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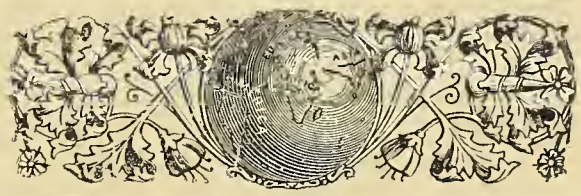


"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, SEPTEMBER 5th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 7th.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens,

TUESDAY, September 8th.—Royal Horticultural Society; Meeting of Committees at 12 o'clock.
Trade Sale at Hall Place, Bexley Heath, by Messrs. Protheroe & Morris. Sales of Bulbs by Messrs Protheroe& Morris, & Mr. J. C. Stevens.

WEDNESDAY, September 9th.—Royal Caledonian Society's Show at Edinburgh (2 days).
Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens.

THURSDAY, September 10th.—Paisley Show (2 days). Special Exhibition of garden produce at the Manchester Botanic Gardens (3 days).
Trade sale at Mill Lane Nurseries, Cheshunt, by Messrs. Protheroe & Morris. Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, September 11th.—Bildeston Show.
Trade sale at the Avenue Nurseries, Bexley Heath by Messrs. Protheroe & Morris. Sales of Orchids and Bulbs, by Messrs. Protheroe & Morris, and of Bulbs by Mr. J. C. Stevens.

SATURDAY, September 12th.—Galashiels Show.

OUR "BULB" NUMBER.—The subject of bulbs is a vast one, and we no sooner tackled it than we found how impossible it was to deal with it fully,or even as we should have liked. We refrain from mentioning the important classes of bulbs and their allies which we have omitted, so as to avoid making invidious comparisons. It will be observed, however, that nearly every class or genus of plants we have dealt with is hardy or so nearly, that they can be successfully cultivated at least in the more favoured parts of the country. The half-

hardy may be relegated to the greenhouse, which is their proper place, while the majority are perfectly able to take care of themselves in the open. To say that these hardy bulbs are popular, is but a feeble way of expressing the fact that they are more or less grown by everybody who has a garden, and even by those who have no garden except a window.

Those of our readers who are of a botanical turn of mind, will notice that every subject we mention in the way of bulbs and their allies, belongs to one or other of three natural orders—namely, Liliaceae, Amaryllideae and Irideae, in the order of importance given. The selected lists which we furnish are in many cases limited, but beginners may rely upon their being the best of each respective kind, exclusive of new, scarce and expensive varieties. The lists have been made out to include the highest quality at the smallest expense compatible with efficiency. Some experienced growers for exhibition might feel inclined to substitute other varieties for certain we have named; and as there is always room for differences of opinion, we should welcome an expression of the same.

This being the first number of a new volume, we take the opportunity of heartily thanking our supporters contributors, readers, and friends generally. The greatly increased correspondence on all subjects pertaining to gardening with which we have been favoured during the past year, tends to show that we are giving our readers a certain measure of satisfaction; and to maintain this impression, it will be our constant endeavour to attend to duty to the best of our ability.

WHAT IS A BULB? In ordinary parlance we are prone to speak of so many different things as bulbs, that we are liable to include some structures under that term which are not bulbs at all. There are bulbs proper, corms, and tubers, which, externally, appear very much alike, and are yet morphologically, that is structurally, very different. To get over the difficulty in doubtful cases, the permanent portions are termed roots or crowns. Lily of the Valley and Solomon's Seal would come under such a designation. Botanically the word crown is generally used in a very different sense, and if applied to the central part of the flower of Eucharis or Narcissus the term coronna is used. The word root is inapplicable to the fleshy portion of the rootstock of Lily of the Valley, surmounted by a tuft of scales and leaves, enclosing a raceme of flowers. This fleshy portion is an underground stem.

What, then, is a bulb? From the botanist's point of view the answer is easy in most cases, but there are some complications and exceptions to the general rule. A bud is a short stem or axis remaining permanently in the condition of a bud. It consists of a thin, flat, or slightly conical, solid portion, bearing on its upper surface, numerous modified leaves of a fleshy character, and arranged over one another in a globose or conical mass. These fleshy, modified leaves remain underground as a rule, and contain a store of reserve material to enable the bulb to throw up a flower scape or stem in the following spring or summer. Bulbs are of two types —namely, scaly or tunicated. The bulb of Lilium auratum is scaly, and is so termed because the scales do not overlap one another, at least to any great extent. Tunicated bulbs have very broad scales like the Hyacinth and Tulip, overlapping one another to a considerable extent; or the scales form entire conical sheaths, the larger lying over the smaller like a series of candle extinguishers, as in the Onion, Daffodil, Snowdrop, and Snowflake. These two types —namely, scaly and tunicated bulbs, may be readily understood and remembered by getting samples of each and carefully removing the fleshy scales or leaves one by one till the centre is reached. The outer, thin and membranous coat of an Onion, Hyacinth, or Tulip merely consists of dried-up scales.

In the common German Iris, the rootstock consists of a fleshy stem creeping above or slightly beneath the soil; but the English and Spanish Irises are termed bulbous. Close examination will show a considerable difference from the bulb of a Hyacinth, not merely in outward form, but in internal structure. The central portion is relatively large and solid, forming in reality, a very much shortened rhizome, covered with thin membranous scales instead of fleshy ones. Almost a similar condition prevails in Freesia. The underground portion of these plants therefore consists partly of a bulb and partly of a rhizome, forming an exception to the general rule. The rootstock of the Crocus and Gladiolus is a corm, that is, a very much shortened and flattened stem bearing buds on the top. By removing the leaves from the corm of a Gladiolus, this arrangement can readily be seen by the naked eye. All the central portion is structurally a stem, containing a great quantity of starch and other reserve material, which, in the case of a Hyacinth or Lily, is stored in the fleshy scales. The corm of Gladiolus and Crocus is annual, for a new one is formed on the the top of the old during the period of growth, while the old gradually shrivels up and decays. There is yet another structure amongst the subjects dealt with in this issue, namely a tuber, occurring in the Tuberose (Polianthes tuberosa). A tuber may either be a root structure as in the Dahlia, or a stem as in the Potato, Jerusalem Artichoke, and Tuberose. Specifically it is a stem or branch thickened into a fleshy mass by the excessive development of the soft tissue. Amongst the subjects under notice in this issue we have bulbs, corms, tubers, and a structure intermediate between a bulb and a rhizome or underground stem.

Jersey Show.—Our special correspondent has sent in a detailed account of this show; but want of space precludes its appearance till next week.

The "Bulb Number" is worth saxpence o' ony man's siller; therefore to gie it awa' for a penny is positeevely redeekulous.

The many friends of Mr. Peter Blair, of Trentham Gardens, who are also readers of this paper, will be very glad indeed to learn that he is fast recovering from the effects of his accident.

Bulbs for the London Parks.—We are informed that the whole of the bulbs required by the London County Council for the parks this season, will be supplied by Messrs. William Cutbush & Son, Highgate Nurseries, London, N.

A Big Sunflower.—A Sunflower of extraordinary size and weight has been grown by Mr. J. G. Lee, South Douglas Road, Cork, and may be seen in the window of Messrs. Browning and Jagoe. The flower head measures 50 in. in circumference.

Cricket: Hurst & Son *v.* Longmans, Green & Co.—This match resulted in a drawn game, Hurst getting 151 runs for eight wickets, and Longmans 81 for nine wickets. Another match played by Hurst & Son *v.* St. Paul's Athletic, was won by Hurst & Son. Hurst, 98 runs for four wickets; St. Paul's, 68 runs.

Buxted Flower Show was held at Buxted Park, on the 26th ult. The entries numbered 662 as compared with 537 last year, independently of the poultry department. The competitive exhibits in the horticultural division occupied a marquee, and the non-competitive exhibits filled another. Here Mr. H. G. Prinsep, gardener to Viscountess Portman occupied the whole of the central area. Mr. G. W. Piper, Uckfield, Messrs. Wood & Son, Maresfield, and Messrs. J. Dennet & Sons, staged fine collections of cut flowers. Mr. A. J. Ridley showed a wasps' nest with the industrious insects at work.

Glut of Fruit.—The South Lincolnshire markets are glutted at present owing to the abundant crop of fruit, and prices are very unremunerative. Apples of first-class quality are selling at 6d. to 8d, per stone, and Plums at 6d. to 1s., the average price being 9d. Pears are likewise very cheap. It is feared that prices will yet rule lower so that the crop will not pay for gathering.

The New Conservatory in Sefton Park, Liverpool, which has been presented to the city by H. Yates-Thompson, Esq., at a cost of £10,000, will probably be opened in the first week of October. We understand that Mr. Thompson himself will perform the ceremony and that the honorary freedom of the city will be conferred upon him in recognition of his munificence. The freedom will be presented in a silver casket.

Orchids at the Sale Rooms.—There was not a very large sale at the rooms of Messrs. Protheroe & Morris, Cheapside, on the 28th ult., but two pieces of Laeliocattleya andreana were knocked down at 3½ gs. and 5½ gs. respectively. Hybrids of Cattleya bicolor went for £1 10s. each; and a small plant of a hybrid Dendrobium obtained from D. nobile nobilius, crossed with D. findlayanum, was sold for £1 12s. 6d. Very fine plants of Vanda caerulea, well furnished with leaves went at prices ranging from 2s.6d. to 3s. 6d. each; while the same specimens at a more favourable time of the year would have fetched 10s. 6d. to 15s. apiece. Such opportunities for getting a cheap supply of imported Orchids should not be missed by those getting a collection together.

German Horticultural Exhibition at Hamburg in 1897.—The first appendix to the programme of the 1st April 1896 is now published in the German language. The exhibition will remain open from May to September. England will be represented on the committee by the following members of the Royal Horticultural Society:—Sir Trevor Lawrence, Bart., Sir J. H. Schroder, Bart., W. T. Thiselton Dyer, Esq., F.R.S., Dr. Morris, C.M.G., Rev. W. Wilks, M.A., J. T. Bennett-Poë, Esq., Charles Shea, Esq., Philip Crowley, Esq., W. Marshall, Esq., Harry J. Veitch, Esq., Geo. Bunyard, Esq., H. Self Leonard, Esq., and Owen Thomas, Esq. Numerous money prizes are offered, including 1,000 marks (a mark is equal to a shilling of our money) for the best collection of market Carnations; 5,000 marks together with a work of art worth 2,000 marks for a complete representative collection of Orchids in the early part of the year, &c. Communications should be addressed to the Comité der Allgemeinen Gartenbau-Ausstellung in Hamburg, 1897.

Mr. G. Bunyard on Fruit Culture.—At the monthly meeting of the Brighton and Sussex Horticultural Society, on the 20th ult., Mr. J. Cheal in the chair, a lecture on "Fruit Culture" was delivered by Mr. Geo. Bunyard, of Maidstone. The lecturer commenced by stating that the scope of his subject made it difficult to deal with in the time at command. He therefore proposed to deal with some common errors, including too deep planting, which arose frequently from the piling on of manure. The soil was frequently too light so that the trees failed to get a good grip. Vegetable crops were often planted too close to the trees. Wall trees were allowed to get too dry at the roots, the wall drawing the moisture from the soil and also intercepting the rain when blown from the direction covered by it. Pruning was done too early in the season. Summer pruning should not be commenced before August to prevent the trees making a second growth. September and October were the months for root-pruning, whereas it was often left till November. Trees were often trained too closely together, and orchards were neglected instead of being properly thinned. The foliage of vines was often too severely thinned and too much stopping done. The soil round fruit trees should be made quite firm; and when grown in houses the trees should not be too near the glass. The sashes might be removed during the ripening of Peaches. Amateurs were apt to neglect thinning the fruits of Apples and to pick them before they were perfectly ripe. In the matter of storing Mr. Bunyard recommended a little moisture and free ventilation, while the fruit must be kept in the dark. Early Pears should be gathered before they were quite ripe and late ones allowed to hang as long as possible. Gooseberries, Red and Black Currants, Raspberries, Strawberries, and Plums were also dealt with seriatim.

DOUBLE ENGLISH DAFFODILS. NARCISSUS HORSFIELDI. NARCISSUS NANUS. NARCISSUS INCOMPARABILIS SIR WATKIN. NARCISSUS INCOMPARABILIS STELLA.

DAFFODILS.

FROM being a neglected and unimportant class of plants in gardens, Daffodils proper, and Narcissi generally, have risen to be of the first importance for garden decoration in spring, both in the open air and under glass. For several months in succession, they constitute one of the leading and most persistent features of spring exhibitions, from the time the forced bulbs make their appearance till the latest have gone out of season in the open ground. With the shelter of a cold frame, the beautifully neat Narcissus cyclamineus, and the chaste white N. monophyllus, may be had in bloom in February or even earlier, according to the mildness or otherwise of the winter. They finish up in June in the open ground with the last remnants of the double forms of N. poeticus. Three species flower some time between September and November, but they are rare in cultivation and unimportant.

The best authorities place the number of species at sixteen, with numerous hybrid forms natural or artificial. A good few take the rank of sub-species; and the number of garden varieties is legion. The leading uses to which they are put, are for conservatory decoration and exhibition as far as pot culture is concerned; and on the other hand for spring bedding and naturalisation on the grass. For these purposes they have never been more popular. No class of flowers is better adapted for naturalisation on the grass, and this style of gardening is largely on the increase, having very much to recommend it. The accompanying illustration shows this aspect of spring gardening admirably, and we cannot too strongly recommend it to the attention of our readers. The use of Daffodils for cut flowers is practically unlimited, and no spring flowers are more elegant, graceful, handsome, and amenable for this purpose. All the more common kinds are of the easiest cultivation in any ordinary garden soil. Pot culture for exhibition purposes is dealt with on another page.

LONG CROWNED OR TRUMPET DAFFODILS. *Golden and Yellow.*—One of the most popular on account of its earliness and neat form is N. obvallaris or the Tenby Daffodil. It forces so readily that it may be seen in the market about Christmas or soon after. It is golden-yellow. For forcing and general purposes, Golden Spur and Ard Righ or Irish King, come next in order of flowering. Both are golden-yellow and handsome Daffodils. Golden Plover is equally useful for pot work, and much of the same character. Santa Maria is very early even in the open ground, and is a gem for pot culture. The flowers are of a dazzling golden-yellow or orange, and very handsome. Another early flowering, but much paler variety, is Princeps, with sulphur-white segments and yellow trumpet. Distinct also is Countess of Annesley, with darker flowers and a deeply lobed crown. A very popular and handsome old type is N. maximus (see illustration p.8) of a rich golden-yellow, with a huge trumpet, and very useful otherwise for bedding on account of its showy character and earliness. Of the later and large types, Emperor is quite indispensable for pot culture and bedding. The pale yellow segments are very broad, and the golden trumpet is magnificent. This variety heads a list of several others of the same class, including M. J. Berkeley and P. R. Barr; and all are easily obtainable. Glory of Leiden is, of course, the king of this section, but it is yet too scarce and costly. Of the smaller trumpet Daffodils, the graceful and elegant M. Jonstonei Queen of Spain must not be omitted. Its flowers are of a rich lemon-yellow. Those who make their acquaintance with the above selected dozen will want to know more of them.

Bicolors.—The finest of the Bicolor type is Weardale Perfection, but it is yet scarce and expensive. The list would, therefore, be headed by John Horsfield, better known as Horsfieldi, and Empress, two of the finest Daffodils in cultivation. The white segments and golden crown are very handsome. The first-named is the earlier. The earliest of all this section, however, is J. B. M. Camm, white with sulphur yellow trumpet. None is more floriferous than Dean Herbert, otherwise known as Primulinus, with primrose segments and rich yellow trumpet. James Walker has a sulphur white perianth and golden trumpet of great size. Harrison Weir, on the contrary, is white, with a canary yellow trumpet. The latest of all the bicolor group is Grandis or Grandee, about a fortnight later than Empress, and much dwarfer in habit.

White Daffodils.—These have been derived from the chaste, little Spanish N. moschatus. The finest of all the white varieties is Madame de Graaff, but it is yet very scarce. Scarcely inferior to it is Mrs. J. B. M. Camm, under highly favourable conditions. The purest white is Colleen Bawn, a very early variety. Bishop Mann, otherwise known as Butter fly, is the tallest growing of this type, and resembles a giant form of Cernuus. Mrs. F. W Burbidge has a pale primrose trumpet. Cernuus pulcher is an early variety of a silvery-white. Tortuosus, otherwise known as Leda, is a beautiful wild form with twisted segments of a snowy white. Wm. Goldring is notable for its long neck and drooping flowers.

Double Varieties.—There are several double forms of the trumpet section, but only a few of them are widely cultivated, including Telamonius plenus, otherwise called Van Sion, Lobularis plenus, and Rip Van Winkle, with very deeply cut crowns and very narrow segments. The first two are well adapted for naturalising on the grass.

MEDIUM-CROWNED TYPES

Incomparabilis type.—Sir Watkin is *facile princeps* the finest of this section on account of its magnificent size. It is well adapted for pot work. Gloria Mundi and Cynosure are second in importance and have a large orange crown to recommend them. They, as well as Stella, with a yellow cup, are useful for bedding purposes. Leedsi has a yellow perianth, and the crown is edged with orange-scarlet. The finest of all the orange-scarlet crowned varieties of N. incomparabilis is C. J. Backhouse. Quite of another type are Queen Bess and Princess Mary, both notable for the widely expanded character of their crown, something between a bowl and a saucer in shape. The former of the two is the earliest of this section and useful for market. Princess Mary is nevertheless a fine flower, with an orange rim to the crown, and broad segments. One of the finest and most charming of recent introductions is Sutton's Lulworth (see accompanying illustration p.9). The broad, creamy-white segments are much imbricated; but an even finer feature of the flower is the large and widely-expanded, glowing orange-scarlet crown, which places the variety in the first rank for ornamental value.

Double forms.—Queen Anne's Double Daffodil is one of the most singularly constructed, and besides being neat, is notable botanically for its segments being arranged in six imbricated rows. Sulphur Phoenix is a very choice sulphur-white variety. Orange Phoenix (see illustration p.8) is even finer and more distinct by reason of its yellow perianth segments being interleaved with short orange ones. We are indebted to Messrs. Sutton & Sons, Reading, for the accompanying illustrations of Daffodils.

Eucharis-flowered.—These are white varieties that bear much the same relation to N. incomparabilis as the white trumpet varieties do to the yellow ones. They all belong to the hybrid Leedsii type, and the white flowers have been aptly compared to those of a Eucharis. Duchess of Westminster has flowers of great width, a canary-yellow crown, and is well adapted for bedding. Katherine Spurrell is equally fine with a light yellow cup; in fact many consider it the best of the section next to Duchess of Westminster. Minnie Hume is a charming flower with a pale yellow crown passing to snow white. Mrs. Langtry has a broad, white perianth, and a cup that is edged with pale yellow. Amabilis has a long

crown, and is wholly pure white when fully expanded. Beatrice is equally pure and perfect in shape.

Other hybrids.—For pot work or open air planting, a collection would be incomplete without a few of the Barri section but particularly B. conspicuus, the lemon-yellow segments of which are broad and overlapping. The crown is edged with orange. Maurice Vilmorin has a creamy-white perianth and orange-edged cup, and is second in value only to that previously named.

SHORT-CROWNED NARCISSI.

M. Burbidgei is allied to N. poeticus, having the same white perianth, but a slightly deeper cup of a bright orange colour. The large snow-white perianth and saucer-shaped, orange cup of Muzart Orientalis, bespeak a plant of hybrid origin, apparently between N. poeticus and N. Tazetta. It is deliciously scented.

Polyanthus Narcissi.—Being less hardy than any of those previously named, the varieties of N. Tazetta are mostly used for conservatory decoration and exhibition purposes, and are grown in pots. Paper White is, of course, indspensable for forcing purposes. Bazelman Major is, perhaps, the finest of this type in cultivation. The flowers are of great size and white, with a yellow cup. Scarcely inferior is Grand Monarque with a primrose cup. Gloriosus is white with an orange cup and valuable for forcing. Her Majesty is white, but the best of this colour is White Pearl. The Good Luck Lily or Jos Flower of China should not be overlooked because very floriferous. For the sake of variety Jaune Suprême with a yellow perianth and orange cup should be grown.

The Poet's Narcissus.—There are several fine forms of this, but N. poeticus ornatus is one of the most useful for pot work, and N. p. poetarum one of the most handsome. There are two double forms, the Gardenia-flowered or N. p. recurvus flore pleno being the best.

SNOWDROPS.

BRIGHT barbingers of spring, how we greet their appearance from out the frozen earth! Bravest of Flora's beauteous children their delicate blossoms seem ill fitted to contend with the keen cutting winds of February. Planted in clumps in the herbaceous border they look happy enough, as long as there are no heavy showers to besmirch the virgin purity of their blossoms with mud. They appear to the best advantage when naturalised on lawns or in shady nooks in the flower garden. Once planted, there they may well be let alone, as lifting has a tendency to weaken the bulbs. For the purpose, our common British Snowdrop, Galanthus nivalis, is as good as any, and as a large quantity of bulbs can be obtained in autumn at very low rates, a few hundreds of them scattered about would do much to improve the look of the flower garden and pleasure grounds in early spring.

G. Elwesii is the giant of the genus. It is a very large distinct form introduced from Asia Minor about the year 1875. This species and G. nivalis with one or two of the better varieties of the latter are the most suitable for general purposes. Where Snowdrops are wanted to produce a telling effect by themselves the best way is to plant in large bold clumps or masses. A thinly planted shrubbery may be turned to good account in this way. A grand mass of G. Elwesii close to the hardy fernery at Kew was one of the finest sights to be seen last year in the whole of the gardens. Snowdrops may also be turned to good account as an edging to beds. In planting, the bulbs should be buried not more than 2 in. deep.

Pot culture is but a qualified success! True, if treated properly, the bulbs flower well enough, but sooth to say Snowdrops look out of their element under glass. Their rightful place is the damp cold earth outside, their nurse the wintry February winds, and to remove them thence seems to rob them of a large portion of their unique individuality. If it is elected to grow a few in pots, they must not be subjected to heat, or failure will result. After their removal from the plunging bed a corner in a cold frame is the best place for them. Here they will come on gradually and flower a couple of weeks before those outside. G. Elwesii is the best for this purpose, and some of the double forms are greatly admired.

HYACINTHS.

SOMETHING like thirty species of Hyacinths are known to science, and they vary so much in form and structure that botanists have divided them into five sections; but some of these sections are considered by certain authorities as distinct genera. A large number of these thirty species are only of botanical interest. A few of these small-flowered ones are useful for the rockwork or for small beds on the grass in early spring. Hyacinthus azureus and H. amethystinus are gems for this kind of work, and their flowers are of those particular shades of blue indicated by the specific name.

The Hyacinths, proper, all belong to one species, namely, Hyacinthus orientalis. The vast number of early and late, single and double, exhibition, bedding and decorative varieties have all been derived from one species in gardens by centuries of cultivation, crossing and selection. The wild species is a native of the Levant from whence it was introduced to this country in 1596 according to records. The Dutch introduced it from the eastern shores of the Mediterranean, and have been its principal cultivators ever since. Seven or eight varieties were known in this country about the end of the sixteenth century, and the botanist Swertius figured as many as forty varieties as early as 1620. By the year 1720, the Dutch florists at Haarlem, cultivated more than 2,000 varieties, so that if a tithe of them were really good sorts in those early times, the extensive and extending cultivation of the present day can only be the revival of a culture that was formerly held in very high repute. In all probability not a single variety of those days is now in existence, notwithstanding the fact that some Hyacinths are very long lived. Certain varieties, probably of weak constitution from the first, deteriorate in a few years; but on the contrary some are known to have survived for upwards of a century. Moreover, in spite of all changes that must have taken place, the best varieties now in cultivation, may be regarded as the lineal descendants of the improved sorts of the olden times.

The wild type is described as having blue flowers, and in its native country flowers in February, being naturally a month earlier there than here owing to the more southern latitude. The vast number of shades of colour now in existence speak volumes of the possibilities lying latent in a single species, and gradually developing into actual reality in response to the guiding hand of man. It might well be asked whence comes the rose, purple, carmine, lilac, mauve, yellow and other distinct shades of colour that cannot be detected in the wild blue form. The white varieties might be described as albinos which frequently occur in a state of nature. Other colours may have been derived by the separation of original mixtures. Some of them may be actual developments quite foreign to the original. Without actually analysing the colours of the wild blue form, one would naturally conclude that yellow was an innovation. There is no real scarlet in Hyacinths, though some of the shades of colour come very near it as seen by the naked eye, and are often described as such by cultivators. On the other hand there are those who would deny that there is any true blue in the whole race. That opinion, however, would only be shared by the more special of the specialists. There are many blues, even amongst Hyacinths and some of them are extremely beautiful. While speaking of colours, it may be germain to the subject to recall the fact that light is unessential to the development of the colours of Hyacinths. The small and colourless flowers of the bud stage, will gradually assume the hues characteristic of each

NARCISSUS INCOMPARABILIS ORANGE PHOENIX (See p. 7). NARCISSUS MAXIMUS (See p. 7).

respective variety even in darkness provided all other conditions are equal. A considerable number of hues, however, particularly the rose and red varieties are intensified by exposure to light, and thereby improved. The colours will even develop beneath the soil, if by any accident or otherwise, the flowers are unable to reach the surface.

As far as real cultivation is concerned, the Dutch growers still keep ahead of us, and seem likely to do so. The rich sandy nature of the soil of Holland, and the natural facilities for sub-irrigation, as well as for drying off the land during the period of maturity, are no mean advantages in the favour of the Dutchmen; and those who are thus enabled to grow the bulbs to the greatest perfection, at the least expense, would naturally be able to command the market. The soil and general facilities for high cultivation are mostly against us in this country, so that Hyacinths may never be grown to any great extent. The development of the flowers from the well-grown and well-ripened bulbs is quite another thing, yet requires a considerable amount of skill to insure the best results as those who grow for exhibition well know. The practical treatment of bulbs for exhibition purposes, will be found in another column. For merely decorative purposes the cultivation of Hyacinths is quite another and an easy matter. Good bulbs readily respond to indifferent treatment under a variety of conditions, and the results for home use give great satisfaction, and this, together with the beautiful colours at the hand of the grower and the agreeable perfume of the flowers, must, to a great extent, be held responsible for the ever-increasing popularity of this class of plants.

The successful forcing of bulbs depends upon early potting, so that roots may be well developed before the pots or boxes containing them are introduced to heat; and also upon a selection of those varieties which naturally flower early, and therefore readily respond to the application of artificial heat. Small bulbs are very useful for this purpose, because the loose spikes of small flowers are lighter and more graceful for cutting and mixing with other subjects than are the heavy spikes from fully developed bulbs. For these very reasons Roman Hyacinths are extremely well adapted for forcing, and the increase of their culture has been very great within the last few years. By proper treatment they may be had in perfection or nearly so as early as November. The early forms of the larger-flowered varieties may be forced in time for the Christmas festivities. Varieties suitable for this purpose are Homerus, deep rose, Norma, rosy-pink, Blanche Hâtive, La Candeur, Reine de Holland and Madame Van der Hoop, all pure white; also Grande Vedette, bright blue, Orondates, porcelain blue, Leonidas, clear blue, Willem I, dark blue and La Nuit, black.

For bedding purposes, cultivation is very simple, all that is necessary being to plant the bulbs sometime between the middle of October and the middle of November. The soil must be properly enriched and otherwise prepared. The varieties must also be properly arranged as to stature, earliness or otherwise; and the colours to give the best results must be properly harmonised. The simpler the design the better. The water culture of Hyacinths in coloured or ornamental glasses is simpler still, and not at all devoid of interest from various points of view. The fact that Hyacinths are not liable to disease and insect pests, is largely due to their flowering early in the season when few insects are abroad, and to the cool weather being unfavourable to the development and spread of fungoid diseases.

SELECT LIST.

The undermentioned list of thirty varieties represents the cream of those now in commerce, and sufficiently plentiful to be obtainable at the prices within the reach of every cultivator. Some might be inclined to increase or decrease the number, and others to substitute their own favourites. All of them are well adapted for decorative purposes, and nearly all are favourites for exhibition.

WHITE.—For size of flower and purity of colour there is little fault to be found with such grand things as La Grandesse, L'Innocence, Madame Van der Hoop, Mount Blanc, La Neige, and Queen of the Whites. La Neige and L'Innocence are early sorts, and Madame Van der Hoop particularly so. All the above are single, but the double white La Tour d'Auvergne will constitute a useful companion to the rest.

ROSE AND RED.—The delicate pink flowers of Gigantea are very charming. Macaulay produces large spikes of rosy flowers, striped with carmine. Moreno is a rosy-pink variety in the way of Norma, but in many respects superior to it. Other fine things in this group are Vuurbaak, fiery-crimson or carmine, Gertrude, dark rose, and King of the Belgians, deep carmine. A red companion to the above is Noble par Mérite, with double flowers.

BLUE.—Grand Maître is a magnificent porcelain blue variety with large spikes and flowers. Somewhat similar in colour is Lord Derby, and equally popular on the exhibition table. Other single sorts are King of the Blues, of a beautiful Oxford blue; Czar Peter, porcelain shaded with lilac; Black Prince, blackish-blue; and Queen of the Blues, light blue. The lilac-blue Charles Dickens is a magnificent variety.

PURPLE AND MAGENTA.—The five best of this type are Adelina Patti, lively magenta; Distinction, dark claret; Haydn, lilac-mauve; Sir Wm. Mansfield, violet; and La Victoire, the latter being double.

YELLOW.—King of the Yellows is of a beautiful golden-yellow; Ida, clear yellow, very fine; Marchioness of Lorne, salmon or creamy-orange; and Jaune Suprême is a deep yellow, double variety.

NARCISSUS INCOMPARABILIS SUTTON'S LULWORTH (See p. 7).

SCILLAS.

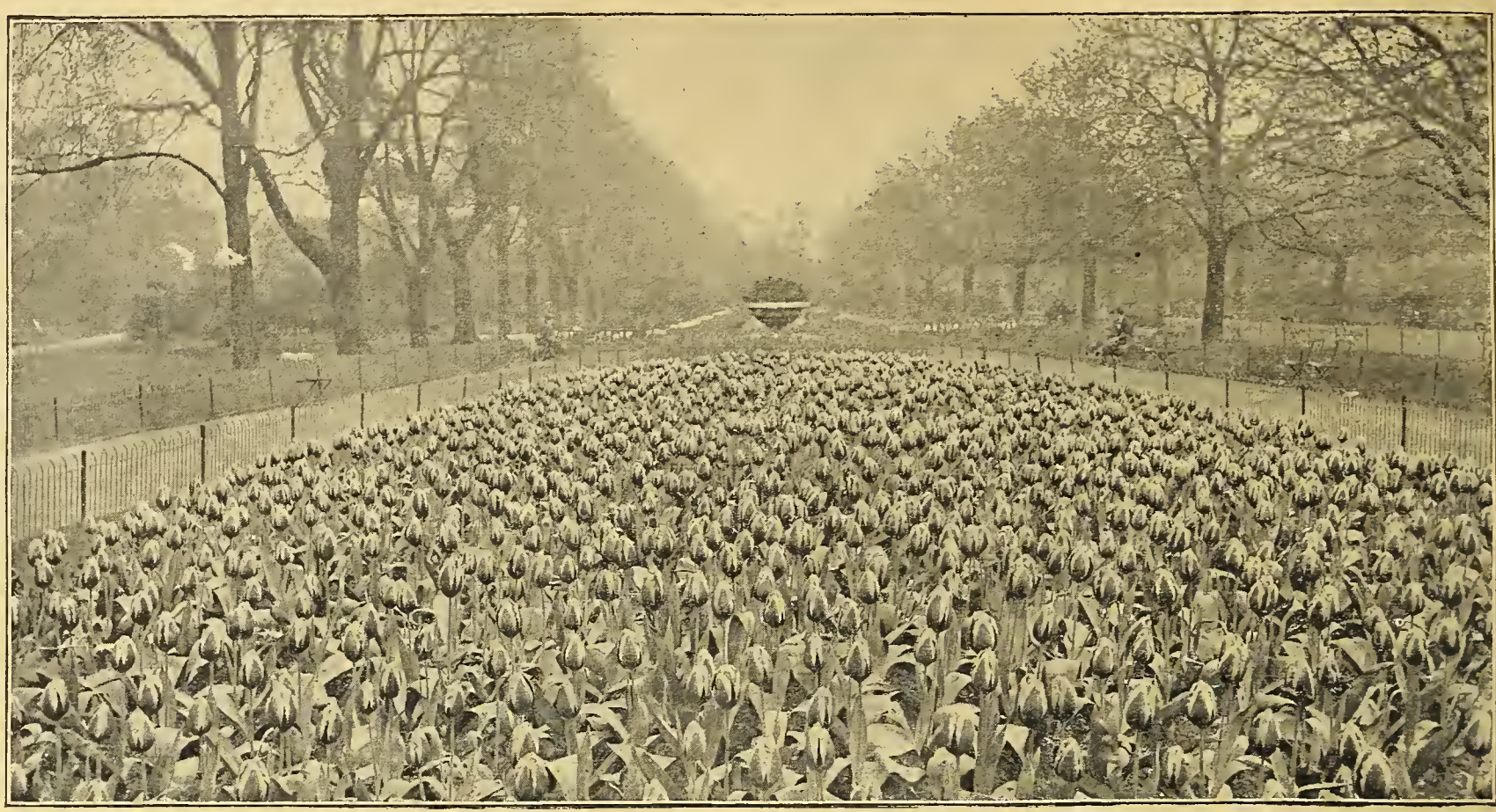
FOR naturalising in the grass, planting in clumps amid the gray hoary stones of the hardy fernery or rockery there is no more suitable species than our wild Scilla nutans. What gorgeous stretches of vivid blue does Nature sometimes favour us with in the woods and coppices of our native land, although sad to say such brilliant stretches of beauty are now getting rarer each day under the blighting influence of the brick and mortar fiend. There are several garden forms of this that are well worthy a place in the rock garden. S. n. grandiflora alba, S. n. g. rosea, and S. n. g. rubra are the best of these. As the name grandiflora indicates, the flowers are much larger than those of the type, although they can scarcely be more beautiful.

S. HISPANICA, commonly known as the large Spanish Bluebell or Squill is a species that is remarkably variable. The perianth in the type is normally blue, but often changes to rose-purple or white. Consequently there are numbers of pretty varieties. In some nurserymen's catalogues this figures under the name of S. campanulata, a name that doubtless bears allusion to the sub-globose campanulate perianth.

S. SIBIRICA is too well known to need further description. Its dwarf habit renders it a gem for the rockery to which its bright sky-blue flowers impart a vivid touch of colour during the early months of the year. Grown in pots it is admirable for conservatory decoration, and there are many owners of small glass houses who take advantage of its amenity to pot culture to grow it in this way. It does not take kindly to forcing, but may be coaxed into bloom a week or so earlier than its relatives outside if it is given a place in a cold frame or cool greenhouse. A good sandy loam is most to its likings, and a few small lumps of sandstone mixed with this will not come amiss. As an edging to small beds or borders in the flower garden it appears to great advantage, as it is perfectly hardy and very free-flowering.

SCILLA BIFOLIA, a native of the Mediterranean region, completes the list of the commoner Scillas. It is as amenable to pot culture as S. sibirica, and the ultra-marine blue of its flowers is both showy and distinct. Gifted with a hardy constitution it is perfectly at home in the out-door garden.

Bulbs in any quantity of all of the above may be obtained at a fairly reasonable price, and should be planted as soon as possible whilst they are resting. In fact, the sooner they are got in the better.



BED OF KEIZER KROON TULIPS IN REGENT'S PARK.

TULIPS.

THE subject of Tulips is a vast one on account of the numerous species and varieties in cultivation. Fifty or more species are known to science, and a far larger number is cultivated than in the case of the species of Hyacinth. The vast number of varieties of Tulipa gesneriana may be divided into several groups or divisions for garden purposes—namely, early single, early double, Darwin and florists' Tulips. All of these, but certain varieties in particular, are suitable for bedding purposes, forming one of the leading features of spring gardening. Certain varieties are particularly adapted for early forcing or pot culture, and the larger of them for exhibition purposes. Darwin and florists' Tulips are considered late, flowering in May, and are best adapted for outdoor culture. Florists' Tulips proper are best adapted for exhibition purposes, that is, the varieties which conform to the canons of the florist. Those which do not come up to this standard are utilised for spring bedding, and very effective many of them are.

Then we have a group known as Parrot Tulips, doubtless on account of the peculiar combination of scarlet, green, yellow, and other colours. They are late-flowering and characterised by large, ragged, lacerated, wavy, and crumpled flowers of most fantastic form and bizarre combinations of colour that defy description. When the early Tulips are in bloom, the buds of the Parrot Tulips are green, of peculiar form, and seem as if they would never be able to expand; but they reach perfection at last and flower lovers in general become lost in admiration and wonder. They are very old and their origin lost in obscurity; but Tulipa viridiflora is supposed to have had something to do with it, in the opinion of some authorities. Truly we are unable to gauge the evolution of those things even which have arisen under the hand of man. For late spring bedding the Parrot Tulips are invaluable and well worthy of more extensive cultivation.

Of late years a large number of species and garden forms of Tulips have been brought into requisition for bedding purposes, and most charming subjects they are; in the first place, because they are of beautiful colours, and far less formal than the neatly-rounded and broad-petalled forms of T. gesneriana; and secondly, because they arrive at perfection when the early Tulips are over and hold the ground till the summer occupants must be planted out. Their numbers are continually being added to from year to year; and those who have not yet tried them for spring bedding should make a point of doing so, and they will be surprised with the beauty, grace, elegance, attractiveness, and effect of all the finer and more distinct forms. They hold the same relation to the forms of T. gesneriana, but especially to the florists' Tulips as border Carnations do to the bizarres and flakes of the florist.

The outdoor culture of all the Tulips is one of the simplest. The chief conditions are that the soil should be friable, fairly rich and properly drained. The proper planting season is from the middle of October to the middle of November as in the case of Hyacinths; but the earlier the better when the summer occupants of the beds have been removed. The method of treatment required for the pot culture of early exhibition varieties, is detailed in another column.

EARLY TULIPS.

SINGLE VARIETIES.—The different colours of the Duc Van Thol group are indispensable for early work, particularly at Christmas. They flower about twelve days earlier than the early varieties of T. gesneriana, and for that reason may be utilised in a few beds to furnish the earliest display in the open ground. The early varieties of T. gesneriana, however, must always rank higher in importance for general bedding purposes and exhibition. The simpler the designs the more satisfactory they prove. Beautiful pure white varieties are Joost Van Vondel White, of large form and fine shape; Nelly, of dwarf habit and fine form; L'Immaculee, indispensable for forcing; and Pottebakker White. Other grand varieties of the first water are Keizer Kroon, crimson-scarlet, margined yellow; Cottage Maid, silvery-rose pink; Duchesse de Parma, orange-red, margined yellow; Pottebakker Scarlet, rich and fine; Rose Gris-de-lin, rose and white, dwarf and useful for pot work; Thomas Moore, orange; Wouverman, rich purple violet; La Reine, white, shaded with rose; and La Tendresse, a large and beautiful rosy flower. Yellow varieties of the first rank are fairly numerous, and include Chrysolora, a large pure yellow flower; Canary Bird, clear yellow; Pottebakker Yellow, clear yellow, often striped red; the sweet-scented Yellow Prince; and the huge golden-yellow Ophir d'Or. The latter is, indeed, the finest yellow of this class for any purpose. The rich dark scarlet Koh-i-noor, the magnificent dark rose Proserpine, the rich rosy-pink Rouge Luisante, and Vermilion Brilliant, whose colour is well expressed by the name, cannot be overlooked nor omitted from collections. Rosa Mundi with pale purplish-rose flowers is also handsome for beds. Very few of the above could be omitted from a selection of twenty-four of the best early Tulips for forcing, exhibition and spring bedding. The accompanying illustration of a huge bed of Keizer Kroon in Regent's Park will give our readers an idea of the style of spring bedding in the London parks in the matter of Tulips. This illustration has been furnished us by Messrs. J. Carter & Co., High Holborn, London.

DOUBLE VARIETIES.—Where double Tulips are admired there is no difficulty in securing variety. Murillo, pale rose; Rex rubrorum, bright red; Tournesol, red and yellow; Tournesol Yellow and Imperator rubrorum, scarlet-crimson are all suitable for forcing, and the three latter for spring bedding as well. Salvator Rose, rosy-white; Rozen Kroon, crimson-cerise; La Candeur, pure white and Gloria Solis, red, with yellow edges, are all well adapted for bedding. Raphael is a forcing variety, and the finest of the double rose Tulips.

DARWIN AND FLORISTS' TULIPS

The Darwin Tulips are merely a new race of breeders, unfettered by the rules, canons and limitations imposed by florists to define the standard necessary for a variety to take rank amongst the old English florists' Tulips. The door is practically left open for anything that is distinct and intrinsically beautiful. We, therefore, find a range of colour from pale porcelain to the darkest violet, and from pink, rose or red to crimson, maroon, chocolate brown and black. They are tall, vigorous, late Tulips flowering in May. They are termed breeders because they have not yet become broken or rectified, since they were raised from seed. Some are named and others are without that distinction. The beauty of many of them is fascinating.

The florists' Tulips also flower in May, and those which do not come up to the florists' standard are utilised for bedding purposes with very fine effect. Bizarres are feathered or flamed with various shades of crimson or red on a yellow ground. The byblomens are feathered or flamed with purple, lilac or black on a white ground. The Roses have also a white ground, but they are always feathered or flamed with pink, rose or red. These may be obtained of all the leading dealers, separately or in mixture. The "True English Amateur Tulips" are classified in the same way, but they are more select and refined, because those only are selected which have the characteristic markings regularly defined.

TRUE ENGLISH AMATEUR TULIPS.

Besides this series of the true amateur Tulips, there are also the old Dutch and the Flemish amateur Tulips, but we propose to deal only with the "English Amateur Tulips" here. This selection has been made from Messrs. Barr & Son's extensive and famous collection at Long Ditton, Surrey. They have all been developed from Tulipa gesneriana, and flowering in May, are classed as late. Breeder

Tulips are self coloured. Rectified Tulips are those which have "broken" or developed, or sported as a Chrysanthemum man would say, from the breeders into varieties, variegated with two or more colours. All are beautiful and well adapted for amateurs who desire to take up some delightful hobby; and we could wish to see such cultivators largely increased.

Bizarre rectified Tulips form a section characterised by being variegated with orange, scarlet, crimson or brown on a yellow or golden ground, with a stainless yellow base. In this section we should mention seven varieties forming a very short list of the fine things at hand. Dr. Hardy is handsomely marked with dark scarlet on a rich yellow ground, and perfect in form. George Hayward is variegated with rich crimson-maroon on gold; Colbert with chocolate on bright golden-yellow; Sir Joseph Paxton with maroon-black on lemon; Lord Lilford with dark chocolate on yellow; Lord Stanley with mahogany-crimson on yellow; and Sulphur with mahogany-brown on yellow. The latter is sweet-scented. Beautiful breeders belonging to this section are Goldfinder, bright scarlet with clear yellow base; Sir Joseph Paxton, dark chocolate; brown; Lord Frederick Cavendish, bright mahogany-brown; and Sulphur, light olive-brown, and scented like the rectified form of the same name.

Bybloemen rectified Tulips are variegated with violet, purple, black, lilac or lavender on a white ground with a stainless white base. Mrs. Jackson is variegated with black on a white ground, and has short petals; Adonis, purple and black on white; Lord Denman, puce-purple on white, and very beautiful; and Talisman, violet-black on white, very showy. Bybloemen breeders should include Adonis, rich violet-purple, and Talisman, slaty-purple.

Rose Rectified Tulips are variegated with pink, rose, scarlet or crimson on a white ground, and have a stainless and beautiful white base. Annie McGregor is variegated with brilliant rose-scarlet on white; Aglaia, rose on white; Mabel, beautiful rose on white; and Lord Derby, brilliant rose-scarlet on white. Breeders belonging to this section should include Lord Derby, brilliant rose-scarlet; Mabel, beautiful soft rose; Industry, intense scarlet-cerise; and Annie McGregor, deep rose-scarlet. The latter is a lovely flower; indeed, we like it better than the rectified form.

Flowers in which the dark colours are confined to the margin of the segments, are spoken of as feathered; those in which the dark pigments form a flame along the centre, and generally at the margin as well, are termed flamed Tulips. Thus we have flamed bizarre, feathered bizarre, flamed rose, feathered rose, flamed bybloemen, and feathered bybloemen. The above twenty-five varieties will form the nucleus of a beautiful collection, all being easily obtainable. Those who wish to go further afield

Tulipa retroflexa.

may consult our last volume under the heading of Tulips, by means of the index.

Species and Garden Forms.

There is practically no limit to either form or colour, in this case, and herein lies their great charm. They should be planted in large beds, masses or clumps to secure the grand effects of which they are capable of producing. The large clear yellow flowers of T. retroflexa have long pointed segments elegantly recurved towards the apex; hence the specific name. A large bed of it appears like a flock of some foreign yellow bird hovering on the wing. (See illustration). Scarcely less beautiful in its way is T. elegans with carmine flowers and much reflexed segments. T. e. alba differs by having white petals and a narrow crimson margin. T. fulgens is rich crimson with pointed, reflexed petals. The huge orange-scarlet flowers of T. Greigii, with a black centre, recurved outer segments, and purple-blotched leaves, are now well-known. Other fine things are T. billietiana, yellow, suffused red; T. macrospeila, crimson with black base outlined with yellow; T. spathulata, scarlet with black or violet centre, and supposed to be the wild T. gesneriana; T. Oculus Solis, crimson with black eye; T. persica orange-red outside, and golden-yellow internally; T. sylvestris, the only British species with fragrant, drooping, yellow flowers; T. vitellina, pale lemon; T. viridiflora, the green Tulip, supposed to be the parent of the Parrot race; and T. clusiana, a small, white species, elegantly banded with red. Three decorative varieties very popular in Covent Garden Market, are Picotee (see upper flower in illustration) white with bright cerise edgings; Golden Eagle (lower flower) yellow with crimson edge; and Bouton d'Or (right hand flower) nearly globular and golden yellow. We are indebted to Messrs. J. Veitch & Sons, Chelsea, for this opportunity of figuring Tulipa retroflexa, the three market varieties, and Parrot Tulips.

Of the Parrot Tulips, Markgraaf, yellow, scarlet and green; Monstre Rouge, crimson with black markings; Perfecta, red and yellow, handsomely striped; Feu Brilliant, brilliant scarlet, Lutea Major, yellow striped red occasionally; Rubra major, crimson; and Cafe Brun, coffee-brown and yellow, are all gorgeous and handsome varieties.

BULB CULTURE FOR EXHIBITION.

To be successful in the culture of spring-flowering bulbs for exhibition, an early start is very important, so that a longer season may be given the bulbs to become established in pots. The first point to consider is the selection of the varieties required, and this is best done the season previous when the bulbs are yet in flower, and when comparisons can easily be made with the different sorts, which, by leaving to catalogue descriptions alone, a new beginner is apt to become confused, and likely to select those that are not so suitable as others. In any case, the bulbs should be got from some reliable vendor, and let it be clearly explained that they must be of the right character to suit the purpose intended, thus allowing your merchants some chance to maintain their reputation, which they will endeavour to do if the purpose for which the bulbs are required is placed before them in a proper manner.

Tulip Picotee. Bouton d'Or. Golden Eagle.

Parrot Tulips.

Hyacinths.

The beginning of October is a good time to pot up Hyacinths, and the size of the pot required will depend on the size of the bulb and the strength of the variety. Six-in. pots are usually large enough for all strong-growing sorts; but for the yellow varieties

5 in. is large enough, placing only one bulb in each pot. The pots should be clean, and one crock is quite enough for drainage, the Hyacinth being a moisture-loving plant. The compost most suitable for spring-flowering bulbs consists of two parts loam, one part dried cow manure, one part leaf mould, and a little

LILIUM PARRYI.

sand, if necessary, the whole being in a fairly moist condition, yet not wet. In potting, the soil should not be made too firm, otherwise the roots when they begin to form will raise the bulb out of its position; on the other hand, if too loosely potted the plant will not thrive. Press the soil moderately firm, and and fill the pot so that the top of the bulb when planted is only visible above the soil. As soon as potted they should be placed on a hard bottom of ashes outside, and covered with cocoanut-fibre refuse to the depth of 4 in. Ashes fresh from the furnace should not be used unless they have time to become thoroughly exposed to the rain and weather before using, as the acids they contain, when fresh, are sure to injure the young growth. It is an excellent plan to place a small pot inverted over the bulbs thus preventing any injury.

As soon as the roots are travelling freely round the sides of the pots and show signs of activity they should be removed to a cold frame and gradually inured to the light by placing some protection over the frames for a few days, admitting air carefully to begin with; then fully expose them in favourable weather. When growing freely, weak liquid manure will help to swell the spikes to larger proportions, taking care never to allow the soil to become too dry or a check will result. From the frames they can be taken to the greenhouse in time to develope before any given date, about six weeks being ample time to bring them on in a greenhouse temperature. Of course, some varieties open before others, and one of the very best, Moreno, being a week earlier than most of the others, requires to be kept cooler so as to enable it to get at its best with the others. Then,

LILIUM TIGRINUM FLORE PLENO.

again, Koh-i-noor, being late, requires to be kept warmer. An acquaintance with the varieties is necessary as with most other things. Varieties of Hyacinth are [illegible], but of the newer sorts I noted one last season, Lady Clinton, which seemed to be in every respect first-class.

TULIPS.

The same cultivation equally applies to the Tulip as to the Hyacinth; but three bulbs in a pot is the usual number for showing. They require plenty of water, and should never become dry, or the young flower buds may never develop. A good addition to the list of these is Mons. Tressor, a rich yellow, which promises to be the best of that colour.

POLYANTHUS NARCISSI.

These require much larger pots, as the bulbs are of great size. Eight-inch pots are necessary to contain three bulbs of the large sorts, but one inch less for the smaller ones. The soil may be a shade richer for these, and more liquid manure can be applied with advantage. Illustre Soleil and La Comtesse are two good additions to this class, and were shown well last season.

DAFFODILS.

It is surprising that these are not more grown in pots, and more classes made for them at exhibitions. To my mind they are the most beautiful of all bulbs grown in pots in the spring, and they are also very lasting. They require potting about the middle or end of August as they emit roots about that time; and any neglect in potting at the proper time is easily noticed at the flowering period by having poorer blooms. Six bulbs in a pot, or thereabouts, make a fine show, and with the same culture as the foregoing, success is assured.—*James Gibson, Devonhurst, Chiswick.*

LILIES.

AT a moderate calculation the genus Lilium com-

LILIUM PARDALINUM.

prises something like forty-five species scattered over the temperate regions of the northern hemisphere. When they do occur within the tropics they ascend to considerable elevations on the mountains, and such species generally succeed best in greenhouses, though some of them are relatively hardy in Britain, and give great satisfaction in the open air. All are extremely beautiful, for there is not a weed in the genus. In the space at command here, a review of the entire genus is impossible. A fairly large number are extensively cultivated for forcing and early flowering, while a large number have been boldly consigned to large beds under various conditions in the flower garden, where they are universally admired. The selection given below includes twenty-six species which, with the numerous beautiful varieties belonging to several of them, must be admitted as the best and most useful in cultivation. Several others are none the less beautiful and distinct in their way, but they are less often seen in cultivation.

L. GIGANTEUM.—Vigorous bulbs of this stately species throw up a stem from 4 ft. to 10 ft. in height, furnished with large, leathery, heart shaped leaves, and bearing a raceme of numerous, drooping, tubular, fragrant, white flowers tinted with purple internally. It is a native of the Himalayas at an elevation of 5,000 ft. to 10,000 ft. and should be planted in sheltered situations in good soil mixed with a good quantity of peat or leaf mould.

L. LONGIFLORUM.—Of indoor cultures this forms one of the most extensive in the way of Lilies; but the favourite variety is L. l. eximium, best known in gardens under the name of L. Harrisi. This form is extensively cultivated in the Bermudas to supply the American and European demand to a great extent. It has larger and more numerous flowers than the type, and the blooms are always pure white and deliciously fragrant. L. l. Takesima is tinted with violet before the flowers are fully expanded. These

LILIUM MARTAGON ALBUM.

Lilies are natives of Japan and China. Their early flowering habit makes them rather short lived out of doors.

L. PHILIPPINENSE.—Since the first descriptions of this species appeared in books, the record in many respects has been completely broken. Specimens reached us the other day from Mr. T. S. Ware, Tottenham, bearing one and two flowers on a stem, each 8 in. to 12 in. long instead of 7 in. or 8 in. The leaves were 6 in. to 9 in. instead of 3 in. or 4 in. It grows 2 ft. to 3 ft. high, with slender, wiry stems and linear leaves. The trumpet-shaped flowers are pure white and powerfully but deliciously fragrant. The species is a native of the mountainous districts of the Philippine Islands at an elevation of 10,000 ft. to 12,000 ft., and has been found on trial by Mr. Ware, to be hardier than L. longiflorum. It is well adapted for outdoor and pot culture, flowering between August and October. It has been certificated by the R.H.S.

L. JAPONICUM.—The widely funnel-shaped, white flowers of this species are also very choice, and together with the pink, rose or red-flowered variety L. j. Krameri, and the bronzy-purple tubed L. j. Browni, should find a place in every collection. All are deliciously fragrant. They may be grown in light sandy loam in sheltered positions out of doors or in pots for conservatory decoration. They are natives chiefly of Japan and the islands of the Corea, possibly also of China.

L. NEPALENSE.—The yellow flowers of this species have a dark purple central zone and are very handsome. It is a native of the Western and Central

LILIUM MONADELPHUM SZOVITZIANUM.

Himalayas at an elevation of 7,000 ft. to 9,000 ft.; but in this country is only cultivated in pots. We figured it quite recently in Vol. XII, p. 785.

L. CANDIDUM.—Description is hardly necessary for this old and popular Lily, which is the first of the really hardy species to come into bloom during the

month of June, when its pure white and highly fragrant flowers are very acceptable. It thrives in any ordinary garden soil that is not too heavy, and when doing well should be left alone, as it dislikes disturbance. It is the real White Lily and a native of Southern Europe from Corsica to Persia and the Caucasus.

L. WASHINGTONIANUM.—Without doubt this is a magnificent Lily varying from 4 ft. to 6 ft. under favourable conditions, and producing from twelve to twenty flowers in a raceme. They are funnel-shaped, fragrant, and white or tinted with red or purple, and thinly speckled with lilac on the interior. The leaves are arranged in whorls, and the plant is bold and distinct. It is a native of California on the mountains near the coast.

L. PARRYI.—The funnel-shaped flowers of this species are of a clear yellow, thinly spotted internally with small purple specks, and produced in racemes of twelve to fifteen flowers on strong stems. It is a fragrant and handsome Lily, imported from California in 1879, and by no means common. The accompanying illustration (p. 12) will give an idea of the general contour of the species.

L. TIGRINUM.—The brilliant orange-red flowers of the Tiger Lily, handsomely spotted with dark purple, are familiar to most people. There are a few magnificent varieties including the richly spotted L. t. splendens and l t. flore pleno (see illustration p. 12). It comes from the temperate parts of Japan and China, and is of the easiest cultivation in any fairly good garden soil.

L. AURATUM.—The golden-rayed Lily of Japan is even more familiar to the British public than the Tiger Lily, by reason of its extensive cultivation for conservatory and greenhouse decoration. It is the queen of all the Lilies, producing flowers a foot in diameter. On fasciated stems we have seen as many as 134 flowers in one huge cluster. In the southern counties it does well in peat soil in the open air. There are numerous splendid varieties in cultivation, of which L. a. rubro-vittatum, L. a. Wittei, white, and L. a. platyphyllum are notable.

L. SPECIOSUM.—There are numerous, choice and beautiful forms of this Japanese species, which is equally as common as L. auratum for pot culture. It is perfectly hardy in the south at least, and being dwarf in the open air, makes very showy beds. There are something like five white varieties of it in gardens, but that known as L. s. Kraetzeri is the best. L. s. rubrum is heavily spotted with crimson, and L. s. Melpomene is one of the darkest and finest.

L. HENRYI is one of the handsomest of recent introductions, having been sent home from Ichang, China, by Dr. Henry in 1888. It is most nearly allied to L. speciosum but is more vigorous, reaching a height of 4 ft. to 5 ft. in the open ground. The flowers are of a beautiful orange-apricot, but similar in form to those of L. speciosum.

L. PHILADELPHICUM is totally different from any of the above, and like the next three species has erect, open flowers, which in this case are of a brilliant orange-red, thinly spotted with purple. The L. umbellatum of gardens is a vigorous form of this species.

L. CROCEUM has erect flowers of a lively orange, densely spotted with crimson and furnished with elevated papillae. During July it is a conspicuous feature of the open garden. It is a European species from Switzerland southwards.

L. DAVURICUM is equally hardy as it comes from Central and Eastern Siberia and forms a conspicuous feature of many gardens during July. The large erect flowers are of a brilliant red, and slightly spotted. It thrives in soil of a varied description.

L. ELEGANS is a Japanese species of the same alliance, bearing a few very large flowers on the top of dwarf stems. The flowers are orange-red in the type and the segments are nearly spotless and almost smooth compared with its allies. For bedding purposes it is very useful. There are many fine varieties of it, including L. e. armeniacum rich, apricot, L. e. cruentum, crimson, and L. e. Wallacei, glowing apricot.

L. PARDALINUM.—This may well be taken as a representative of a large group of Lilies characterised by the segments of the flower, being strongly rolled back in the form of a turban (see illustration p. 12). The species under notice is a stately Lily much cultivated within recent years in the flower garden. The flowers are bright orange-red, with a lighter centre, beautifully spotted; but a great amount of variation may be noted in a large bed of this stately species. The leaves are whorled.

L. CANADENSE is a dwarf species with drooping, bell-shaped, bright red spotted flowers. Like the last it comes from North America.

L. HUMBOLDTI comes from California and grows from 4 ft. to 5 ft. high, bearing from six to forty flowers on vigorous stems. The large reddish-orange and purple veined flowers are very handsome.

L. HANSONI.—The flowers of this Japanese species are of a beautiful orange-apricot hue; but are otherwise remarkable for the thick and spongy character of the segments. It is of easy culture and handsome in beds.

L. MARTAGON.—The Turk's cap Lily is one of the oldest, commonest, and most easily grown in cultivation. The type has dull purplish red flowers, but there are several beautiful varieties, including L. M. dalmaticum, crimson purple, and L. M. album, with long racemes of white flowers (see illustration p. 12).

L. MONADELPHUM SZOVITZIANUM (see illustration p. 12) may be taken as a type of this same group of Lilies, but having scattered instead of whorled leaves. It is a bold and handsome Lily with large yellow flowers, spotted in the centre and borne on stately stems.

L. LEICHTLINII also has large yellow flowers handsomely spotted with purplish red. It is altogether distinct from the previous Lily.

L. TESTACEUM is believed to be a garden hybrid between L. candidum and L. chalcedonicum, and this belief has been confirmed by trial. The flowers are soft reddish-yellow or testaceous as the name implies, and appear in July.

L. CHALCEDONICUM is a bright scarlet Lily of common occurence in gardens, flowering in July. It comes from Greece.

L. POMPONIUM comes from southern France and northern Italy and has bright orange-red flowers not unlike those of L. chalcedonicum, but the leaves are longer and more loosely arranged. All of the above Lilies from L. pardalinum to L. pomponium inclusive are of the easiest cultivation in ordinary garden soil; but they thrive best when planted in beds amongst dwarf Rhododendrons or other shrubs, so that the soil may be shaded from hot sunshine to prevent too great a loss of moisture. Every garden should possess a good number of them.

We are indebted to Mr. T. S. Ware of Tottenham, for all the illustrations of Lilies here presented for the benefit of our readers.

CROCUS GIANT PURPLE IN THE GRASS, REGENT'S PARK.

CROCUSES.

SOON after the waxy blooms of the Snowdrop have made their appearance, and before they have entirely left us, does the humble Crocus brave the blast of early spring, and star the ground with its bright blossoms. The earliness of its flowering season alone would insure it a hearty welcome, but when to this is added a full share of beauty, it is manifest that the Crocus holds an important position amongst plants suitable for the decoration of the flower garden in early spring. The cottager knows it, and loves it well, and it is an honoured occupant of our great public parks, as well as of the large gardens of the landed proprietor.

Broadly speaking, the genus may be divided into two sections, the first in which the plants flower in spring, and the second in which they flower in autumn. It is with the first section that we have now to deal, the other must be left for future consideration.

Crocus vernus, from which most of the varieties

cultivated in our gardens have sprung, if not a true native of Britain, has been naturalised in the meadows about Nottingham and other parts of central England, also in some portions of Ireland, so that it and its varieties are perfectly hardy.

Crocuses may be employed in the flower garden in a variety of ways. Medium-sized clumps of one colour, dotted at intervals near to the front of a mixed herbaceous border look very pretty, whilst as an edging to other beds they are by no means to be despised. Where the practice of planting three standard Rose bushes in small circular beds is followed, nothing is more suitable for covering the ground, shaded by the bushes than Crocuses, and a Rose garden in which these pretty bulbous plants have been tastefully utilised may be made to literally glow with colour at a time when the Roses themselves are anything but ornamental. In following out such a plan the most important point is the arrangement of colours. Certainly the most effective method is to plant in masses of one colour, and where the beds are small, this idea should be carried out.

From the artist's point of view, however, all these arrangements are defective. Crocuses produce but comparatively little foliage, and the result is that we get a blaze of colour with nothing to soften it or to tone it down if they are left to themselves. Planting upon grassy lawns naturally suggests itself as a way out of the difficulty, and we venture to say that no one who has witnessed the magnificent effects yearly produced at Kew, and in the various London parks in this way could fail to appreciate and admire them. The accompanying illustration (p. 13), for which we are indebted to Messrs. Jas. Carter & Co., represent that fine variety Giant Purple, growing in Regent's Park. The soft green hue of the grass just waking to life 'neath the influence of the genial vernal rains and breezes serves as an admirable foil for the starry flowers reposing upon its bosom, and just the thing to show them off to advantage.

No studied arrangement of colours is needed in such a case, the plants must appear as if Nature's hand had strewn them there, and it may be stated here that once planted they will be quite capable of looking after themselves. The plants make little foliage, and what little there is will have fulfilled its office before the scythe or the mowing machine are called into play, so that the difficulty that applies to the naturalising of coarser growing subjects on the lawns near to the mansion is not to be apprehended here.

Any ordinary soil, except clay, will suit Crocuses, so there is no need of a great amount of preparation. Planting should be conducted as soon as the corms come to hand. They should be buried about 3 in. below the surface of the soil. A similar distance may be allowed between the corms when planting in beds.

Although Crocuses will not force to any extent, they may be successfully cultivated in pots, and a few pans or pots filled with them are generally much sought after for conservatory decoration whilst the year is yet young. The same compost as that used for Hyacinths will do. Five good-sized corms will be enough for a 5-in. pot. If pans are used, about an inch and a half space may be allowed between the corms. After potting, the pots should be plunged in ashes or cocoanut fibre in the same way as the other bulbs, and allowed to remain in this position for a few weeks until roots have been formed, and the tops have commenced to grow. Afterwards they must be removed to a cold frame or a shelf in a greenhouse, where they can obtain plenty of light. Fire-heat must only be applied to keep the frost out, or the corms will not flower. For naturalising purposes it will be well to invest in a collection of mixed colours. The corms thus obtained are quite good enough for the purpose, and come rather cheaper. For bedding purposes and for culture in pots, the following varieties will be found very suitable:—Mont Blanc, and Lady Stanhope, white; Purpurea Grandiflora, and Othello, purple; Albion, white striped; La Majesteuse, violet striped; Sir John Franklin, blue; Large Yellow, and Cloth of Gold, yellow.

GALTONIA CANDICANS.

Probably this plant is better known by its less correct name of Hyaciuthus candicans. The tall, graceful racemes of pure white flowers are produced at a time of the year when flowers of the kind are beginning to get somewhat scarce. Added to this, they associate wonderfully well with many other bedding plants. They may be employed with excellent results for planting amongst hardy Azaleas, dwarf Rhododendrons, and other flowering shrubs. Interspersed with Gladioli, they also do good service. One of the prettiest beds at Kew last year was one filled with Galtonia candicans and Gladiolus brenchleyensis, the pearly-white of the one and the vivid scarlet of the other producing a fine contrast. The name of the genus is commemorative of Francis Galton, an explorer of some celebrity, and includes two species only, that under notice and G. princeps, a closely allied species, but of secondary decorative value. The racemes are broader and shorter, and the flowers smaller and of a decided greenish cast. Galtonias will thrive in almost any ordinary garden soil, although they prefer that of a fairly light nature. An admixture of peat or leaf soil is therefore much to their liking. Propagation may easily be effected by offsets. Seeds will produce good flowering bulbs within four years of the date of sowing.

BULBS FOR THE MILLION.

One of the most important of the direct results that accrue from the improved international communication that characterises the latter part of the nineteenth century is the vital union that exists between the producer and consumer. Distance has been to a very large extent annihilated, and we are able to take advantage of the influence of fairer climes than ours in obtaining for our own use what our own country cannot. Especially is this the case with horticultural commodities. Holland and Japan have been brought to our very doors, so to speak, and the horticultural traders of these countries are only too glad to exchange the fruits of their labours for British gold.

The distinctive feature of present-day gardening is undoubtedly the vast amount of bulbs, chiefly of foreign growth, that contribute their quota of beauty to the adornment of our flower gardens, our conservatories, and dwelling houses. All this speaks with no uncertain voice of a huge channel somewhere, by means of which these supplies are distributed amongst us. To those of us who are accustomed to see bulbs of various sorts doled out in dozens and half dozens over the counter of a local nurseryman the immensity of the bulb trade does not so forcibly appeal. It is only when we visit one of the great centres of the industry, and see thousands upon thousands disposed of to eager buyers, that we are able to realise its far-reaching character.

The name of Messrs. Protheroe & Morris is too well known whereever the love of horticulture has penetrated to need any further advertisement here. Ever in search of a new experience, and learning that a great sale of imported bulbs would be held at the premises of 67 and 68, Cheapside on Friday, August 28th, we were fain to bend our steps thither and witness for ourselves the transactions that would ultimately result in supplying our gardens next season with such a wealth of bloom and beauty. And what went we forth to see? Simply a knot of interested individuals, many of them nurserymen and dealers, with a fair amount of the amateur element intermixed. Among the latter appeared more than one black coat of clerical cut, with the accompanying white tie. Of course it goes without saying that an auction graced by the clergy must be a very select affair indeed, and we were therefore not surprised to note the good behaviour of the meeting generally.

As between seventeen and eighteen hundred lots had to be disposed of under the hammer it may be surmised that the business was conducted with remarkable celerity and despatch. From the gentleman in the box, who wielded both his tongue and his hammer with right good will, down to the numerous porters who were bustling up the various lots as they were called for, all went off with machine-like regularity. One thing that impressed us most forcibly was the fact that although each bag of bulbs was duly sampled for the benefit of those who wished to see what they were buying, in very few cases did the buyers take the trouble to look. Long connection with the firm has doubtless convinced them that the material sold by Messrs. Protheroe & Morris is to be depended on, and they felt proportionately comfortable in making their bids. A splendid instance, this, of how the confidence begotten of fair dealing between buyer and seller contributes to smooth and easy working.

Of course, to listen to the auctioneer one could only come to the conclusion that he was a philanthropist in disguise, who sold simply because he was born to sell, and not because he made anything by it; but after all he was really very good, for he did not remind his audience more than once in five minutes of the bargains they were losing. Really it seems astonishing, taking the low prices into consideration, that so many Dutch growers can make bulb-growing pay. Labour, carriage, and packing have all to be thought of, in addition to the rental of the land the plants occupy, and the time they take to grow into marketable condition. As a sample of the returns, we may say that 400 fine La Reine Tulips fetched 4s. 6d.; 300 grand bulbs of that most showy of Tulips, Keizer's Kroon, only 6s.; 400 Duc Van Thol, 200 Golden Crown, 200 Artus, 200 double La Candeur, and 200 double and single mixed Tulips were knocked down for 12s.—just a shilling a hundred for flowering bulbs in superb condition, as our own experience told us. Hyacinths, both single and double, all fine named varieties, changed hands at barely a penny a piece. The single red Norma, however, always seems to fetch a better price, as also do some of the finer of the blue varieties, although even then prices fluctuated considerably during the afternoon. "They must go" said the man with the hammer, and go they did, accordingly. Collections of Crocuses, 400 in each, composed of 50 each of eight named sorts, were knocked down as fast as they were put up at 4s. a time. Who would be without Crocuses? Narcissi seemed no exception to the general rule of cheapness. Thus 100 Grand Soleil d'Or, 72 Grand Monarque, 100 Gloria Mundi, and 150 Incomparabilis Stella were sold for 7s. 6d.

The above are only a few instances of the prices that ruled throughout the day. Narcissi, Hyacinths, Tulips, Crocuses, Scillas, and Snowdrops, were no drug in the market, but were speedily appropriated by ready buyers until the last lot in hand was disposed of. We found ourselves wondering, as we left the auction rooms, how many hundreds of acres, how many thousands of gardens, that one day's sale had provided for, and if one day could do so much, how about all the other days? but we gave it up, for that way madness lay.

SOCIETIES.

National Chrysanthemum Society, *Sept. 1st, 2nd, and 3rd.*—The Chrysanthemum season was opened most successfully on the above dates at the Royal Aquarium, when an exhibition of early flowering Chrysanthemums, Gladioli, and Dahlias was held. Naturally the show was of a much more varied character than later ones could possibly be, for although Chrysanthemums were not present in very great force, Dahlias, and hardy flowers generally were well represented.

Mr. E. F. Such, Maidenhead, staged the best twenty-four bunches of Chrysanthemums, comprising eighteen varieties. In a class for twelve blooms of Madame Desgranges some excellent material was forthcoming. Mr. B. Calvert, gardener to Colonel Archer Houblon, Hallingbury Place, Bishop's Stortford, was placed first with a splendid lot. Mr. J. Sandford, gardener to G. W. Wright-Ingle, Esq., Wood House, North Finchley, was second; and Mr. G. W. Forbes, gardener to D. Nicols, Esq., Regent House, Surbiton, third. Mr. B. Calvert staged another twelve superb blooms, this time of George Wermig. The majority measured fully seven inches in diameter, and the colour left nothing to be desired. Mr. J. Sandford was second. Mr. James Watt, gardener to Henry Bell, Esq., Fitzjohn's Avenue, Hampstead, N.W., showed the best six bunches of yellow varieties, three blooms to a bunch. Competition was very poor in the amateurs' classes, the most noteworthy exhibit here being a very pretty epergne, contributed by Mr. D. B. Crane, Archway Road, Highgate, N.

In the nurserymen's class, Mr. John Walker, Thame, Oxon, led the way for forty-eight blooms, comprising not less than thirty-six varieties of show and fancy Dahlias; Maud Fellows, Duke of Fife, Seraph, Perfection, Mrs. Gladstone, Harry Keith, Majestic, Geo. Rawlings, Miss Cannell, and Grand Sultan were some of his best varieties. Messrs, Keynes, Williams & Co., Salisbury, occupied second, and Mr. S. Mortimer, Swiss Nursery, Farnham, the third place, both with fine collections. Mr. John

Walker represented his previous success in the smaller class for thirty-six show and fancy Dahlias, distinct. Mr. M. V. Seale, Vine Nurseries, Sevenoaks, was second, and Mr. S. Mortimer, third.

Mr. J. T. West, Tower Hill, Brentwood, took the premier award for twenty-four show and fancy Dahlias, distinct. Mrs. Morgan, J. Britton, Mrs. Gladstone, Harrison Weir, J. T. West, and Ethel Britton were some of his best samples. Mr. G. Humphries, Chippenham; and Mr. J. R. Tranter, Henley-on-Thames, occupied second and third places respectively. Mr. J. T. West also had the best twelve Dahlias distinct.

In the amateurs' classes first awards were won by the following exhibitors for Dahlias:—Mr. J. Stredwick, Silver Hill, St. Leonards, for twenty-four and eighteen blooms, and Mr. Richard Burgen, Eynesbury, St. Neots, for six blooms. In the open classes for Pompon varieties, twenty-four bunches, distinct, were best shown by Messrs. J. Cheal & Sons, Crawley, Sussex. Mr. M. V. Seale was second; and Messrs. Keynes, Williams & Co., third. Messrs. J. Cheal & Sons also led the way for eighteen bunches of decorative and Cactus Dahlias, showing, amongst others, grand examples of Beatrice, Harry Stredwick, Mrs. Peart, and Fusilier. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, were first for twelve bunches and two, of six blooms each of Cactus sorts. Twenty-four bunches of single Dahlias were best shown by Messrs. J. Cheal & Sons, who had a very fine lot. T. W. Girdlestone, Esq., Sunningdale, Berks, was placed second, and M. V. Seale third in this class..

Mr. T. W. Stredwick was credited with the first award for the best six bunches of Cactus Dahlias contributed by amateurs.

A grand exhibit of Gladioli was made by Messrs. J. Burrell & Co., who carried off the first award for a collection. Upwards of fourteen dozen spikes in superb condition made a magnificent display, all the leading varieties being forthcoming. Mr. R. Morrow, 12, Corn Street, Leominster, was credited with the third award.

The miscellaneous exhibits were a host in themselves and added much to the attraction of the show. The fountain near the lower end of the large hall was tastefully decorated with plants, cut flowers, and fruit by Messrs. J. Cheal & Sons. At the other end the Ichthemic Guano Co., had erected an imposing trophy, setting forth the value of their now renowned specific, and prettily adorned with plants.

A Silver Gilt Medal was awarded to Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E., for an extensive exhibit of cut zonal Pelargoniums and Dahlias, tastefully set up with Palms, Ferns, and Isolepis. The Dahlias occupied the large central mound in the centre of the table, the Pelargoniums being relegated to the smaller flanking groups.

A similar award was made to Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., who had a superb exhibit of hardy flowers. Dahlias were the chief feature here, all sections of this popular flower being on view in the pink of condition.

Messrs. Carter, Page & Co., 52 and 53, London Wall, E.C., received a Silver Medal for a very showy table of cut flowers. A bank of Cactus Dahlias was a conspicuous item here, and received no small share of attention from the visitors.

Messrs. Cutbush & Son, Highgate, N., sent hardy cut flowers in great quantity, Dahlias and perennial Asters being accorded prominence (Silver Gilt Medal). Mr. Eric F. Such received a Silver Medal for a small but choice group of hardy cut flowers. A similar award was made to Mr. F. G. Foster, Roehampton Nurseries, Havant, for a very nice collection of Sweet Peas.

Mrs. W. Green, Junr., The Nurseries, Harold Wood, Essex, contributed a wonderfully pretty floral table which so pleased the judges, as, indeed, it did everyone else, that a Floral Medal was voted.

Mr. J. H. Witty, Nunhead Cemetery, S.E., put up a highly meritorious group of early-flowering Chrysanthemums in pots (Silver Gilt Medal). A smaller group sent by Mr. Chas. Shaw, Hall Street, Sherwood, Notts, received a Silver Medal.

Messrs. R. Spooner & Sons, Hounslow, staged an exceedingly fine collection of hardy fruit, including Apples, Pears, Plums, Cherries, and Peaches (Silver Gilt Medal).

From Mr. A. Pentney, The Gardens, Worton Hall, Isleworth. came a nice collection of vegetables, all of them in first-class condition (Silver Medal).

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Hardy Cyclamens becoming White.—*Sigma*: The flower you send is a white variety of Cyclamen neapolitanum. It was not pure white, but had a pale purple zone in the interior of the short tube. If all the flowers arising from the corms in previous years were rose, it is a strange phenomenon that they should now be white. Not knowing the whole of the circumstances it would be somewhat difficult to arrive at a correct solution of the case. We would suggest that you probably planted a batch of seedlings originally, and that there were white varieties amongst them. These would now be making their appearance as a result of greater vigour, or because they are earlier than the rose varieties. Another solution of the case is that the rose coloured seedlings have sported to white. This would be strange, but similar cases often occur amongst other classes of plants, though we should hardly have expected it with Cyclamen neapolitanum. Further observations, however, may clear up the mystery, and if so we should be pleased to hear concerning the same.

Horticultural Instruction.—*James Good*: We shall post you an old prospectus for the winter term at the Chelmsford School of Horticulture at the Technical Laboratories. Students in the county of Essex are allowed so much for board and lodgings, while the instruction is given free. Some students are being admitted to the class from Suffolk at £3 a head for the three weeks' course, but they have to find board and lodgings. If this would suit you, apply to the secretary, Mr. J. H. Nicholas, County offices, Duke Street, Chelmsford, Essex, and he will endeavour to arrange for having your name entered. A class is now being arranged to commence on September 14th.

Names of Plants.—*Various*: Poterium canadense; 4, Statice profusa, or a variety of it: 5, Fuchsia procumbens; 6, Abrus precatorius, often called the weather plant; 7, Tradescantia multiflora argenteo-variegata; 8, Tradescantia multiflora aureo-variegata. —*F. H.*: 1, Euonymus latifolius; 2, Aster, but material sent insufficient to determine the species; 3, Malva sylvestris, apparently; 4, Send when in fruit; 5, Polypodium Billardieri apparently, but no fructification.—*T. Watt*: 1, Pyrus Aria; 2, Pyrus Maulei; 3, Pyrus japonica; 4, Fuchsia Riccartoni.—*J. L.*: 1, Pleroma macrantha; 2, Rivina laevis; 3, Anthemis tinctoria; 4, Colchicum antumnale; 5, Athyrium Filix-foemina Victoriae.—*C. B. G.*: Impatiens fulva; Impatiens parviflora, small yellow flowers; the common Hemp (Cannabis sativa).—*A.H.*: 1, Centaurea macrocephala; 2, Croton aigburthense; 3, Croton angustifolium.—*Geo.Hutchinson*: 1, Nephrolepis cordifolia; 2, Yucca aloefolia variegata; 3, Adiantum Capillus-Veneris var.; 4, Adiantum concinnum latum; 5, Osmunda regalis palustris; 6, Nephrodium molle corymbiferum; 7, Pteris umbrosa; 8, Asplenium bulbiferum fabianum; 9, Pteris longifolia.

Names of Fruit.—*Upton*: Pear, Windsor. — *W. Walker*: Apple, Red Juneating.—*Geo. Telford*: 1, Alfriston; 2, Ecklinville Seedling; 3, Lord Grosvenor; 4, Yorkshire Beauty; 5 and 6, Warner's King; 7, Worcester Pearmain; 8, Duchess of Oldenburgh; 9, Cellini. — *Various*: Pear not known; Plum, Mitchelson's.—*Constant Reader, Stonehouse*: 1 and 2, Pear Louise Bonne of Jersey; 3, Pear Williams' Bon Chretien.

Mushrooms Eaten.—*T. Easton*: Yes, woodlice do eat and injure young mushrooms; but slugs and cockroaches also do the same thing. We should not advise the use of phosphorous paste on the beds but that you should set traps of pieces of Carrot, Turnip, and Potatos. Visit the beds at night with a lantern or candle and you will catch the marauders in the act.

Communications Received.—M. Temple.—R. G. W.—C. B. G.—J. Crook.—A. E. Stubbs.—"Natural Science."—Dobie & Dicks.—Dobbie & Co.—James Thurstan.—J. Mitchell.—J. C. Stogdon.—T. R.—Robert L.—J. T. Bingham.—X.—Dahlia —W. G.—Electric.—F. W. M.—L. Vince.

TRADE CATALOGUES RECEIVED.

BENJAMIN SODDY, 243, Walworth Road, London, S.E.—Soddy's Bulbous Flower Roots.

CHARLES WALKER, F.R.H.S., 93a, Fishergate, Preston.—Catalogue of Bulbs and Roots for Spring Flowering.

LONDON SEED TRADE.

August 28th, 1896.

MESSRS. HURST & SON, 152, Houndsditch, and 39, Seed Market, Mark Lane, report a moderate enquiry for Mustard, Rape, and Trifolium incarnatum at prices current last week. Some little speculative trade has opened up in Red Clover and Cowgrass. Ryegrass steady.

Land for the People.

Freehold five acre poultry farms in the United States only £20, convenient to Philadelphia, close to Railway station.

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3 Incomparabilis Frank Miles
3 ,, Beauty
3 ,, Sir Watkin
3 Incomparabilis Queen Bess
3 ,, Double, "Eggs and Bacon"
3 ,, ,, "Codlins and Cream"
3 Barrii conspicuus
3 Barrii Maurice Vilmorin
3 Leedsii Mrs. Langtry
3 Nelsoni William Backhouse
3 Burbidgei John Bain
3 ,, Falstaff
3 ,, Baroness Heath
3 Poeticus ornatus
3 ,, Double Gardenia-flowered

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20 Johnstoni Queen of Spain
20 Obvallaris
20 Oporto Yellow
20 Rugilobus
20 Princeps
20 Moschatus
20 Pallidus praecox
20 Telamonius plenus
20 Incomparabilis Leedsii
20 Incomparabilis Cynosure
20 ,, Double, "Butter and Eggs"
20 Barrii Golden Mary
20 ,, General Murray
20 Leedsii Duchess of Brabant
20 Burbidgei Vanessa
20 Poeticus ornatus
20 ,, of gardens
20 ,, Double Gardenia-flowered
20 Biflorus

CHOICE MIXED DAFFODILS OF MANY SORTS, per 1000, 30/-; per 100, 4/6.
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THE PEERLESS DAFFODILS, OR CHALICE-CUPPED STAR NARCISSI, MIXED COLOURS. The grand effect of these light graceful Daffodils must be seen to be realised as naturalized plants. Their value as cut flowers for bouquets and vases cannot be over-estimated. *Mr. William Robinson has made a great feature of these at Gravetye*, per 1,000, 37/6; per 100, 5/-.
TRUMPET DAFFODILS, MIXED, including **Princeps, Abscissus, Spurius, Rugilobus, Lent Lilies, Telamonius plenus,** etc., per 1,000, 42/-; per 100 5/6.

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CONTAINS 350 BULBS OF FINE QUALITY, AS FOLLOWS:—

12 Choice named Hyacinths
12 Early White Roman Hyacinths
3 ,, Blush ,, ,,
3 ,, Blue ,, ,,
6 Double Roman Narcissus
6 Narcissus Paper White "Early Snowflake"
3 ,, Polyanthus Gloriosus
3 Narcissus Polyanthus "Grand Soleil d'Or
25 Sweet-scented Single Jonquils
3 Narcissus (Daffodils) obvallaris
3 ,, Pallidus praecox
3 ,, Telamonius plenus
3 ,, Princeps
3 ,, Poeticus ornatus
12 Single Early Scarlet Tulips "Duc Van Thol"
6 Single Tulip Chrysolora
6 ,, ,, Cottage Maid
6 ,, ,, Pottebakker Scarlet
6 Double Tulip Tournesol
100 Splendid (named) Crocuses
25 Scilla sibirica
50 Elwes Giant Snowdrop
12 Chionodoxa Luciliae
12 ,, sardensis
12 Allium neapolitanum
1 White Bermuda Lily
2 Violet-scented Iris reticulata
12 Freesia mixed hybrids

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20 Choice named Hyacinths
6 Early White Roman
3 Polyanthus Narcissus Gloriosus
3 ,, "Scilly Isles" White
3 ,, "Grand Soleil d'Or"
25 Sweet-scented Single Jonquils
6 Narcissus Golden Spur
6 ,, bicolor Empress
6 Narcissus Telamonius plenus
6 ,, Poeticus ornatus
6 Single Tulip Chrysolora
6 ,, ,, Dusart
6 Single Tulip Princess Marianne
6 ,, ,, Van Vondel
6 Double Tulip Tournesol
100 Splendid named Crocuses
12 Scilla sibirica
12 Chionodoxa Luciliae
12 Chinodoxa sardensis
25 Elwes Giant Snowdrop
6 Puschkinia libanotica compacta
6 Sweet-scented Iris persica
1 White Bermuda Lily
12 Milla uniflora

Barr's "Covent Garden" 21/- Collection of Bulbs

FOR THE FLOWER GARDEN, CONTAINING 700 BULBS OF FINE QUALITY, MOST SUITABLE FOR OUT-DOOR DECORATION.

30 Hyacinths, Barr's Rainbow Mixture, large-flowered
6 Polyanthus Narcissi
5 Daffodils, Queen of Spain
5 ,, Obvallaris
5 ,, Princeps
5 ,, Pallidus praecox
5 ,, IncomparabilisQueenBess
5 ,, Leedsii amabilis
5 ,, Poeticus ornatus
12 Jonquil-like Daffodil "Regulosus"
25 Single Tulips, Barr's Rainbow mixture
25 Double Tulips, Barr's Rainbow mixture
50 Crocus, large yellow
50 ,, striped
50 ,, blue
50 ,, white
50 Snowdrops
12 Scilla sibirica
20 Chionodoxa Luciliae
20 ,, sardensis
24 Winter Aconites
12 Blue Grave Hyacinth
12 Allium Moly, yellow
25 Star of Bethlehem
25 Wood Hyacinths, mixed
10 Milla uniflora
25 Summer Snowflakes
12 Fritillaria, mixed
2 Crown Imperials, in two vars.
2 Lilium candidum
2 ,, Tigrinum splendens
2 ,, Thunbergianum, mixed
25 Barr's Giant Ranunculus, mixed
25 Spanish Irises, mixed
12 English Irises, mixed
50 Anemone, large-flowered, single, mixed

Barr's "Woodland" 21/- Collection of Bulbs

For naturalizing in Woodlands, Orchards, Wild Gardens, etc., Containing 1,112 suitable Bulbs of fine quality.

200 Daffodils mixed of all kinds
100 Winter Aconites
100 Star of Bethlemen, white
50 Blue Starch Hyacinths
200 Crocuses, mixed
100 Wood Hyacinths, mixed
100 Elwes Giant Snowdrops, small bulbs
25 Summer Snowflakes
25 Dogs' Tooth Violets, mixed
25 Anemone, Single, mixed
12 ,, apennina
12 Anemone fulgens
50 Milla uniflora
25 Allium Moly, yellow
25 Lily of the Valley, crowns
12 Snakeshead Fritillarias
6 Crown Imperials, mixed
3 Lilium davuricum, mixed
3 ,, pyrenaicum, yellow
3 ,, candidum
12 Gladiolus Colvillei
12 ,, ,, The Bride
12 ,, byzantinus

Barr's 42/-, 63/-, 84/-, & 105/- Collections of Bulbs as above

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, SEPTEMBER 12th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 14th.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens,
Trade Sale at Dyson's Lane Nursery, by Messrs. Protheroe & Morris.

TUESDAY, September 15th.—Messrs. G. Bunyard & Co.'s Centenary Show at Maidstone (2 days).
Trade Sale at Burnt Asb Lane Nurseries by Messrs. Protheroe & Morris. Sales of Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.

WEDNESDAY, September 16th.—Trade Sale at the Nurseries, South Woodford, by Messrs. Protheroe & Morris.
Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens.

THURSDAY, September 17th.—Trade Sale at the Brimsdown Nursery, by Messrs. Protheroe & Morris.
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, September 18th.—Trade sale at the Longland's Nursery, by Messrs. Protheroe & Morris.
Sales of Orchids and Bulbs, by Messrs. Protheroe & Morris, and of Bulbs by Mr. J. C. Stevens.

POTATO EXPERIMENTS IN BERKSHIRE.—An extensive series of experiments on the manuring of Potatos has been carried out on the Trial Grounds of Messrs. Sutton & Sons, Reading, by Mr. Douglas A. Gilchrist, Director of the Agricultural Department of the University Extension College, Reading, in collaboration with Mr. A. W. Sutton. The experiments were divided into seven sets, all determined by the kind of manure employed, and the time it was applied, except in the seventh set where spraying experiments were recorded. A large party of about eighty agriculturists and others interested in Potato culture met at Reading to inspect the trials; but previous to this inspection they were most hospitably entertained to luncheon by the Messrs. Sutton, in the Abbey Hall, Reading. All the partners of the firm were present, supported by the Mayor of Reading, the Principal and the Director of the Agricultural Department of the College, and Mr. Owen Thomas (The Queen's Gardener), as well as other well-known gentlemen.

From the Abbey Hall, the party were driven in breaks to the Trial Grounds, and fortunately the weather kept fine till the inspection had almost been completed. The Potato most largely employed in these experiments was The Sutton Flourball, a relatively new, round, red, disease-resisting variety for field culture and of excellent table quality. The first set of ten plots had been manured in 1895 but not in 1896. Plot 1 had not been manured in either of the years, but gave a total weight of 6 tons 10 cwt. 20 lbs. Plot 2 received 20 tons of farmyard manure per acre, in 1895, at a cost of £5, and gave a total weight of 7 tons 10 cwt. 60 lbs. A similar weight of farmyard manure together with complete artificials, applied to the third plot, gave a very singular result, inasmuch as the total weight of tubers (6 tons 9 cwt. 52 lbs.) was less than from the first plot that received no manure at all. Complete artificial manure alone gave precisely the same result. The artificial manures actually employed were 2 cwt. each of nitrate of soda and superphosphate, and 1½ cwt. of sulphate of potash. A double dressing of complete artificial manure alone raised the weight to 8 tons 8 cwt. 4 lbs per acre. Complete artificials with a half-dressing of nitrate gave 8 tons 17 cwt. 16 lbs. A double dressing to plot 7, reduced the total crop to 7 tons 19 cwt. 12 lbs. which was certainly singular. In plot 8, the potash was omitted and the crop rose to 8 tons 9 cwt. 72 lbs. When phosphates only were omitted (plot 9), the weight was 8 tons 11 cwt. 28 lbs. When nitrogen alone (plot 10) was omitted, the crop was reduced to 8 tons 6 cwt. 68 lbs The results from plots 8, 9, and 10, would therefore indicate that nitrogen is the most important of the artificial manures for Potatos, and that potash comes next in order of value. This, of course, is quite in agreement with our previous convictions. The above ten plots belong to the first set of the experiments. No manure has been applied since 1895, so that a second crop has been harvested from the same ground. The heavy weight of produce in all cases except in plots, 1, 3, and 4, show that the beneficial effect of artificial manures is carried over more than one season. In the case of nitrate at least, the dry summer of 1895 and the dry winter following it, had the effect of economising the manure in the soil, so that the crop just dug up has benefitted by the same. All these are important considerations.

The second set of ten plots was manured both in 1895 and 1896. The result was that the weights per acre were considerably increased, but scarcely sufficient in the majority of cases to warrant the double expenditure for manures. The best results accrued in plots 5 and 7 where the heavy dressings of nitrate clearly accounted for the increase. It is difficult to explain the remarkable decrease in plot 10, otherwise than by the omission of nitrate. The manures actually applied were 2 cwt. superphosphate, and 1½ cwt. sulphate of potash, and the return was 5 tons 16 cwt. 88 lbs. Here again the importance of nitrogen to the Potato crop becomes apparent. All the manures employed were applied early in January with the exception of the readily soluble nitrogen. Set three was initiated this year and treated as in the second set. The results show lower weights in a considerable number of cases, the weakest being in plot 1, where no manure at all was applied. This would seem to show that the ground was poorer from not being manured in 1895. The next lowest weight was harvested from plot 10, where nitrogen had been omitted from the otherwise complete artificial manure. The heavy dressings of nitrate again gave excellent results, the heaviest weight being 9 tons 5 cwt. on plot 7, which had a complete artificial manure with a double dressing of nitrate.

Set 4 was devoted to spring manuring, that is, the applications were made when the Potatos were planted between April 17th and 22nd. Here the figures have been radically altered, for the heaviest crop (9 tons 4 cwts. 72 lbs.) was obtained where farmyard manure only, at the rate of 20 tons per acre, was applied. The second

heaviest crop was obtained where both farmyard manure and complete artificial manure was employed; this amounted to 8 tons 19 cwt. 32 lb. This might be explained by the fact that farmyard manure greatly increases the retention of moisture in the soil. The lightest weight (5 tons 3 cwt. 104 lbs.) was taken from the plot where complete artificial manure and a half dressing of nitrate was given. Seven out of ten plots gave a relatively heavy crop, so that something is to be said in favour of spring manuring when a droughty summer follows. Unfortunately for the cultivator, he cannot foresee what the rainfall is likely to be when the planting is being done.

A set of ten plots was also set apart for spring manuring with a totally different class of manures though containing the same ingredients of plant food. Magnum Bonum was the variety of Potato employed, and the heaviest crop obtained (9 tons 9 cwt. 72 lbs.) was where 2 cwt. fish guano, 2 cwt. of superphosphate, and ½ cwt. muriate of potash per acre, were applied. The second heaviest crop (9 tons 1 cwt. 88 lbs) was obtained by the use of 1 cwt. nitrate of soda, 2 cwt. of superphosphate, and ½ cwt. muriate of potash. The lightest weight was 6 tons 19 cwt. 72 lbs., derived from the plot manured with 1½ cwt. Ichaboe guano, 2 cwt. superphosphate and 100 lbs. of salt. The spring manuring has given by far the best results. Of the nitrogenous manures, fish guano gave the best results; but nitrate of soda has nearly as good a record. As far as potash manures were concerned, muriate of potash gave a better result than either sulphate of potash or kainit. Superphosphate gave better results than basic slag as far as phosphatic manures were concerned.

In set 6 the same kinds of manure were employed as in set 5; but they were applied in the early part of January, except in the case of nitrogenous manures. Winter manuring in this case may be considered a failure; for the manured plots showed a remarkable deficiency in nearly every case. The use of 1 cwt. nitrate of soda, 2 cwt. superphosphate, and ½ cwt. muriate of potash gave 7 tons and 80 lbs. of Potatos, being the highest figure obtained in this set. Strangely enough, the next heaviest crop (7 tons) was harvested from ground that has received no manure whatever this year. The worst results (4 tons 5 cwts. 40 lbs.) were harvested from the plot manured with 2 cwt. fish guano, 2 cwt. superphosphate and ½ cwt. muriate of potash. Precisely similar kinds and quantities of manures in set 5, applied in spring gave the best return. These are facts that ought to be borne in mind by other experimenters in future trials, so that their exact significance may be fully explained. Nitrate of soda has given the best results amongst nitrogenous manures. Basic slag is again inferior to superphosphate.

Set 7 was entirely set apart for spraying experiments; and although disease was conspicuous by its absence throughout the entire series of experiments, the spraying was not valueless as an object lesson. The plot of The Sutton Flourball that was sprayed gave 4 cwt. 88 lbs. more Potatos than the unsprayed or check plot. The reverse condition prevailed in the case of White Elephant; for the sprayed plot gave 12 cwt. 56 lbs. per acre less than the unsprayed plot plot.

The summary of the conclusions to be derived from these experiments, is that heavy dressings of nitrate are highly advantageous and necessary to secure the best crops of Potatos, not forgetting a due proportion of the other necessary ingredients. The best results were obtained by spring manuring, in one case with farmyard manures, and in another with fish guano, superphosphate and muriate of potash. This latter really gave the highest of all the returns. The second highest record was from a plot manured in winter; but as this was where a double dressing of nitrate was given, the latter was really applied in spring. Spraying is prejudicial to the securing of a full crop, more particularly in the case of early varieties. The moral to be drawn is that disease-resisting varieties of Potatos should be planted in every case where possible.

Mr. F. W. Beadon, of Huddersfield has been elected president of the English Arhoricultural Society for the ensuing year.

The Rontgen rays help to detect ingredients with which food is adulterated, such as powdered chalk or spar mixed with flour, as well as brick dust, sand and other impurities mixed with spices.

This year's Potato Crop is estimated to be about 5·20 tons per acre on the average, or 0·44 less than last year. The total weight of crop is expected to be 500,000 tons less than last year, but that amount exceeds the average of the ten years previous to 1895.

Late Sweet Pea flowers may to some extent be insured by loosening up the soil between the rows, and watering the ground with liquid manure to encourage fresh growth. All seed pods must also be picked off to concentrate the energy of the plants upon the fresh growth.

Uprooting the Edelweiss.—A correspondent of *The Standard* complains bitterly, and not without some reason for complaint, of the wanton destruction of one of the most characteristic plants in the Alps by thoughtless tourists who are wont to dilate on their feats and experiences with this plant. Says the writer, the tourist might as well boast of keeping a chamois in his back yard for three years, but that ultimately it died after a miserable struggle to exist.

New Garden Allotments at Dundee.—A meeting of residenters and householders was held on the 20th ult., in the vicinity of Gardner Street, Lochee, for the purpose of taking into consideration the advisability of renting or leasing a piece of ground on the Lawton Farm, for garden allotments. There was a a good attendance, Mr. Andrew Johnstone was called to the chair, and Mr. Andrew Kirkland, gardener, was appointed clerk to the meeting. Ultimately it was agreed to form an association to be called the "Gardner Street Garden Allotment Association.

The marriage of Mr. James Kelway, son of Mr. William Kelway, of the firm of Kelway & Son, to Miss Ella Christine Stubbs, only daughter of the Rev. Joseph Stubbs, Vicar of Buish Episcopi, Somerset, was solemnized at St. Mary's Church, Buish, on the 3rd, inst. The officiating clergyman was the Rev. F. E. Brightman M.A., of the Pusey House, Oxford, assisted by the Rev. E. M. Lance, M.A., Vicar of Pill, Somerset. The youthful bride, who was given away by her father, was attired in a handsome ivory duchesse satin costume with court train, the bodice being prettily arranged with chiffon, and the dress completed with a tulle veil and wreath of real Orange blossom. She wore as her only ornament, a diamond and sapphire broach, the gift of the bridegroom and carried a charming shower bouquet containing Orchids, Lilies, Stephanotis, Orange blossom, Roses and Tuberoses, also the gift of the bridegroom, The bridesmaids were:—Miss Beatrice A. Kelway, (sister of the bridegroom), Miss Snowie Coles, Miss Katherine Green, (cousin of the bride), and Miss Dorothy Welsh (train bearer). After the ceremony the guests to the number of nearly 100, were entertained at a reception held at the Vicarage. At 3.30 the happy pair left for London en route for Scotland where the first part of the honeymoon will be spent. On September 19th, they will start from Southampton for a tour round the world. The whole village was en fete, triumphal arches being erected at points of advantage along the route taken by the bride and bridegroom. The parishoners were entertained by Mr. William Kelway, and the Rev. J. Stubbs, at tea in the parish room, nearly 600 being present. The presents numbered nearly 140.

Hardy Fruit has been getting very plentiful in Covent Garden Market for a week or two past. Flowers of all kinds are also plentiful, but they are very different from the sweet-scented flowers of spring and early summer. Amongst the more common of the hardy and cheap flowers the China Aster plays no unimportant part at the present juncture.

Tercentenary of the Potato.—This year is the tercentenary of the introduction of the Potato into Ireland by Sir Walter Raleigh. The Irish Gardeners' Association has therefore resolved to hold a great conference and exhibition of Potatos in Dublin towards the end of the year. English and Scotch specialists are expected to attend, and papers on all matters connected with the Potato and the prevention of disease will be read. The secretary is Mr. Thomas Shaw, Sackville Hall, Dublin.

Gardeners' Royal Benevolent Institution.—We have received the following from Bristol:—"It is gratifying to learn that the kindness of Sir Greville Smyth, Bart., and Mr. Francis Tagart, who threw open to the public their respective gardens and grounds at Ashton Court and Old Sneed Park a few days ago, has resulted in the substantial addition of £20 to the funds of the Bristol and Bath Auxiliary of the Gardeners' Royal Benevolent Institution. This institution which was founded as long ago as 1838, is intended to relieve aged and infirm gardeners and their widows. It grants substantial pensions to such persons. The local auxiliary was formed as recently as 1893 in order to promote a knowledge of the institution's work in this district, and depends largely upon collections and subscriptions for funds. The collections at the various flower shows this year have been fairly successful, but the number of pensions granted by the institution is such that the coffers are never very full, or even as full as might be wished."

Dundee Flower Show.—The three days' flower show of the Dundee Horticultural Society was opened on the 3rd inst., by the Right Hon. H. H. Asquith, M.P., ex-Home Secretary and his wife. The show was held in three large marquees on Magdalen Green, and was the finest that has ever been brought together in Dundee. There was a brilliant gathering of ladies and gentlemen during the afternoon and evening of the first day. Mr. G. Masson, St. Fort Gardens, had the finest table of stove and greenhouse plants arranged for effect, Cocos weddeliana, Crotons, Lilies, Ferns, &c., being very fine. Mr. Peter Marshall, Balmore, Newport, was first for six stove and greenhouse plants. Mr. J. Blair was first in the amateurs' class. In the cut flower classes, open to gardeners, Mr. P. Marshall was to the fore for six bunches of stove and greenhouse flowers. Mr. Wm. Harper, Tulliebelton House, Perth, had the best twelve H.P. Roses; and Mr. J. A. Stark, Ferndale, Invergowrie, was first for Teas and Noisettes. In the nurserymen and florists' division, Messrs. D. and W. Croll, Dundee, and Messrs. James Cocker & Son, Aberdeen, were first and second respectively for twenty-four H.P. and Tea Roses. For twenty-four Tea and Noisette Roses, the order was Messrs. D. and W. Croll, and Messrs. Adam and Craigmile, Fernielea, Rubislaw, Aberdeen. Messrs. W. P. Laird and Sinclair, Dundee, took the lead for twenty-four varieties of Dahlias, and eleven bunches of Cactus Dahlias, beating Messrs. D. and W. Croll in both cases. Messrs. James Cocker & Sons, led the way for twenty-four spikes of Gladioli, and eighteen bunches of hardy flowers, and were followed in both classes by Messrs. W. P. Laird and Sinclair. In open competition, Mr. Wm. Benvie, Murie Gardens, Errol, had the best twelve varieties of Apples. In the gardeners' competition, Mr. James Beisant, Castle Huntly, took the leading honours for a collection of eight dishes of fruit, and a collection of six dishes of hardy fruits. In the former class he had exceptionally fine Grapes, also Peaches, Nectarines, Figs, and a Melon. His Apples and Pears were also splendid. No better collection has been shown in Dundee for many years. Mr. Beisant took several other first prizes for fruit. Other first prize takers for fruit were Mr. John Leslie, Pitcullen Gardens, Perth, Mr. J. Kinnear, Fernbrae, Dundee, Mr. D. R. P. Saunders, Mr. A. Duncan, Invergowrie House, Mr. Geo. Nicolson, St. Helens, Mr. W. Williamson, Mr. Geo. Duncan, Mr. G. Masson, Mr. J. Bilton, Fernie Castle, and Mr. J. Joss, Arnhall. Mr. R. Rae, Roxburgh, had the best collection of vegetables in the open class. Mr. J. S. Gilmour, Tayport showed the best six kinds of vegetables in the amateurs' class.

Plant out Carnations as soon as the layers are well rooted and the ground has been prepared for them. Choose a dry day for the operation and make the ground quite firm; the plants will stand the winter all the better for it.

Hop-pickers in distress.—Owing to the report that the season was a fortnight in advance, thousands of hop-pickers arrived on the scene of their labours too early for the hops and as a consequence many of them are starving, as well as subjected to heavy downpours of rain thoroughly drenching their clothing which they have no means of drying.

Mr. H. H. Asquith in opening the Dundee flower show on the 3rd inst., spoke of the greatly increasing interest in horticulture, and said that it was one of the most refining of all recreations or hobbies by which busy men could diversify and elevate their lives. Scottish gardening has always been the pride of Scotland and the envy of other countries. Flower shows tended greatly to improve the character and quality of fruits, flowers, and vegetables. He compared the pleasant work of the gardener with the unfruitful toil of the politician.

An innovation at a flower show.—Mr. Udale, technical instructor in gardening, carries on an experimental garden at Droitwich, by the aid of a subsidy from the County Council. At the flower show held recently at Aston Fields, Mr. Udale had a very instructive exhibit, each specimen of which bore a label showing the kind of seed used, and the date of sowing. Those interested in gardening had an excellent opportunity of picking up information of various kinds relating to gardening, and could not fail to profit by it should they turn the same to practical account in their gardens. The experimental garden is doing some useful work and gives every promise of being of great service to cottagers and amateurs as well as the profession.

Coloured plate of Daffodils.—Messrs. Barr & Son, King Street, Covent Garden, have initiated a fresh departure in issuing a coloured plate of Daffodils with their autumn catalogue of "English Daffodils and Tulips," and uniform in size with the same. The species and varieties illustrated (seven in all) are well known and beautiful types each in their respective classes, and widely differing from one another in general appearance. The hybrid Narcissus Barii conspicuus takes a prominent position at the top of the plate, and Angels Tears or N. triandrus albus is seen peering from behind it. In the centre comes the beautiful Eucharis Daffodil (N. Leedsii Mrs. Langtry) with broad white segments. N. bicolor J. B. M. Camm, and N. Johnstoni Queen of Spain, take up positions on the left and right respectively. The interesting N. cyclamineus major and the pigmy N. minimus are not overlooked, but take their places beneath the taller growing forms. All these may be looked upon as types of different sections.

Death of Mr. A. G. Martin.—It is with profound sorrow that we receive the short telegram announcing the death of Mr. Martin, at Bloemfontein, Orange Free States. Our readers will remember the character sketch and photograph we gave in our columns on January 4th last, and the announcement therein that our friend was about to visit South Africa for the benefit of his health. On Saturday January 11th, he sailed by the Castle Liner, but was taken ill soon after landing at Cape Town, and only stayed there long enough to recover sufficient strength to journey further into the country. Eventually he succeeded in getting to the Orange Free States, and finding the climate there more congenial than that of the Cape, he decided to settle down at Bloemfontein. At this place it appears that his disposition and ability attracted the attention of some gentlemen prominently connected with municipal affairs, with the result that a copy of *The Bloemfontein Messenger* reached us setting forth the election of Mr. A. G. Martin on the post of book-keeper to the markets. In a letter which quickly followed his announcement, the new municipal officer spoke in glowing terms of his appointment, prospects, and health, yet before one had time to send congratulations, comes news of his death. To the young wife with her child stranded on foreign soil we send sincere condolences, a sentiment which will be shared by all horticulturists when they remember that her father, Mr. William Richards (for many years the publisher of *The Gardeners' Chronicle*) met his death from the same disease that has now taken away her husband.

Bad for the Hops.—It is reported that mould is spreading in the East Kent Hop gardens to an alarming extent.

The Hampton Court Big Vine is in fine condition this year, and carrying its usual complement of 1,200 bunches of Grapes, which are being cut daily for the royal table.

"The Florist's Business is, we asseverate, a wonderfully paying one." At least the *Pall Mall Gazette* says so, and continues, "Begonias cost 2s. 6d. each to rear, and there is not the least difficulty in selling as many as can be raised for a guinea each. It is an exceedingly busy business: there is no slack time all the year through." All this is certainly very rosy, but our contemporary also says, if things do not go very well, there is the fresh air and the perfume of flowers to be thankful for. That is our belief, but such airy blessings do not help to pay the rent nor the labour bill.

Orchids at the Sale Rooms.—On the 10th of March last, we saw and described Odontoglossum crispum arthurianum at the Drill Hall, where it was accorded a First-class Certificate by the Royal Horticultural Society, when exhibited by W. Vanner, Esq., Chislehurst. On the 4th inst. a small piece off the original plant, and consisting of one old pseudobulb and a lead, appeared at the Central Sale Rooms of Messrs. Protheroe & Morris, Cheapside, where it created a considerable amount of excitement and lively bidding till in a short time it was knocked down at 68 guineas. Those who have seen the plant well know that it is something in the way of O. c. apiatum and very handsome, with one to three large, dark crimson-purple blotches on the petals, and some smaller marking on the other segments. We are not surprised that it realised a high figure and that it was the most important Orchid put up for sale that day.

HORTICULTURAL SHOWS IN PERTHSHIRE.

In one provincial paper we have seen over a score of reports of horticultural exhibitions which were held on one day. This does not include the number of these shows reported in local papers alone. In Forfarshire, Stirlingshire, and some other counties exhibiting goes on increasing, and it may be fairly said that horticulture is not losing its popularity. Much of the success attending these shows, and the interest taken in them by the populace, are due to the patronage of the influential and the opulent portion of the community in the districts. Perthshire is specially favoured in this respect. As examples at Perth, where Lord Balvaird, Mr. Wood, Sir Robert Pullar, and others expressed themselves so favourably towards horticulture, and where it had such influence on the people who were engaged in the work as a profession, or those who spent their leisure time in their gardens for the love of flower, fruit, and vegetable culture, floriculture appears to make rapid strides even in the most obscure localities. Gardening papers are read by great numbers of the people, so that advertisements certainly are not printed in vain. Neither are exhibits from our leading nurserymen and florists labour in vain, when tabled as many are at exhibitions. At Crieff, August 22nd a very pretty exhibition was opened by the Countess of Ancaster who was accompanied to the platform by a large number of the élite of the district. The Countess in the most felicitous manner complimented this rising society on their success, and in a speech of some length, spoke of the influence which the love of flowers had on all classes of the community, it being elevating, humanising, and the love increased the more as persons became acquainted with it. Her ladyship had experience of this at Drummond Castle (that unique garden is open to the public three days a week, and to which visitors come from long distances, especially at this season when flowers are at their best). Provost Finlayson, who presided expressed himself very intelligently regarding the exhibition and its associations. The splendid collection of vegetables, so tastefully arranged, were the strong points. Celery, Leeks, Onions, Potatos, Turnips, and Cauliflower were of great excellence. There was also an increase in plants, and tables of them arranged for effect were an improvement on former years. Mr. McKennie's table was deservedly placed first, and received Provost Finlayson's handsome prize. Mr. Maxton Graham's medal was won by Mr. D. R. Drummond, of Fowlis, for an exhibit of vegetables, which would have been admired at any horticultural exhibition in the kingdom. The great centre of attraction, however, was the exquisite display of Messrs. Dobbie, of Rothesay, whose large collection of their choicest Sweet Peas, Gaillardias, Violas, Dahlias, etc., were greatly admired by the visitors. Their International Leek also exhibited was noted by the keen vegetable growers. Messrs. Turnbull, Perth Nurseries, had a fine collection of Sweet Peas in bunches, and some fine tuberous Begonias from seed raised by themselves.—*M. Temple, Carron, N.B.*

POINSETTIAS.

In the dreary winter, particularly when Nature is covered with a mantle of snow, what a bright and bold show these Mexican plants produce under glass, particularly in a warm temperature. Last season we grew a batch with the intention of utilising them for the decoration of the Conservatory; the cuttings were taken off the old stems—they having been stood out-doors in the full sun at the end of May—with a slight heel and inserted in fine sandy soil, placing them in heat under hand-lights. When rooted they were potted off into 60's, shading them for a time till they got root-hold, when they were placed on shelves near the glass to keep them dwarf and strong. Their next shift was into 32's, using a soil composed of fibrous loam, adding a little old mushroom-bed manure and a good sprinkling of sand; they were still kept in heat, but soon became too tall to be accommodated by the shelves. When at their best they were transferred to the conservatory, but a lower temperature prevailing there, they soon began to lose their lower leaves, and the bracts were affected by damp.

I had saved a few old plants, and noticed that they stood the lower temperature better than the summer struck ones; so we decided to try the whole of them this season in preference to propagating. The plants were wintered under the stage in the stove. They were brought out when they commenced to break, placing them in a pit, the lights being taken off in June to harden the growths. They were shaken out, the balls reduced, and repotted into 32's, using nice fibrous loam and sand alone. After potting they were placed in a pit, shaded during sunshine, syringed in the afternoon, and carefully watered, as anything approaching stagnation is very detrimental to the Poinsettia; hence they require good drainage. When they had taken hold of the new soil, air was given and shading dispensed with, keeping them as near the glass as possible.

About the middle of July they were plunged to the rims of the pots in ashes, and allowed the full benefit of the air and sunshine. I should have given them that position until the end of the present month, but we have now copious rains so have removed them to the side stage of a light and airy greenhouse, which position they can occupy for a few weeks, when they will be transferred to warmer quarters. They look well at present, are stocky and short jointed, so that I think they will give a better account of themselves than summer struck, and grown-on-in-heat plants.—*George Potts, August 24th.*

CHIONODOXAS.

The popular name of "Glory of the Snow," which is applied to the members of this genus, more particularly perhaps to C. Luciliae, doubtless bears reference to the natural habitats of the plants. They are found at high altitudes, where they expand their bright blue flowers amidst the melting snows. The genus contains about four species, all of them closely allied to each other. These are very variable, and there are several well marked varieties in cultivation. Some botanists only admit three of the members of the genus to specific rank, viz., C. Luciliae, C. nana, and C. cretica. C. sardensis is looked upon as a form of C. Luciliae. All of them are perfectly hardy and may be grown in beds or borders, in nooks in the rockery, or sprinkled about among the grass.

No matter where they are, their bright star-like flowers always attract attention as some of the most beautiful of the plants of early spring. C. cretica, common to the mountains of Crete is the first to flower. The flowers are pale blue in colour and the plant closely resembles C. nana, except that it is of much more vigorous habit. C. nana the dwarf of the genus, also a Cretan species, usually bears lilac

coloured flowers, but seldom or never exceeds 4 in. in height.

C. Luciliae and its varieties are the most useful of all. The type is a native of Asia Minor and Crete, and was brought to this country about the year 1877. C. gigantea is a very distinct and beautiful plant. It is dwarf and robust in habit and has one or two deep gentian blue flowers to a scape. These blooms are fully twice the size of those of C. Luciliae. In habit it is dwarf, yet robust. C. Alleni, a comparative novelty, has flowers slightly lighter in hue, and the leaves are broader and of greater substance. C. sardensis exhibits one of the most intense blues it is possible to imagine, and when the sun is seen shining upon a patch of it the effect is brilliant in the extreme. The white flowered forms of C. Luciliae, and C. gigantea are also very pretty, and should be grown for the sake of variety.

Wherever Chionodoxas are planted care should be taken that they are not disturbed too frequently, every three or four years will be quite sufficient. The leaves ripen and die away before the summer is far advanced so that they are not in the way of the mowing machine when planted on the lawn.

Chionodoxas force fairly well provided the bulbs are allowed to make plenty of roots before being hurried on. They may be treated like Hyacinths therefore. A compost of equal parts of peat, loam, and sand will suit them admirably.

FREESIAS.

Of all the pretty things that the Cape of Good Hope has given us there are none that are greater successes than the Freesias. Their deliciously fragrant flowers are in great request during the dull months of the year, and so easily do they adapt themselves to pot culture, that by dint of a little management, and the growing of several batches, a succession may be kept up without trouble from December till March. Not only do the blooms look well upon the plants, but they last well in water when cut—a most valuable property. Then as to size, the first thing that strikes one is how disproportionately large the flower is as compared to the bulb, which is not nearly so large as that of a Snowdrop. In order to grow Freesias well the best plan is to shake them out, and pot them up afresh each year, about the middle of August. This gives an opportunity of separating the bulbs, the larger flowering ones from the smaller ones. The latter may be sown thickly in shallow pans by themselves and allowed to grow on at their leisure. These will make good bulbs by the second year.

A very suitable compost may be formed of two parts of good loam, one of leaf soil and one of peat, plenty of sharp sand being added to keep the soil open. Either forty-eight or thirty-two size pots may be used, the smaller ones being the more suitable for the earliest batches. After potting, the usual probationary period must be given, the pots being plunged in either ashes or cocoa-nut fibre—the latter for preference. About the third week in September the plants may be uncovered and removed to a cold frame or a shelf in a greenhouse. A light, airy position throughout the growing period is essential, and although the plants need not be coddled, draughts should be avoided.

As growth proceeds, staking will be a matter of some importance. Only light neat stakes must be used, otherwise the decorative value of the plants will be sadly discounted. For ordinary purposes four or five small stakes may be inserted round the edge of the pot, and a couple of small strands of raffia twisted around these; but where the bulbs have been specially selected with a view to the production of large flowers a little more trouble is necessary. A neat stake will then be required for each plant, and all the small growths must be removed so as to give all the room possible to the five or six large plants.

Manures.—As soon as the plants get into full swing judicious applications of liquid manure will be of great service. Clay's Fertiliser answers admirably, and this may be varied with a little Peruvian Guano, both of which should be dissolved in the water used for watering. Now and again a weak solution of soot will be very helpful, and will serve to keep the foliage green and healthy.

Insect Pests.—Of these green fly is the most to be dreaded, and it is almost sure to make its appearance upon plants that are somewhat weakened by being forced rapidly. Several light fumigations with tobacco rag, or paper will soon get rid of it, however.

Freesias require plenty of water, but they must not be treated exactly as aquatics, or the foliage will turn yellow. In order to be in flower by Christmas the first batch should be introduced into heat by the beginning of December.

F. refracta alba, with its pure white flowers, which still retain the fragrance of the type, is undoubtedly the form most extensively grown. F. Leichtlinii, considered by some botanists to be a distinct species, is also a charming plant. Its flowers are a delicate cream yellow. The throat is more open, and the segments do not spread quite so horizontally as in F. refracta.

LACHENALIAS.

Some thirty species, or thereabouts, all natives of South Africa are included in the genus Lachenalia; but of the majority of these the ordinary gardener knows nothing. L. tricolor, and its variety aurea, are the plants that up to the present have attracted the greater part of his attention, and thousands of pots of these are forced each year. L. Nelsoni, which is of hybrid origin, is not so frequently seen, more's the pity; for it is every whit as showy as the others. The flowers are bright golden yellow in hue, and disposed in long many flowered racemes. The foliage also is strong and substantial. L. pendula has flowers in which deep purple, red, and yellow, are all exhibited. They are fully an inch in length, and are borne upon stout scapes. The leaves are erect, dark green, and usually more or less spotted with dark brown, as is also the scape.

L. fragrans, as the specific name denotes, is very sweet scented. The flowers which display a curious shade of red are borne about twenty to a raceme which is thus of considerable length.

L. purpurea caerulea, a species which is rarely met with outside the bounds of botanic gardens, has purplish-blue flowers, thirty or forty of these going to a scape. The leaves are from 6 in. to 9 in. in length, and about ½ in. wide. It flowers in April.

Lachenalias do well in pots, pans, or hanging baskets. The latter plan shows the beauty of the plants off to perfection as the leaves have a natural tendency to droop. For pots a 5 in. size will be quite large enough. They must be well drained as the plants abhor stagnant moisture about their roots, and this is one reason why they always do so well in baskets. A compost of two parts fibrous loam, and one part each of leaf soil and dry cow manure, together with a liberal addition of sharp river sand may be recommended. The bulbs may be covered with about half an inch of soil.

As in the case of Freesias the bulbs are best left in the old pots until the time for repotting comes, which will be sometime from the beginning to the middle of August. It will not be necessary to plunge the pots in the same way as the usual run of bulbs are treated, but they may be consigned to a cold frame and allowed to come on gradually. Frost must be excluded during the winter months, and the plants must be studiously shielded from draughts which work harm by disfiguring the foliage.

Batches of the plants may be introduced into a gentle heat as required—a place on a shelf in a vinery just started will suit them admirably—but hard forcing should not be attempted. Liquid manure may be given with advantage as soon as the flower scapes begin to make their appearance.

PLANTS RECENTLY CERTIFICATED.

The undermentioned subjects received certificates from the Royal Horticultural Society on the 25th ult.

Orchid Committee.

Laeliocattleya brymeriana. *Nov. hyb. bigen.*—This beautiful bigeneric hybrid was raised from Laelia amanda crossed with the pollen of Cattleya Warscewiczii. In colour and shape of flowers it shows the influence of the seed parent strongly. The sepals and oblong-elliptic petals are pink, and the latter are folded longitudinally along the middle. The lip is mottled, and marbled with bright purple on the palest lilac ground and striped with orange on deep purple along the centre. It is handsome and distinct. First-class Certificate.—Col. Brymer, M.P., (gardener, Mr. J. Powell) Islington House, Dorchest

Stanhopea eburnea.—The sepals and petals of this fine species are ivory white. The epichile of the lip lacks the horns so prominent in many species, but there are two horns at the base of the hypochile which is purplish in the interior of the sac. The messochile is spotted with deep purple. The flowers are highly fragrant and not disagreeable. Award of Merit. Major Joicey, (gardener, Mr. F. J. Thorne), Sunningdale Park, Berks.

Miltonia candida grandiflora. *Nov. var.*—The flowers of this fine variety are of unusual size with sepals and petals of a dark rich brown, with a yellow tip and some markings of the same hue. The lip is white with a large violet blotch on the centre. The plant carried three spikes varying from 18 in. to 2 ft. in length. Award of Merit. Major Joicey.

Laelia monophylla.—The sepals and oblong-elliptic petals of this rare species are orange-scarlet or cinnabar. The lip is small and of the same hue. One of the scapes of the plant shown by Major Joicey bore two flowers—a very rare ocurrence, showing that his gardener, Mr. F. J. Thorne understands its cultivation. Award of Merit.

Cycnoches maculatum.—The raceme of this plant shown was 18 in. long and bore very numerous, large, straw-yellow flowers, shaded with green and much spotted with brown. The lip was white with a brown tip, and furnished near the base with long finger-like, white points. Award of Merit. The Hon. Walter Rothschild (gardener, Mr. E. Hill), Tring Park, Tring.

Miltonia schroderiana.—The raceme of this species is shorter than the bright green leaves. The sepals and petals are heavily blotched with brown on on a greenish-yellow ground. The lip is infolded at the sides and white, with a large, triangular deep purple blotch at the base. The column is white, and the truncate wings pink. Award of Merit. The Hon. Walter Rothschild.

Bulbophyllum sp.—The sepals of the plant shown by the Hon. Walter Rothschild were oblong, the petals narrower, and all glossy yellow, heavily lined with brown. The hinged lip was laterally compressed and buff yellow. Botanical Certificate.

Dendrobium longicornu.—The lateral sepals of this species are united and drawn out into a long spur, and white. The funnel-shaped lip is white and veined internally with orange; a darker or cinnabar band runs along the centre. Award of Merit. W. Thompson, Esq., (gardener, Mr. Stevens), Stone, Staffs,

Catasetum callosum.—The dorsal sepal and the petals of this species are erect, while the lateral ones are reflexed in totally an opposite direction, and brown. The lip is green with an orange tubercle at the base, a shallow sac in front of it, and fringed towards the apex. Botanical Certificate. Messrs. Hugh Low & Co., Clapton.

Coelogyne micholitzii.—The sepals and petals of this species are white, and the flowers of medium size. The lateral lobes of the lip, and an elevated, disc like portion in the centre, are of a rich dark brown colour; and the terminal lobe is white. It is a singular looking species and very distinct. Botanical Certificate. T. B. Haywood, Esq., (gardener, Mr. C. J. Salter), Woodhatch Lodge, Reigate.

Floral Committee.

Gladiolus Atlas.—This variety throws a large spike, and massive flowers of more than ordinary size. They are a delicate mauve in colour, slightly flushed with rose and irregularly striated towards the tips of the segments with the same hue. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. Bain), Burford Lodge, Dorking.

Gladiolus Fustell de Coulanger.—A large flower with very broad segments, bright scarlet in colour, with a white throat flushed with magenta at the opening. Award of Merit. Sir Trevor Lawrence, Bart.

Lobelia Carmine Gem.—A new and very pretty variety of the cardinalis type with a long multi-flowered spike, and vivid carmine flowers. Award of Merit. Sir Trevor Lawrence, Bart.

Rose Mrs. Rumsey.—This is a new H. P. with large globular flowers, deep pink in colour. The flower stalks are stout and the foliage of great substance, dark greeu, and healthy looking. Award of Merit. Mr. W. Rumsey, Waltham Cross.

Dahlia. Mrs. Webster.—This is the nearest approach to a pure white Cactus form, although a suspicion of green yet remains. The petals are long,

revolute and pointed. Award of Merit. Messrs. Dobbie & Co., Orpington, Kent.

BEGONIA, LOUISE CLOSON IMPROVED.—This is a fine foliage Begonia with large leaves and robust habit. The leaves are deep velvety black heavily spotted towards the centre with dull rose blotches. Award of Merit. Messrs. J. Laing & Sons, Forest Hill.

CALADIUM DONNA CARMEN MACEDO.—A new Caladium with medium sized, cordate, and crinkled leaves, in colour a deep rosy-red with conspicuous broad green veins. Award of Merit. Messrs. J. Laing & Sons.

CAMPANULA PROFUSION.—This Campanula is of hybrid origin, being obtained from a cross between C. isophylla alba, and C. carpatica alba. The flowers, lavender blue in colour, and about 1 in. in diameter, are produced in great profusion, the plant being barely 10 in. in height. The leaves are broadly ovate in shape, with the margins slightly serrate. Award of Merit. Mr. E. H. Jenkins, Hampton Hill.

Fruit and Vegetable Committee.

PEA THE GLADSTONE.—This new Pea has been tried at Chiswick where it received three marks in July last. The pods are 5 in long, much curved, pointed and of a dark shining green. There are about nine or ten dark green seeds of good quality in each pod. Award of Merit. M. W. G. Holmes, Seed Merchant, Tain.

VEGETABLE CALENDAR.

WHERE successional crops of salading are in regular demand, the value of cold frames and turf pits for protecting and advancing small crops will be found very useful after this date. All such structures should be put in working order at once; and additional turf pits formed to meet the demand. Easily moved coverings of straw or strong canvas should also be in readiness for sudden frosts that may occur at any time now.

DWARF BEANS.—Sowings of these should be made without delay to succeed the latest out-door crops. Sow in 10-in. pots, and earth up the plants as they advance in growth. A few hundred seeds may also be sown singly in large 60's; these will be handy for planting out in any available positions in warm houses, or they can be potted on singly, and will give better results than the more crowded plants in larger pots. Good kinds for forcing are Ne Plus Ultra, Sir Joseph Paxton, Canadian Wonder, and Mohawk. The pots should be placed in a frame to insure a quick and healthy germination. Give air freely as soon as the plants are up to insure sturdy growth.

CAULIFLOWERS.—These should not be allowed to become crowded in the seed bed, and the strongest should be pricked out in turf pits and under hand lights, so as to get well-rooted before winter. Where slugs are troublesome a dusting of lime and soot around the plants will keep the slugs in check, and also assist in giving a healthy growth. Another sowing of Walcheren may be made in a sheltered position, or in a skeleton frame, where protection can be given during severe weather. Advancing crops of this vegetable should be frequently hoed to encourage rapid growth and tender heads of flower.

LETTUCE.—There should be abundance of young plants of these in the various seed beds, ready for transplanting into turf pits and skeleton frames filled with prepared soils of leaf mould and light loam. Select the strongest seedlings and plant them about 8 in. or 10 in. apart. With favourable weather they will make rapid growth, and a little protection later on will insure a useful crop. Any spare boxes, 6 in. deep, may also be planted, and placed in a warm position outside, ready for removal into cool houses or a warm frame when the nights get cold. A warm sheltered border should also receive a special preparation by working in a quantity of light manure to render it porous and friable; and a spring crop planted on the first favourable opportunity. The hoe should be freely used among the early planted beds, and any commencing to fold in should have a tie placed around them to prevent the wind from displacing the outer leaves and exposing the centre.

CELERY.—Every encouragement must be given to the late planted rows to ensure a good growth before winter. Earlier rows that are growing freely should be kept free from suckers, and a light bang loosely tied should be placed round each plant to hold them together. Crops required for early use should be earthed up during dry weather, and the soil well pulverised before placing it around the plants.

MUSHROOMS.—The present is the most favourable time for making up beds, and several should be formed during the next few weeks under different conditions to ensure a long supply. A good bed should be made in the Mushroom house where heat can be applied if necessary; another may be formed in any cool dark shed or cellar, while a third can be made in a sheltered position or in a turf pit outside, where protection can be easily applied. A layer of well-rotted cow dung about 3 in. thick placed over the droppings after the beds are spawned, and previous to earthing up will be found of great advantage in producing fine Mushrooms and a heavy crop.

RADISHES.—Sowings of these made after this date should be in cold frames or turf pits, where protection can be given during rough weather, and in all cases the seed beds should face the south.—*J. R.*

THE PLANT HOUSES.

Pits and Frames.

THE chief work here will be the potting up of Dutch Bulbs as fast as they come to hand. If a fair measure of success is expected, it is imperative that as long a period as possible should be given the bulbs before forcing is commenced. The pots must be well filled with roots before the plants are taken into heat, or the flowers will be poor and flimsy. In plunging the pots subsequent to potting care should be taken that all the earliest varieties, such as the Roman Hyacinths, are placed toward the outside of the bed, from whence they can be easily removed without disturbing the rest, should it be necessary to leave them a while longer. If by any chance bulb orders have not yet been sent in, no further time should be lost, as every week is of importance where early flowering is looked for. Appended is a short list of a few of the most useful and best varieties.

HYACINTHS, SINGLE.—King of the Whites, Mont Blanc, Queen Victoria, and Alba Superbissima, whites; Grandeur à Merveille, Anna Poulowna, and Leviathan, blush; Bleu Mourant, King of the Blues, and Masterpiece, dark blue; King of the Blacks, very dark, nearly black; Charles Dickens, Grande Maitre, Lord Derby, and Princess Mary of Cambridge, blue; Lord Macaulay, carmine and rose; General Pelissier, and Robert Steiger, crimson; L'Amie du Coeur, red; Norma, Lady Derby, and Fabiola, rose; King of the Yellows, Ida, and Obelisque, yellow.

DOUBLE VARIETIES.—These are not nearly so useful as the single ones, as they are too stiff and heavy to be really graceful. A few of them may be grown, however, for the sake of variety. The following are some of the best:—Laurens Koster, purple; Pasquin, lilac with a black centre; Prince Albert, dark purple; Blocksberg, porcelain; Murillo, pale blue; Waterloo, red; Regina Victoria, rose; Florence Nightingale, and La Tour d'Auvergne, white; and La Virginité, blush.

MINIATURE HYACINTHS.—These are well worth growing. They only produce comparatively small spikes of flower, but they give as good an account of themselves in a small way as the large bulbs. Then again price has to be considered, and a large quantity may be obtained at very little cost.

TULIPS.—As these come in very handy for conservatory decoration in the early months of the year a few dozen bulbs may well be included in the order. Duc Van Thol is one of the most useful, and forces exceedingly well. There are a number of different colours of this to be had, and the scarlet, white, crimson, rose, and yellow forms should all be grown. In addition to these the following will be found very serviceable:—Artus, rich scarlet; Chrysolora, one of the best yellows; Joost Van Vondel, crimson, flaked with white; Keizer Kroon, vivid scarlet, and yellow; Pottebakker, white; Proserpine, rose-scarlet; Rose Luisante, deep rose; and Van der Neer, deep violet.

POLYANTHUS NARCISSI.—A collection of early flowering bulbs could scarcely be complete without a few of these showy subjects. As the bulbs are so large, the pots must be proportionately roomy, and the soil should be made rich, for Polyanthus Narcissi love rich feeding. For early blooming, nothing is better than Double Roman, and Paper White. Other good varieties are Lord Canning, Bazelman major, Illustre Soleil, and La Comtesse. The last two sorts made a brave show at the exhibition of spring flowering plants held at the Crystal Palace in March of the present year, and are certainly a great acquisition to the ranks of these charming plants.

CROCUSES.—A few pots or pans full of these will come in very useful for conservatory decoration in early spring, and they may be had in bloom soon after the commencement of the year, without very much trouble. Caroline Chisholm, and Mont Blanc, fine white; Louis D'Or, yellow; La Majestueuse, violet striped; Purpurea Grandiflora and David Rizzio, purple; and Prince Albert, lilac; are all varieties that may be thoroughly depended on.

MIGNONETTE.—Where seed was sown in pots about the middle of last month as advised in a previous calendar the seedlings will now be large enough to handle. Thinning out should, therefore, be seen to at once before the young plants become crowded and drawn. Three of the strongest plants will be sufficient to leave in a pot. Keep the plants near the glass, and give them all the light possible with plenty of air. Take care also not to overwater, for if the soil is thus made sour before the dull season commences, the plants have a poor chance of getting through the winter without being crippled.

TREE MIGNONETTE.—A few large bushes of Mignonette are thought very highly off in some establishments, and they are invariably very useful, if only for the purpose of cutting from. To obtain large specimens seed should be sown in April or May, the seedlings thinned down to one in a pot, and subsequently pinched to keep them from flowering. By this time these plants will have made sturdy hard-wooded stuff. Pot them on now into 8-in. pots, using a compost of two parts of good loam, and one of dried cow manure. The latter should be rubbed through a half-inch mesh sieve. A sprinkling of coarse rivers and will also be needed. After potting, the plants should be staked out, and placed in a frame or pit near the glass. A gentle sprinkling with the syringe will be of service.—*A.S.G.*

THE ORCHID HOUSES.

CATTLEYA GUTTATA LEOPOLDII.—This, one of the finest of the tall growing Cattleyas and a summer-flowering one, is, when well grown, an object of great beauty, and is very telling as an exhibition plant. Its treatment differs very little from other Cattleyas, the only exception to my mind being that it does best when given a somewhat higher temperature in the Cattleya house; and on that account it should be afforded a light position during the early summer months in the warmer division.

The compost best suited to its requirements is good rough lumps of peat with just a little live moss inserted here and there. It should be made secure in the pots by neat stakes; sometimes we make the plants fast to a rough piece of an Apple or Cherry branch before placing them in the pots. The compost then can be put more loosely about the roots, too firm potting being injurious, as the water cannot pass freely away.

C. MARGINATA.—This is one of those charming little Cattleyas that should be grown, not on account of its beauty alone, but because it takes up but very little room. We grow ours in small pans which are suspended close to the glass on the south side of the intermediate house. The pans must be well drained, and when repotting, work little pieces of broken crocks in here and there as the work proceeds. This will serve to let the water pass freely through the whole.

The plants are now coming into flower, and as they push new roots from the base of the flowering growths, as soon as the flowers fade we do what repotting is required then. Very little water must be given to newly-potted plants, just enough to keep them plump and the moss alive.

COOL HOUSE.—If all has gone well with Oncidium tigrinum, the plants will now be pushing up their spikes, as they do so before the young bulbs are above half made up. They are so succulent and sweet that, if not protected, they will soon fall a prey to the ravages of slugs, which are always plentiful just about this time. Pieces of cotton wool put round the spikes, the roughest side outward, help to keep them at bay; but we think the safest way is to hang them up and keep a vigilant eye on them when going round the last thing at night. We have not at present used any fire heat in this division yet, but should the weather remain as it is now, dull and wet, we shall just warm the pipes to dispel any superfluous moisture consequent on cold damp nights.—*C.*

HINTS FOR AMATEURS.

PROPAGATION OF BEDDING PLANTS.

It is often the burden of the housewife's cry that no sooner has she got one meal safely over than it is time to begin to prepare for the next. The gardener may be said to be in nearly the same plight; for it seems that as soon as he has got his plants safely out in their summer quarters, the shortening of the days and the lengthening of the nights warn him that it is time to make his preparations for securing a stock of plants for another season. The seasons overlap each other so completely that every week brings its own work that must be attended to if things are to work properly.

The summer season is so short, and the period during which the plants are in the full blaze of their beauty so brief and transient, that naturally enough one feels inclined to put off cutting the plants about until the very last moment. Now, however, seeing that September is passing away so rapidly, it will not be wise to defer operations any longer. If cuttings are to root well enough to enable them to pass through the winter safely, sufficient time must be allowed them, and a week of sunny September weather is worth three weeks of time a month further on.

Zonal Pelargoniums.—It is extremely problematical whether these will ever be ousted from the share of popular favour they enjoy as bedding plants. The tuberous Begonia is a doughty opponent, but in seasons like that which is now fast drawing to a close, when rain has been conspicuous by its almost entire absence, the zonal Pelargonium has had rather the best of matters; for if the tuberous Begonia has one particular aversion it is drought. The propagation of "Geraniums," to give them their popular, although erroneus, title, is exceedingly easy. If the cuttings are simply inserted in the open ground they will root quickly and well. Many cultivators adopt this plan with conspicuous success. Of course the cuttings have to be lifted and potted off, if frost threatens to supervene. It is now too late in the season to think of adopting this plan, however; for to carry it out successfully, the cuttings should have been put in not later than the end of August. Pots will be needed now and indeed there is very little doubt that taking all things into consideration, it is the better plan for amateurs to follow, since it saves the second trouble of lifting and potting off.

A word as to the making of the cuttings may be of service. Sturdy, short-jointed shoots, 6 in. or 7 in. in length, should be chosen. The wood of these should, if possible, be fairly well ripened, a state of things that may be taken for granted, if it is of a light brown hue, and fairly firm in consistency, instead of green and succulent. A sharp thin-bladed knife is of great importance, for the cuts must be clean, not jagged or bruised. The three or four lower leaves should be removed, also all flower trusses, and young buds, that may be observed. Finally, cut the stem through close up to and under a node or joint as it is often called, and the cutting is complete.

Pots.—Large 60-size pots are the best size to use, for they contain quite enough, but not too much, soil to last the cuttings through the winter. A few crocks must be placed in the bottom of each pot, a little moss on the top, and then the remainder may be filled up with the compost. For the latter any soil may be made to serve, provided plenty of sand is mixed with it. In filling the pots the soil must be pressed down firmly with the fingers, otherwise it will not be possible to insert the cuttings securely. Four cuttings may be placed round the edge of a 60-size pot, and one in the centre. It is most important that the cuttings should be firmly fixed, otherwise their overhanging leaves will catch in each other, and in shifting the pots from place to place the cuttings are liable to be rudely dragged out, the operation of rooting naturally being retarded thereby.

Position.—The cutting pots should be stood out-of-doors, for the present, in some light open spot, where the sun's rays may strike full upon them. A watering should be given as soon as they are in place, and any pots that are then observed to be standing unevenly must be put straight.

Numbers.—Of course the numbers of cuttings put in will depend entirely upon the requirements of the amateurs' garden, but it will be wise to insert at least twenty-five per cent. more cuttings than the number of plants wanted. It is advisable to make a short list each year of the number of cuttings of each variety inserted, for the sake of comparison. For the tenderer varieties such as Creed's Seedling, Robert Fish, Mrs. Henry Cox, and Mrs. Pollock, twenty-five per cent. increase is rather too small a margin to allow, as these varieties often go off wholesale during bad winters.

Violas.—Mildew seems to be unusually prevalent this year, and it is by no means an infrequent sight to see whole batches of plants fairly overrun with it. Where any plants are observed to be affected by the scourge the best plan will be to cut them right back, and allow them to break up afresh from the root, which they will do very readily. The old plants may then be taken up and divided, and as two or three dozen young plants may be obtained from one medium-sized old one this method of propagation has much to recommend it, even as against the more popular mode of putting in cuttings. Any plants that are cut back now will have a fair chance of making plenty of good growth before the autumn is very far advanced, for after the recent rains the soil is in a fine condition for favouring rapid growth.

Campanula isophylla and **C. i. alba.**—Amongst all the Bellflowers these are the most suitable for the window, and whether it be in town or country they always seem to do well. The present is an admirable time for getting up a stock. Old plants that have been flowering freely during the last few weeks should be examined, and if they are observed to be throwing up any young growths from the base these should be cut off and inserted as cuttings. These young growths will root freely enough if treated as follows:—Take large thumb pots, that is, those about 2½ in. in diameter, inside measurement, drain them well and fill them nearly full of light sandy soil. Upon this place a thin layer of sand. Insert the cuttings fairly close to each other—a pot of the size mentioned will hold six easily. It will be found that cuttings which are situated close to the sides of the pot root best, hence it will be well to insert the cuttings in a ring all round the edge of the pot, and to leave the centre free. Give a gentle watering to settle the soil, place the pots of cuttings in a cold frame, and cover them with a bell-glass.

A gentle heat will assist the production of roots, but if this is not procurable the protection of a bell-glass will be sufficient. The cuttings must be shaded from the sun until they are well rooted.

Sweet Peas.—In this case, at any rate, the amateur may save his own seed with the best of results. The pods should be gathered as soon as they have turned nicely brown. Owing to the drought even the pods on the later rows will have reached this condition by this time, and as the seed can do no further good if left out of doors it should be plucked and taken in. The haulm, which, after the flowers are gone, is anything but an ornament, may be cleared away and burned, and the sticks neatly tied up in bundles and stored away for use another season. The sorts should be kept separate. They should each be put into shallow wooden boxes, correctly labelled and dated, and the boxes placed in a shed or outhouse, where the seed may finish ripening and dry off nicely before it is packed away for the winter.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Hyacinths.—Will you be good enough to tell me the names of a dozen varieties of good single Hyacinths that I can depend upon.—*M. M.*

Mont Blanc, and Alba Maxima, white; Grandeur à Mereville, blush; King of the Yellows, and Obelisque, yellow; Norma, rose; and Gigantea, rose; Lord Wellington, orange-salmon; Robert Steiger, crimson; Lord Derby, blue; Grand Lilas, lilac; and King of the Blues, dark blue; can all be thoroughly depended upon. Most of them are first-class exhibition varieties.

Marrows for Preserves.—In order to make preserves, the Vegetable Marrows should be well ripened.—*E. Seaton.*

Roman Hyacinths.—For forcing into bloom before Christmas, the white Roman Hyacinths will suit your purpose best, *Long Melford.* The bulbs ought to be potted up without any further delay.

Cactus Dahlia.—The bloom of the Dahlia you send us, *W. J.* is too near to Mrs. Hawkins, to be considered distinct. Its free flowering qualities are certainly a point in its favour, but it is not of sufficiently high quality to make a fuss about.

Exhibiting at the Drill Hall.—You must put yourself into communication with the Secretary of the Royal Horticultural Society, the Rev. W. Wilks, 117, Victoria Street, or with the Assistant Secretary, at the same address. Either of these gentlemen will inform you, *L. L. A.* as to the rules governing exhibits for non fellows of the Society.

Caladiums drying off.—Your plants have undoubtedly nearly fulfilled their allotted task for this year, *Scottie.* Do not dry them off too rapidly, but gradually curtail the water supply as the foliage dies down, and do not let them get dust dry now or at any time. We do not believe in treating Caladiums thus; for tubers which are planted out in mixed borders which are never other than damp invariably come up strongly year after year.

Freesias.—Take the Freesias out of the cocoanut fibre refuse as soon as the green tops of the young leaves show through, *P. Arden.* The pots may be placed in a cold frame, near the glass, and shaded rom the sun for a time, in order that they may gradually become inured to the light. Afterwards they may receive all the light it is possible to give them.

Grapes Damping.—During dull damp weather, it would be a good plan to light a fire and get a little heat circulated in the pipes, *George T.* This will expel the damp air, and keep the Grapes from going off in the way you mention. Bad berries should be cut out with the scissors as soon as seen, or they will spread the decay with great rapidity.

Begonia Seed.—In order to finish off the Begonia seed, *Anon,* you should lay the capsules upon a sheet of paper in a dry airy room where they will burst as they dry. The seed may then be easily transferred to paper bags and laid by until spring.

Heavy Potato Crops.—I would like to know if the weight of Potatos as given under is very good. Four Potatos were planted whole, 3 ft. apart, the weight of each Potato when planted, being respectively 1½ lbs., 1¼ lbs., 1 lb., and ¾ lb. The weights of the crops taken from these sets were in order;—11 lbs. 1 oz, 11 lbs., 10 lbs. ¼ oz, and 8 lbs. ¾ oz; Total 44 lbs. 1 oz.—*G. M. P.*

We take it for granted that the sets were put in 36 in. apart. This would work out at 23 tons, 15 cwt., 1 qr., 12 lbs.,—an extraordinarily heavy crop. We should feel obliged if our correspondent will inform us as to the name of the variety which has aquitted itself so well, during a dry season too. Perhaps others of our readers will favour us with an account of their successes in a similar direction.

A plague of Cockroaches.—We fully endorse all the hard things you say about Cockroaches, *Reader.* The best remedy we know of is to invest in a little phosphorus vermin paste. Spread this on small pieces of cardboard, slate, or crock, lay it down in different parts of the house, and await results.

Nerines.—The growths you refer to, *A. P.*, are undoubtedly the flower scapes, which make their appearance before the leaves. As the plants have been resting during the last few months, and will thus have needed no water, the soil in the pots will be dry throughout, and will take repeated waterings before it becomes properly moist again. You should transfer your plants to a nice light corner in your greenhouse, where the flowers may have every opportunity given them to develop.

A Lily with many names.—In an interesting communication *L. R. T.* points out that Lilium candidum is specially well off with regard to names. It is known as Madonna Lily, St. Joseph's Lily, Annunciation Lily, and he has even heard it called the Damascus Lily. The last name is a strange one to us; perhaps some of our numerous readers have heard it.

SEFTON PARK, LIVERPOOL.

New Winter Garden or Conservatory.

Liverpool is well to the fore in providing parks and open spaces for the enjoyment and education of its citizens. It was only last year that the Wavertree Playground with an area of about 100 acres was thrown open for the free use—as its name implies—as a playground for that congested portion of the city. With this addition, Liverpool boasts of 850 acres of parks and gardens. The largest of these is Sefton Park, on the eastern side of the city, comprising 382 acres, costing £264,000. Of this total £250,000 was paid to Lord Sefton for 370 acres. The expenditure on the park was £147,000, and from this large acreage, 113 acres have been set aside for building purposes. This magnificent park was opened in 1872, and now, by the munificence of Mr. Yates Thompson, one of Liverpool's generous sons, has been added one of the finest conservatories in the country, which will shortly be opened to the public.

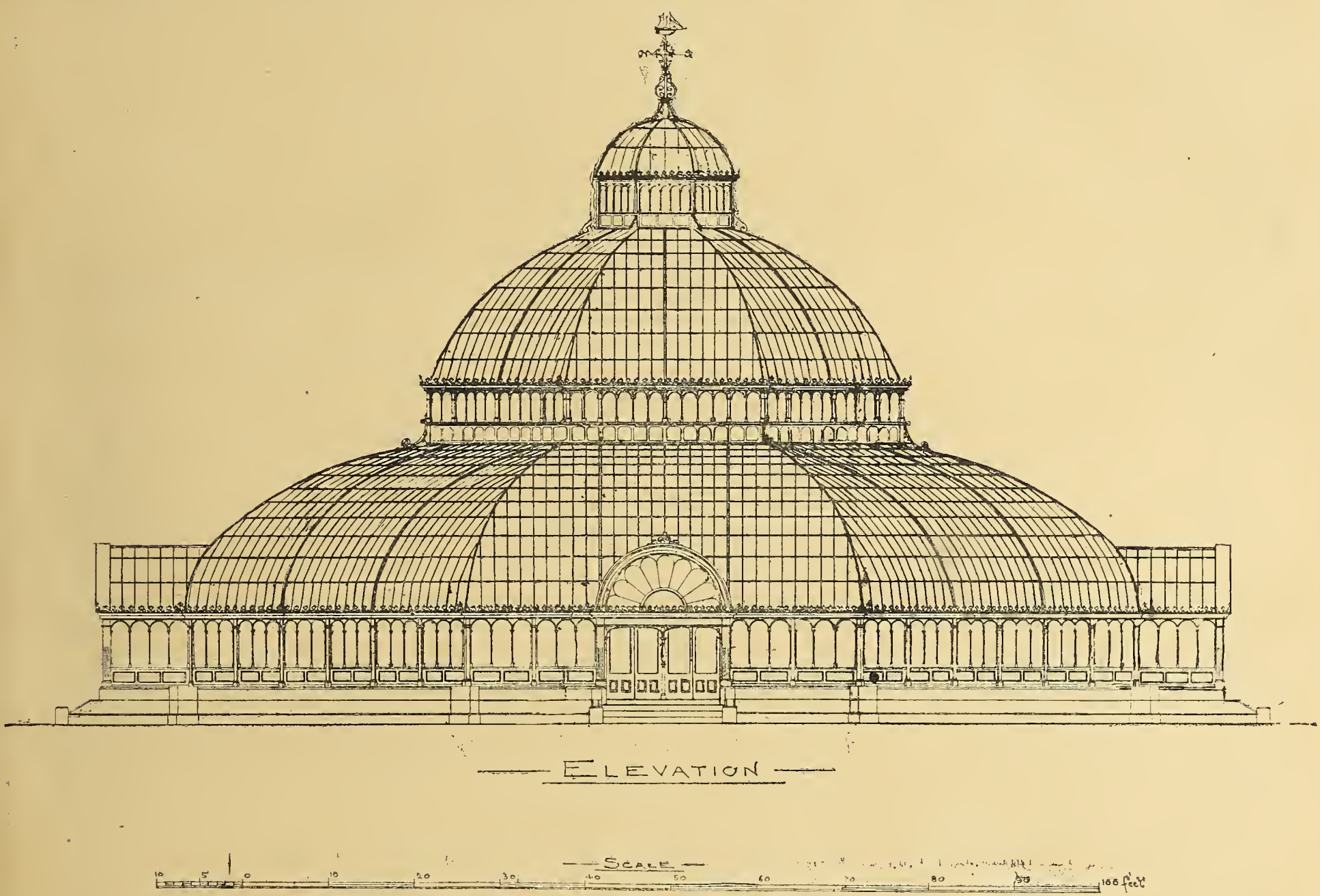
The building is 111 ft. in diameter, or 133 ft., including the porches; the extreme height is 82 ft.; to the dome 68 ft.; and to the gallery 30 ft. The building is octagonal in shape, and is founded on concrete with a polished red granite base, 4 ft. 6in. high; the upright framework of the sides is built of cast iron and polished plate glass; the roof is carried on steel girder framework with eight ornamental cast iron columns underneath the large dome; the whole is surmounted with an ornamental vane in the form of a ship, 6 ft. 6 in. by 6 ft. The gallery is reached by an iron spiral staircase, and is only intended for the use of the workmen, for ventilating, &c. The house has four entrances, which is of considerable advantage during cold windy weather. The cement promenade is 16 ft, in width, and will afford shelter when required, to many hundreds of visitors; the pathway is in conformity with the house, bold in design, and octagonal in form. Around the central bed and on the sides of the outer beds, rockwork of white tufa, with ample pockets some two feet high, will form a natural position for a great variety of plants. According to the ground plan seats are to be placed with their backs close to the rockery, which will mar the effect of the grouping, at the same time hiding many of the Ferns and Lycopods, that should prove interesting and instructive to the student. If seats are necessary they should be arranged at intervals in the centre of the promenade.

The house is composed entirely of granite, steel, iron, and glass, except the doors, which are made of teakwood; the glazing with the exception of the sides, is 26 oz. clear sheet glass. The heating is by 4,000 ft. of 4-in. hot-water pipes supplied by two 10 ft. rivetted steel Cornish boilers, fitted with Mackenzie and Moncur's improved triangular tubular water furnace bars; eight rows of pipes are arranged near the granite base; a like number inside the rockery of the middle bed, and three around the gallery. The boiler house is a detached building some forty yards from the conservatory, the mains and drain pipes being carried through a 4 ft. tunnel which will admit of free examination at all times; the fuel to be used is anthracite coal for cleanliness.

To those who like statistics, the structure may be briefly stated as composed of 690 tons of concrete, 90 tons of granite, 200 tons of iron, and 20 tons of glass. The cost of the structure is over £8,000 or with the furnishing will be fully £10,000. The design is simple, but noble; and may to some be termed dwarf in appearance in proportion to size; but horticulturists will state that is an advantage. The height is ample for stately Palms, etc., and the dwarfer plants will be nearer the light. Mr. Yates Thompson, the generous donor with the designers and builders, Messrs. MacKenzie and Moncur, Limited, hothouse builders, London, Edinburgh, and Glasgow, are to be congratulated upon every detail of this magnificent structure, which will not only add to the general appearance and utility of this lovely park, but will afford much that is instructive to the botanist and student.

The furnishing of the structure has been entrusted to Messrs James Veitch & Sons, London, under the able supervision of Mr. H. Herbert, Superintendent of the Liverpool Parks and Gardens. Amongst the most important plants already in the house, may be noted Latania borbonica, 12 ft. in diameter; Phoenix dactylifera, 9 ft. in diameter; four Seaforthia elegans from 20 ft. to 25 ft. in height. Photinia japonica, 8 ft. high; six Dracaena indivisa; two Cocos flexuosa, 25 ft. high; four C. datyle, 6 ft. high; Cocos Marie Rose, 6 ft.; also Cycas circinalis, Chamaerops Fortuneii, Corypha australis, Phoenix rupicola, Araucaria excelsa, Bambusa aurea and B. Metake, Aralia quinquefolia, Clethra arborea, Acacia paradoxa, Rhododendrons, Himalayan, and Javan varieties, Camellias, etc.

For a structure of these dimensions, and to afford variety and supply, a span-roofed house 114 ft. by 20 ft. is now being erected in the Park Nursery Grounds. Arrangements are in progress with the intention of opening the house in October, when it is to be hoped that the donor will perform the opening ceremony under the presidency of the Earl of Derby, Lord Mayor of Liverpool, supported by the members of the Corporation



New Conservatory at Sefton Park, Liverpool.

VIOLA CONFERENCE.

(*Concluded from Vol. XII, p. 813*).

Mr. Moorman.

In his opening remarks this gentleman paid a further tribute to the brilliancy, the beauty, and the general utility of the Viola. It was suitable alike for large as well as for small gardens. The self-coloured varieties were the best, but some of the fancies, of which mention might be made of The Mearns, were also good. Sylvia and Countess of Hopetoun, were two of the best whites, and Bullion, and Ardwell Gem, two of the best yellows. True Blue, Archie Grant, Bluebell, Wm. Niel, J. B. Riding, Countess of Kintore, and Duchess of Sutherland were all good. What we wanted was hardy, free flowering varieties in which the blooms were raised well above the foliage on long stout stalks, as in the case of the Duchess of Fife and Archie Grant.

Violas naturally did best in localities where the rainfall was most abundant, and hence in places where

the rainfall was not so great, the lack of moisture from the clouds must be made up by deep cultivation. He had great objections to watering his plants with the hose, for except this was in the hands of a careful and experienced workman, the plants were apt to have the soil washed off their roots by the forcible stream of water and harm would thereby be done. He advised that all watering should be done through the medium of a rose-can. Violas certainly possess this great advantage over the generality of bedding plants, that they will stand any amount of overhead watering. Like Mr. Jordan he had found the winters to exercise a fatal effect upon the plants, and for any place within the five mile radius autumn planting could not be practised. He propagated his plants by cuttings. In September the young growths near the crown were selected, and dibbled into cold frames, where they passed the winter. After being watered, the cuttings required little more attention and rooted quickly and well.

Violas had a number of enemies. Of these, Canker was one of the most dangerous. It was often brought about in the first place by wireworms gnawing the plants at the collars. Mildew and red Spider also had to be reckoned with, although fortunately they did not often make their appearance when high cultivation was given. Mr. Moorman also spoke of the effective combinations that might be made with Violas, Fuchsias, and bronze Pelargoniums.

Dr. Shackleton was of opinion that the Violetta type was the most useful and best for small gardens. Mr. D. B. Crane stated that it was his experience that autumn planting was a much better practice than spring planting. He followed the former method and did not lose more than three per cent. of his plants.

VIOLAS FOR EXHIBITION.

This phase of the subject was taken in hand by Mr. Needs and Mr. Baxter, both of Woking, special reference being made to the newer varieties. Both of these gentleman are known as extensive and successful exhibitors.

Mr. Baxter, in commencing, drew the attention of his audience to the fact that many good bedders were first-class exhibition varieties, some of the rayless sorts such as A. J. Rowberry, Border Witch, and White Duchess, being near to perfection. The essayist averred that no hard and fast rule as to what was a good Viola could be laid down. In Duchess of Fife, said he, we get a form very far from an ideal show variety, but yet it is a very beautiful and desirable thing. In Purple Empress, on the other hand, we come very near to the ideal show type, which in this case lacks grace and refinement. We have now selfs in almost all shades but scarlet, whilst among the striped varieties H. W. Stewart is the best. There is little new in whites, Countess of Hopetoun still leading the way. Yellow Queen is the best of its class, and makes a pretty spray. Lord Salisbury is near to Lemon Queen, but it is apt to come rather coarse on occasion. Mrs. C. F. Gordon may be justly said to have taken the place of the Countess of Kintore. There has been a great advance of late years in flowers having broad margins as Peter Barr.

In the rayless section there are many chaste and lovely forms. A really good yellow rayless variety did not exist until Mr. H. J. McLeod, of Dover House Gardens, introduced A. J. Rowberry, the form of which may still further improve. Vestal is the purest white but rather undersized. Ethel Hancock is good. Christine, with its orange throat, is second only in Violas to White Duchess. May Scott, blush on white, is charming, also Florizel. Waterloo is a little better than Bluebell.

In the miniature section there was still plenty of room for improvement. At the last show of the National Viola Society in the Royal Botanic Society's gardens two stands had been disqualified because they were over the stipulated size. Personally he should not advise increasing the standard, but he thought that a miniature Viola should be a miniature without being made so by bad cultivation.

MR. NEEDS.

This gentleman then proceeded to take up the thread of Mr. Baxter's discourse, whose remarks he said he must endorse. He thought that Mr. Baxter had so covered the ground that there was not much room left for him to say anything. At the best he could only hope to mention a few varieties that Mr. Baxter had left out. Cottage Maid had been omitted. This was one of the best, although an old variety resurrectionised (an old maid, interposed Dr. Shackleton). Lady Isabel and Cherry Park were liable to become coarse under very high cultivation. Carissima was wanted on account of its colour, although it is decidedly lacking in substance. Mention had been made of A. J. Rowberry as a good thing. In his opinion it was bad in everything but its colour, and on that account alone was it tolerated. Its constitution was one of the worst. Pencaitland, he thought, had scarcely had justice done to it by this year's trials. Niphetos, which he learned from Mr. W. Sydenham, was synonymous with Marchioness, was also good.

Mr. Geo. McLeod stated that Cottage Maid, referred to by Mr. Needs, was raised by a Mr. Baxter of Daldowie, and sent out by Messrs. Dobbie four or five seasons ago. The thought that the question of foliage was important to exhibitors, as some greenery was needed in the making up of the sprays. It would be a good plan to grow a number of plants of some variety that produces plenty of foliage. The best for the purposes was Daldowie Yellow, which was literally all foliage.

VIOLA SPORTS.

Mr. J. D. Stuart, of Belfast, had been deputed to deal with this most interesting subject, but, owing to pressure of business, his paper was exceedingly short, and only occupied Mr. R. Dean a few minutes in reading it. Mr. Stuart believed that the conditions of heat and moisture have a great deal to do with the sporting to which Violas are so addicted. In varieties which have purple blotches in the blooms, he had noticed that the area of purple was apt to extend in wet seasons, and contract in dry ones. Watering did not produce the same effect as the water from the clouds. Doubtless this was due to the fact that the artificial waterings, while they soaked the soil, did not produce the same saturation of the atmosphere. The condition of the soil, whether rich or poor, had doubtless something to do with it, although hitherto no one had been able to find out the true reason of the phenomenon of sports. Mr. Stuart then briefly discussed the question of reversion, and mentioned the Ardwell Gem family as good instances in which later sports reverted to an ancestral type. Both Amy Barr and J. B. Riding would sport back to Wm. Neil, from which they had originated.

A few remarks on this subject were offered at the close of the paper by Dr. Shackleton, and Mr. Geo. McLeod.

SEEDLINGS.

A number of seedlings submitted by various cultivators for the opinion of the committee received First-class Certificates A list of these was read out by Mr. R. Dean, the particulars of which are as follows:—

ROLAND GRAEME.—A large, purple, blue flower with darker veins and a small yellow eye. Dr. Stuart, Belfast.

ARGO.—A blush flower with a large yellow eye. Dr. Stuart.

LAVINIA.—A large lavender-blue with fine yellow eye. Dr. Stuart.

TOMTIT.—A charming miniature form, purple-blue in colour. Dr. Stuart.

BARTHOLDII.—A circular, rich, purple-blue flower, with darker veins and a small yellow eye. Mr. D. B. Crane, Highgate.

IRIS is a very showy fancy variety, lavender-blue in colour, blotched with deep purple on the lip. Messrs. Dobbie & Co., Rothesay.

HAMLET is a large, very showy bloom, striated with rose and crimson upon a purple-maroon ground. Messrs. Dobbie & Co.

ENDYMION.—A yellow form of medium size, slightly rayed. Mr. A. J. Rowberry, The Crescent, South Woodford.

MABEL.—This is a pretty lavender-blue variety, with pronounced rays of a deeper hue. Mr. A. J. Rowberry.

PEMBROKE.—A bright yellow self of medium size. Mr. W. Sydenham, Tamworth.

BRITTANIA.—A deep purple-blue form of large size. Mr. W. Sydenham.

ELECTION OF OFFICERS.

The meeting then turned its attention to the making of arrangements for the ensuing year 1896-97, and the election of officers. It was moved by Mr. Cuthbertson, and carried by Mr. Crane that a Viola Conference be held in London in 1897, which on being put to the meeting was carried unanimously. A "trial of Violas to be made next year in the Royal Botanic Society's Gardens," proposed by Mr. Baxter and seconded by Mr. Jordan, was also favourably received. Mr. A. J. Rowberry was unanimously re-elected to the chair upon the proposal of Mr. Needs, whilst a motion set on foot by Mr. Geo. McLeod resulted in Mr. J. B. Riding being asked to fill the post of Hon. Secretary to the Conference. Mr. Geo. McLeod, and Mr. W. Sydenham were re-elected Vice-Presidents, and the choice of the meeeting for a third Vice-President fell upon Dr. Shackleton. Mr. Needs takes the place of Mr. Cuthbertson as Hon. Treasurer.

Votes of thanks to last years officers for their services, and to the Council of the Royal Botanic Society for its kindness, were carried with acclamation, and concluded the proceedings.

THE MOSS ROSE.*

The angel of flowers, one day,
Beneath a Rose-tree sleeping lay—
That Spirit—to whose charge is given
To bathe young buds in dews from heaven;
Awaking from his light repose,
The angel whispered to the Rose :—
"Oh fondest object of my care,
Still fairest found where all are fair,
For the sweet shade thou'st given to me,
Ask what thou wilt, it's granted thee."
Then said the Rose, with deepen'd glow,
"On me another grace bestow"
The Spirit paused in silent thought,
What grace is there that flower had not?
'Twas but a moment—o'er the Rose,
A veil of moss the angel throws,
And robed in Nature's simplest weed,
Could there a flower that Rose exceed.

—*Copied from an old Garden Paper*, 1844.

A VISIT TO TOWN CLOSE NURSERIES, NORWICH.

HAVING received permission to have a ramble through these nurseries, I availed myself of that pleasure during the recent holidays. Arriving upon the scene anyone could not but be struck with a gorgeous circular bed and long border of choice Begonias which greeted the eye of the visitor, showing from the start that Messrs. Daniels Bros. were keeping pace with others in pushing this popular flower to the front. The first house, the largest one in the nursery, visited (after passing by hundreds of seedling Begonias growing in the borders backed up by choice shrubs and perennials), was one which, it could soon be seen, was almost entirely devoted to Begonias, single and double, which were a mass of bloom; and the careful work of hybridisation was being carried out. It could be seen that here also, as at almost every nursery now, the chief object in view was to have plants of dwarf habit carrying erect bold blooms.

Other houses which we visited contained all the new zonal Pelargoniums from Pearson and other noted raisers, and I can but say what a blazing effect they made. An unnamed salmon seedling of which there is a good stock made a striking display, and, when sent out, will I think be much in demand; the colour is quite distinct and the pips very large and bold. Fuchsias, too, were also well grown and included all the newest varieties. Amongst them was the Princess May, with which I was wonderfully struck, on account of the innumerable blooms upon the plants. I should think this variety can claim to be the most profuse blooming Fuchsia at the present time in commerce. Passing by, mention must be made of the Petunias, the double fringed varieties of which were carrying fine blooms. I next visited a house where another popular coming flower, the Canna, was being grown with Coleus. These made a striking effect. Several choice seedling Coleus had been put aside for stock purposes and when named will be sent out. Chief among the Cannas of which a good variety is grown, Queen Charlotte I think was the cream.

Next, visiting the stove and Fern houses, a large batch of Gloxinias, which were just going off bloom, and which had been hybridised, showed good prospects of a bountiful supply of seed. Several plants of Allamanda Williamsii, with Achimenes, were also

* From the German.

a profusion of bloom. A large number of plants of Begonia Rex, and B. metallica varieties were mixed with all sorts of Adiantiums and produced a pretty effect. Two rows of frames were allotted the task of sheltering hundreds of Primulas, the old double white, and seedling Cyclamen which looked well for a winter display, and which were only sown in November and December 1895, thus showing that good flowering plants can be easily obtained within twelve months. The paths were also occupied at the sides by rows of Chrysanthemums which included the latest Continental and home varieties.

Messrs. Daniels Bros. have long enjoyed the distinction of taking a prominent lead in the hardy flowers, and anyone who could have seen them as I did would have had but the same opinion. Phloxes, Gaillardias, Campanulas, Harpaliums, Helianthus, Pentstemons, &c., made a blaze of colour which almost dazzled the eyes. By these borders frames were noticeable containing all classes of hardy plants grown in pots, so that at any season these plants without fear of disturbing the roots can be sent to any part of the kingdom. Annuals, too, made a bold show, chief among which were Godetias for which this firm has received several awards. These, with most others, as Nasturtiums, Linum, Salpiglossis, etc., were being grown with the object of saving the seeds.

The late drought had, as could be seen, played sad havoc among the Polyanthus, Primroses, Pansies, and Carnations, though what little "grass" these last plants had made was being carefully layered. Large portions were being devoted to growing Peas, Cabbages, Onions, Potatos, and other vegetables for seed purposes. Fruit trees also cover a large tract, and specimens of Nectarine, Apricot, Cherry, and Pears were being carefully trained for wall purposes. Here, too, as we had been previously informed, an immense quantity of Myrobalan Plum was growing, the landowners and farmers having taken to this plant for making impenetrable fences. Roses are well grown here, and some score of men were busily engaged the day I was there, budding upon thousands of Manetti and Brier stocks. All through the ramble, system and cleanliness were very prominent features, and if any of your readers are in the neighbourhood I am sure they will enjoy a ramble through this nursery, which is open free at any time during business hours.—*H. P., Norwich.*

PUBLIC PARK IMPROVEMENTS AT GUERNSEY.

Delancey Hill is an eminence situated about halfway between the charming township of St. Peter Port and the quaint old shipping place of St. Sampson, immediately over-looking Belle Greve Bay, and with a long vista of charming seascape, with the islands Sark, Herm, and Jethou, within range of vision. The public spirited inhabitants of St. Sampson are to be congratulated upon their selection of the Delancey Hill estate which has been recently purchased for the purpose of dedicating it to use as a public park.

Much of the ground is at present in a state of nature, but readily offers facilities for judicial improvement at the hands of the landscape gardener and the horticulturists of skilled modern days. To carry this out in detail, the sinews of war require to be provided, and although the present ideas of the committee are somewhat restricted to actual necessaries, yet if funds permit, we believe it is their intention in course of time to furnish the park so as to make it one of the chief attractions of this charming island of the sea. In detail we may mention that it is proposed to provide a series of winding paths, and to plant a suitable selection of shrubs and flowers; besides which there will require to be furnished some garden seats, without which a public recreation ground is certainly incomplete. We are quoting a local contemporary when we say that it is the desire of the authorities to provide seats of a rustic description "for the relaxation of the weary, and the occasional visitors to this beautiful country retreat, with here and there a bower worthy Shakespeare's most romantic inspirations."

Now the necessities for these funds have been practically demonstrated in the course of the committees. The next point was the exact method which should be resorted to in order that the desired object might be attained. An influential body of gentlemen formed themselves into an acting committee and decided upon a fête and fancy fair, which took place on August 19th, 20th, and 21st, under distinguished patronage at Delancey Park. The opening ceremony took place on Wednesday afternoon at 3 o'clock, before a very large influential assembly, comprising the élite of the island and the principle visitors there. The long ranges of marquees covered a considerable portion of the grounds in which were to be found a charming and varied assortment of useful articles for sale in the familiar form of a bazaar. These included an extensive tent devoted to articles of rich and choice specimens of needle work, whilst another found room for some very beautiful contributions in the way of floral specimens and a large variety of fruit.

In addition to this there were a variety of entertainments provided, including a concert in which a party of several gentlemen from London, well-known in horticultural circles, took a prominent part. The concert hall had been improvised and fitted with an ample store, the interior being draped and suitably decorated. A lengthy programme was ably rendered under the direction of Mr. Augur; and in addition to the performers already referred to, there were many local contributors whose accomplishments were very well received by a large audience. A dramatic entertainment followed, but your correspondent regrets to place on record that the limited capacity of his intellect was altogether unable to properly criticise the efforts of the artistes, who, however, worked their hardest and did their best to make their share of the entertainment not the least pleasant item of the evening's diversions.

Now all these arrangements were, of course, the outcome of considerable forethought, on the part of a large and influential committee, of whom the Rev. R. Jones, the Rector of St. Sampson, was the head, assisted by Mr. W. Stranger, Mr. J. W. Dorey, and many others; but especially are we enjoined to put on record the thanks of the management to the large circle of willing lady helpers who so admirably devoted much time and energy with their winning manners to the successful issue of their fête.

ORCHIDS AT DITCHINGHAM HOUSE, NORFOLK.

H. Ryder Haggard, Esq., has so earnestly taken up the pleasant task of Orchid growing, and has so rapidly pushed on with his collection that he has already filled two of his well-built houses, which were until recently devoted to general plant culture. The new intermediate house, which is now completed, is already filled with Cattleyas and other intermediate Orchids, amongst which I noticed some fine pieces of Cattleya Mossiae, C. Mendelii, C. Trianaei, C. gigas, C. sanderiana, C. labiata, also good specimens of Cymbidium lowianum, and Odontoglossum vexillarium, a fine variety and well-flowered. O. londesboroughianum, I noticed, was making strong growths in this house.

The East Indian house is filled with Dendrobiums in varieties, Aerides, Vandas, Saccolabiums, Angraecums, and other choice things.

In the cool house were several Odontoglossum crispum, O. Pescatorei, O. Hallii, O. luteo-purpureum, O. triumphans, and O. Rossii majus. Lycaste Skinnerii is doing remarkably well; Lycaste plana, Lycaste Deppii, and Epidendrum vitellinum majus are well-flowered. One plant struck me as being a magnificent piece of Epidendrum parkinsonianum, a lovely variety with forty of its beautiful white, peculiar-shaped flowers, and a quantity of buds.

In fact everything seems to be thriving at Ditchingham House under the care of Mr. Johnson, the gardener.—*H. A. T.*

FELLING FLOWER SHOW.

The seventeenth annual show of the Felling Floral, Horticultural, Pigeon and Rabbit Society was held at Felling, Durham, on the 17th and 18th ult. Prizes were offered to the amount of £300, and the show proved to be one of the best ever held by the society. Besides the floral exhibits there were poultry, pigeon, rabbit and industrial exhibits. The latter were confined to children at school.

In the open class the first prize for stove and greenhouse plants was taken by Mr. D. Wylam, Shankhouse; he was followed by Mr. J. Morris, Mr. J. Liddle, and Mr. J. Wilkinson, all of Felling, in the order named. Mr. Morris and Mr. J. Liddle took the leading prizes for foliage plants and Ferns respectively. Mr. T. Bell, Felling, had the best three and one Fuchsias. Mr. D. Wylam again came to the front for three stove and greenhouse plants. Mr. J. Morris had the best greenhouse plant. Messrs. Harkness & Sons, Bedale, took the leading awards for twelve Cactus Dahlias, twenty-four and twelve Roses, and the best six Teas, twelve spikes of Gladioli, and six Phloxes. Asters, Lilies, Carnations, Picotees, Petunias, Hollyhocks and Pansies were also exhibited. Mr W. Archer, Mr. J. D. Jobling, Mr. J. Gardner, Messrs. J. Lawson & Son, Mr. J. F. Grainger, Mr. W. Hodgson, Mr. W. Lee and Mr. J. Price took the leading prizes for vegetables. Fruit of various kinds was well represented, and the leading prizes were taken by Mr. G. Lonsdale, Mr. R. Withfor, Mr. J. Atkinson, Mr. F. Edmonton, Mr. W. Lee, Mr. J. Gardner and Mr. J. Smith.

There was a division for amateurs in which prizes were offered for flowers and plants similar to those already mentioned, and there was good competition in nearly all the classes. A division was also set apart for local exhibitors of a different standing which brought an entirely different class of competitors. A very handsome collection of plants grown with Pure Ichthemic Guano was exhibited by Mr. W. Colchester, of Ipswich. The takings at the gate were heavy and established a record.

THE ENGLISH SHOW TULIP.

The bulbs, which will have been in their boxes since June, should now be overhauled and the old skins removed; and any of the bulbs which should not be found in perfectly sound condition must be replaced by others. This being done, the blooming notes should be examined, and any re-arrangement of bulbs the grower considers necessary, should be made accordingly; the bulbs will then be ready for replanting for next year's bloom, the best time for planting being the most available day during the last fortnight in October.

The "leaf damage" which many collections suffered last March and April, consequent on the severe hailstorms and frosts, has had a serious effect in regard to the size of the bulbs of which the leaves were affected. Two-thirds, at least, of my whole stock have been seriously injured from this cause; but a greater disaster has fallen to my lot than the above, for on examining the bulbs comprising a bed of eighty-five rows, more than three-fifths were found to have perished, the majority being soft and pulpy. I have never experienced anything similar during the many years I have cultivated Tulips, and I am at a loss to understand the cause of same, and I, therefore, forward to you (Mr. Editor) a box containing fifty of the perished bulbs, and will thank you if you will kindly show them to Mr. Peter Barr, or to any of your other scientific friends who may be able to explain the cause of the evil. The bulbs, when I took them up during the third week in June, appeared in every way sound and presented no indication of disease. The only possible cause that I can attribute the disaster to was the intense heat of the sun a few days before I took them from the ground and whilst I was taking them up. My soil is light and sandy, and during the process of lifting the bulbs, I well remember that the soil felt hot. I, therefore, think it probable that the bulbs may have been partly baked in the ground a day or so prior to their being lifted, or is it possible that the sun may have burnt them whilst the bulbs were in the boxes during the process of lifting; the time occupied in lifting each box averaging forty-five minutes? I am inclined to attribute it to the latter, from the fact that two-fifths, or about, are sound. In this bed which was never covered with either glass or calico during the bloom, an average of four to six bulbs was planted together, that is, large and small, so that when lifted and put in their separate compartments (3 in. square) of the drawers or boxes, some of the bulbs would be protected from the sun by the others covering them over.

I may remark that the bulbs from my other beds and which were lifted from the ground previously, are in sound condition. They have all been kept in the same room, and a space of 1 in. exists between each drawer, so that a current of air has always passed between each drawer.—*James Thurstan, The Green, Cannock.*

ROMAN HYACINTHS.

The Roman Hyacinth, of which such vast numbers are forced annually in this country and America, is a variety of H. orientalis known as H. o. albulus. It is a native of southern France, and is cultivated there very extensively. It is from this source that we draw the greater part of our annual supply. The bulbs should be secured as early as possible—they are usually to hand some time in August—for it is important to have them potted up early, where they have to be forced hard enongh to produce a succession of bloom frcm November, until such time as the later Dutch bulbs are in flower.

The pure white, sweet-scented blooms of the Roman Hyacinth are in great request during the late autumn and early winter months, for the single blooms, when wired, make up nicely for buttonholes, sprays, etc. The double white Italian comes next to the Roman in point of earliness, but the flowers are not pure white, being suffused with pale rose.

The blue Roman Hyacinth has smaller flowers than either of the foregoing, but they, together with the scape, exhibit a very distinct and decided shade of purple blue. This form should be grown for the sake of variety, although it is not so useful as the white ones.

Supposing the bulbs to be to hand the last week in August, they should be potted up at once. Five-inch pots are the handiest, and these will hold five medium sized bulbs, four round the side and one in the centre. A compost of equal parts of loam, leaf soil, and well-rotted manure, with a good admixture of sharp sand, will answer well. A little sand may be dropped in for the bases of the bulbs to rest upon, and when potting is completed the apices of the bulbs should just protrude from the soil.

It is a good plan to cover the bulbs with an empty inverted pot before covering them with ashes. The moisture contained in the soil will be sufficient for the plants during the plunging period. By the middle of October the pots will be pretty well filled with roots, and the tops will have commenced to start. The plants must then be taken out of the ashes, and consigned to a cold frame, or cool greenhouse. Here they must be gradually inured to the light, and the young leaves will not be long in putting on their normal green hue.

Batches of a size to meet the demand must be introduced into heat at intervals of from ten to fourteen days. If no other convenience exists a place on a shelf in the stove will answer. An occasional syringing will help the plants a good deal. As soon as the lower flowers on the spikes are open, the plants must be removed to the greenhouse or conservatory. The plants at this stage will stand a little disturbance at the root, and by knocking them out of their pots, and removing a little of the loose soil, they may be easily transferred to ornamental vases destined to do duty in dwelling-rooms.

DERIVATION OF SCUTELLARIA.

Notwithstanding Mr. Stogdon's "latest authorities," I still insist that my rendering of *scutella* is well within the meaning of the term; and that, therefore, the readers of the Gardening World have not been led astray. My "antiquated" friend may be a little out of date, perhaps, but I know him to be a man of keen perceptions, and of great research. Does Mr. Stogdon despise the ancients—from whom all wisdom flows—because they are "antiquated"? However, it was not my intention to have noticed any further references to the term in question, which, I am willing to allow, may bear more than one interpretation. But Mr. Stogdon's unfortunate, not to say ungenerous, allusion to another matter, necessitates a reply.

Mr. Stogdon asks, in a bitterly satirical way, for my "authority" for the word "logomarchy." Logomarchy is, of coarse, a misprint for logomachy, which means "a strife about words," a fact which I thought peculiarly *apropos* to the present dispute—hence the illustration. The word—as a word—is not new to me, in fact it is somewhat "antiquated," inasmuch as I first made its acquaintance in a philological essay on the Greek elements in the English language about thirty years ago. But the man who can found an argument, or assume a virtue, on a misprint, is almost sure to read his Pope awry.
—*C. B. G., Acton, W.*

HERBACEOUS FLOWERS FOR COMPETITION.

Your correspondent "Coila" (Vol. XII, p. 802) gives a list of herbaceous plants suitable for competition about the end of July, and in August. From that list I miss mention of the old Phygelius capensis, which in my early exhibition days was considered one of the finest herbaceous plants, and not the easiest to secure in good condition. Statice Gmelini and S. latifolia are equally good for any purpose, and should be placed at a higher estimate than S. incana, because they are more elegant and graceful for cut flower work. I do not urge their claims because they are old, but because they are beautiful and useful. Yellow flowers are usually over-plentiful during the end of summer, but room might be made for Helianthus Miss Mellish, Heliopsis laevis and Coreopsis lanceolata, the latter being one of the finest in colour and dwarfer in habit than C. grandiflora. Eryngium oliverianum might be supplemented by E. alpinum and E. amethystinum, both handsome, and not so often seen at shows, true to name as one could wish. I have often seen the same objection raised to Lilies as "Coila" hints at, but could never glean a tangible reason why they should not be admitted to stands of herbaceous flowers staged for competition. They are bulbous plants to be sure, but all are herbaceous and many of them hardy, and very showy when properly grown. I would name Lilium tigrinum, L. Martagon dalmaticum, L. chalcedonicum, L. pomponium, L. croceum, L. pardalinum, &c. Exhibition schedules sometimes expressly exclude Lilies; but why? That is the question.—*Plantsman.*

JERSEY GUANO.

This is one of the specialities of Mr. Wm. Colchester, the well-known chemical manure manufacturer of Ipswich. As far as the island is concerned the speciality is an unprecedented sale of the Special Jersey Guano, manufactured expressly for the Jersey Potato crop. On the firm's establishment which is of gigantic proportions, three analytical chemists are constantly employed for the purpose, among other things, of testing the samples of different soils, in order to produce a special guano or fertiliser, whose properties will have the power of enriching a certain kind of soil, and greatly increasing its productive qualities. The Special Jersey Guano, together with other fertilisers manufactured by the firm, have received over sixty awards. Into whose hands samples have been placed for trial purposes, they have been high in their praise of it as a chemical manure of excellent quality and great fertilising properties.

In accordance with the usual custom of the firm, Mr. A. E. Stubbs, the genial and courteous manager, while on a visit to the island, decided to entertain a number of the principal clients and friends to dinner. This was arranged to take place at the Great Western Hotel, Pier, kept by Mr. J. B. Bacon, on the 27th ult. It was got up in fine style and the tables arranged with silver and flowers presented an exquisite effect. The company was a large one and included many of the leading residents of the island.

Everything necessary for an enjoyable evening was provided, and after the usual toasts had been rendered there was speech-making interspersed with vocal and instrumental music. Mr. Stubbs who occupied the chair, in proposing "The Industries of Jersey," said that they were not of a varied nature, and consisted chiefly of the culture of Potatos. In England, farmers were only able to get one crop out of the ground, but in Jersey, two and sometimes three crops in one year were not considered out of the way. The English farmer had never been able to solve this problem, and he could not understand, with the high rate of labour and rent per acre, how it could be done. He believed it was quite likely that English farmers would pay the island a visit, in order to take a leaf out of its book, if possible. He had visited the island for the past eight years and found it still improving. The Jersey farmer was a very contented individual, and always bore a happy appearance, and after his day's work was done would return home satisfied that he was one day nearer the goal or harvest. Some farmers, of course, had bad years, but then they invariably retrieved themselves. In concluding he wished them every success in the future, and had great pleasure in calling on Mr. G. de Carteret, in the absence of Mr. F. Le Feuvre, to reply.

Mr. G. de Carteret, in replying, thanked all for the kind manner they had received the toast. He was not quite of the opinion that a farmer's life was a very happy one, as he had many reverses and cares to contend with. They had to thank Messrs. Colchester for being the means of lowering the price of artificial manures, which he assured them made a great difference in the farmer's exchequer in the course of a year. The farmer was greatly dependent on the Potato harvest, and at the same time he thought that everything possible should be done for the visitors who, in a great measure, formed the backbone of the island. He hoped that the future would be as successful, if not more so, than the past, and said that they really depended on the Colchester manures for their success.

In connection with the appointment of Mr. Philip Vibert, late of L'Etoquet, St. Ouen's, as agent, and Mr. Wm. Le Brocq, of Vauvert, First Tower, as sub-agent for Messrs. Colchester, it was stated that the firm would have about 1,000 names of customers on their books in Jersey alone.

PLANT EVOLUTION.

There are often several ways of looking at the same thing. A flower, for instance. We were wont to define it as a shoot modified for purposes of reproduction. Goethe's Ur-plant showed how the petals, sepals, stamens, and carpels were after all only leaves which, in virtue of their respective functions in connection with the ultimate object of forming fruit containing seeds, assumed shapes differing more or less widely from what we generally associated with the term leaf. That is to say, the popular leaf being the flat expanded green foliage-leaf, we felt constrained to derive the floral leaves from such a one. We could fold one up nicely to make a carpel, but stamens floored us rather, and we rejoiced over the Water-lily, which showed us how it had all happened, supplying a complete transition from the flat 'leaf'-like petal to the anther-bearing filament. Double-flowers and monstrosities delighted us, for in them we saw a harking back to the original form. If we imagined anything of evolution it was an ordinary foliage shoot, becoming in course of ages converted into a flower, perfect and complete. And after all we found nothing in our textbooks, and heard nothing at our lectures, to contradict our little theory.

The outer series, the sepals and the petals, were concerned mainly with the protection of the 'essential' stamens and carpels, or with visits of insects and other creatures associated with the deposition of pollen on the stigma. The pollen-sacs of the stamen, and the ovules borne by the carpel, were sporangia comparable with those borne on the fertile leaf of a Fern, or the sporophylls of an *Equisetum*. But when we came to study 'types', beginning with the unicellular plant, and working upwards, doubts would sometimes arise. Our series of types we somehow thought represented stages in evolution. The complex seed-plant had gradually evolved from the simple monad. But the latter was in the habit, at certain periods of its life-history, generally when times were hard, of simply becoming a sporangium, its living cell-content contracting to form spores. Obviously, the sporangium existed long before the leaf. Were we right then in deriving, as our training certainly tended to make us derive, the sporophyll (stamen or carpel, or what not) from the leaf? What was faintly foreshadowed in these doubts may become a reality for the next generation of students. There are some who tell us that the sterile tissue which we find forming bands between the spore-producing cells in the sporangium of *Isoetes*, or segmenting the pollen-sacs of certain seed-plants, recalls the commencement of the evolution of vegetative from reproductive tissue; and that in such sterile tissue, in fact, we see the origin of the vegetative structure—root, stem, and leaf—of the higher plants. We shall then have at any rate a consistent plan of evolution, though one not easily admitting of proof.—*Natural Science.*

GARDENING MISCELLANY.

COLEUSES AT LEYLAND.

For adorning the conservatory during the summer months there are no more gorgeous subjects than the

Coleuses. Mr. C. Walker, F.R.H S., makes a specialty of them at his Leyland Nurseries, near Preston. Amongst the samples of varieties lately raised by him, which were recently forwarded for our inspection, are several really pretty varieties. Our first choice would be Hart's Conqueror which has cordate leaves of medium size, velvety-black in colour, with a bright cerise centre and a yellow-green base. Walker's Surprise has large, broadly ovate acuminate leaves exhibiting an erratic assortment of black, green, rosy-buff, and cerise. This should be very suitable for growing as a large specimen. Distinctly a novelty is Louis Chretien, which has a white centre to the leaves, banded with vivid green. The margins are irregularly and deeply serrate, the whole leaf being ovate lanceolate in shape. The pink petioles are a further attraction. Pride of Leyland, a pretty green and yellow form, is very distinct on account of the peculiar way in which the primary veins form a triangular base to the leaves, the lamina proceeding from them at a right angle. The box of samples contained several other varieties, but those mentioned are the most noteworthy.

BEGONIAS FROM PLYMOUTH.

About a fortnight ago we had a box of double blooms of tuberous Begonias from Mr. Luscombe L. Cousins, gardener to P. F. Bulteel, Esq., The Retreat, Higher Hooe, near Plymouth. He now sends us a box of single varieties, all of his own raising. A soft orange variety named Beauty of Hooe was very choice and deserving of cultivation. Cottager, a soft rose variety, might be placed in the same category; it was of good substance as was Crimson King, of a glowing crimson colour. Intensity was notable for its velvety, maroon-crimson hue; but both this and Crimson King were rather defective in the breadth of the inner petals. The salmon-orange Defender, like Beauty of Hooe and Cottager, was quite circular and of large size. Victor Lemon, a rich scarlet, would appear to be good, but the flower was only half expanded. The rest were smaller flowers. A fiery scarlet variety was notable for its colour, but whether it was named Enchantress or Florrie, we could not say as the papers containing them had become undone. Canary Bird was by far the finer of the two yellows sent, for it was rich and of good size for a yellow. The white varieties hardly came up to the standard, seeing that we have so many fine ones. The floriferous character of White Bedder would be its best recommendation, for a plant in a 7-in. pot carried thirty blooms. The same might be said of Mrs. Hall, the only double variety sent on this occasion. A small plant in a 6-in. pot carried thirty blooms at one time.

SOCIETIES.

CHARD FLOWER, FRUIT AND VEGETABLE.

The annual flower show of the Chard Flower, Fruit and Vegetable Society was held on the 20th ult., in a field in Fore Street, lent by the Rev. C. F. A. Wimberley. This was the first show held in connection with the Amalgamated Chard Amateur and Cottagers' and Chard Horticultural Societies, and proved a decided success in every sense. The entries numbered 740, being about eighty in excess of last year. There was also a great advance in the quality of the exhibits. Prizes were offered in 101 classes. Roses were not numerous, but Dahlias were extremely good, and stove and greenhouse plants were noteworthy. China Asters made a fine display. A collection of fruit and Grapes were creditable exhibits; and hardy fruits such as Apples, Plums and Peaches were specially noteworthy.

In the open classes Messrs. Jarman & Co., Chard, took the leading awards for twenty-four Roses, twenty-four show and fancy Dahlias and Begonias. Mr. W. Helliar, Donyatt, took the lead for Cactus and decorative Dahlias. Mr. W. Brock, Exeter, had the best six stove and greenhouse plants, the best Ferns, and the most effective group of plants.

In the amateur division Mr. W. Brock was again very successful, taking the leading prizes for six and two stove and greenhouse plants, exotic Ferns, and fine foliage plants. Mr. H. Parsons, Nimmer, had the best double, tuberous-rooted Begonias. Dr. Spicer, Chard, had the best single Begonias, double Pelargoniums and Gloxinias. The Rev. H. A. Cartwright (gardener, Mr. J. Rowley), Whitestaunton, was first for single Pelargoniums.

J. Brutton, Esq. (gardener, Mr. A. Crossman), Yeovil, had a very fine collection of fruit, taking the first prize. He was also first for Black Hamburgh Grapes, any other variety, Peaches and Nectarines. Other first prize winners in the fruit classes were Mr. Spottiswoode, Mr. J. Beer, Dr. Spicer, and Col. Mount-Batten. Vegetables were considered specially fine by the judges. For a collection of twelve varieties, W. E. S. Erle-Drax (gardener, Mr. G. H. Copp), Sherborne, led the way. Other first prize winners were Mr. Spottiswoode, Col. Batten, Mr. J. Brutton, Mr. Parsons, Mr. N. J. Lee, Chard, Rev. A. B. McDougall, Rev. H. A. Cartwright, and Mr. A. D. Paul. The Onions staged were of grand quality, and the same might be said of Scarlet Runners, Potatos, Carrots, and Turnips. Vegetables generally were well shown by the cottagers. There were several collections not for competition, and amongst them was an exhibit of pot plants, cut flowers and choice fruit, exhibited by Mr. John Crook, gardener to W. H. Evans, Esq., Forde Abbey, Chard. These things were offered for sale and the proceeds were devoted to the Royal Gardeners' Orphan Fund. This is an example that might well be followed by others.

ROYAL HORTICULTURAL OF IRELAND.

The autumn show of the Royal Horticultural Society of Ireland was held on the 28th ult, in Merrion Square, Dublin, instead of in Lord Iveagh's grounds as formerly. This was an innovation, and fine weather being enjoyed, the exhibition was a brilliant success, and the best that has been held for many years. Two extra tents had to be erected to accommodate the exhibits.

The first award for a group of flowering and foliage plants was taken by Mrs. William M'Comas (gardener, Mr. Coghlan). Lord Carew (gardener, Mr. M'Lennan), was second. Mr. F. A. Miller (gardener, Mr. Colohan), took the lead for exotic Ferns. Mrs. Pease (gardener, Mr. M'Kenzie), had the best double tuberous Begonias in the competitive classes, the best single varieties, and the best zonal Pelargoniums. George Drimmie, Esq. (gardener, Mr. Byrne), showed the best specimen Orchid. Mrs. Pease again took the lead for Coleus, a class in which there was great competition, and for zonal Pelargoniums. Lord Ashbrook (gardener, Mr. M'Kellar), took the first award for thirty-six Dahlias. Lord Cloncurry (gardener, Mr. Rigg), showed the best twenty-four Dahlias. Lord Ashtown (gardener, Mr. Porter), had the leading twenty-four blooms of Roses; and Lord Ashbrook, had the best twelve. George Drimmie, Esq., was to the fore in the class for Tea Roses. Gladioli constituted a prominent feature of the exhibition, and James F. Lombard (gardener, Mr. Tobin), took the leading honour in the classes for thirty-six and twenty-four spikes; Lord Ashtown had the best twelve spikes. Begonias were shown in great quantity and of good quality. In the class for forty-eight blooms, Lord Ashtown took the lead, followed by Lord Ashbrook; the latter came to the front for twenty-four blooms. China Asters, French and African Marigolds, Carnations, Picotees, Sweet Peas, Dahlias, Roses, and Gladioli, in other classes, served to make up a very attractive display. Messrs. A. Dickson & Sons, Newtownards, carried off the leading prizes for Roses and Gladioli.

In the miscellaneous class for competition were numerous exhibits, from a great distance. A Gold Medal was recommended for the fine display of single and double tuberous Begonias set up by Messrs. Hartland & Sons, Lough Nurseries, Cork. Messrs. Dickson & Sons were recommended a Silver Medal for twenty-four blooms of Rose Mrs. John Laing. Messrs. Geo. Bunyard & Co., Maidstone, exhibited a splendid collection of Apples. Mr. John Forbes, Buccleuch Nurseries, Hawick, N.B., re-received certificates for Carnations Yuletide and Countess Cowper, and obtained an H. C. for a collection of Carnations. Messrs. Dicksons, of Chester, were awarded a V. H. C. for a collection of hardy herbaceous flowers of great merit. Mr. M. Campbell, of Blantyre, Scotland, also had a V. H. C. for single annual Chrysanthemums, and was commended for Dahlias, Carnations, and Pansies. Messrs. Dickson & Sons showed a collection of fruit. Messrs. Edwards & Son, Sherwood, Nottingham, staged a collection of centre pieces for tables. A stall of vegetables exhibited by Lord Carew, was pronounced by competent judges to be one of the finest ever seen at a show. Grapes, Apples, Pears, and other things were shown in fine condition.

NATIONAL DAHLIA.

The Grand Exhibition of Dahlias was held at the Crystal Palace on September 4th and 5th. The meeting was rather smaller than usual, although the quality of the material staged was well up to the average in spite of the unfavourable character of the present season.

In the premier class for nurserymen for sixty show and fancy Dahlias, distinct, Messrs. Keynes, Williams & Co. came out at the top of the list. Included in a splendid collection were five samples of Mrs. Kendle, Virginal, Peacock, William Rawlings, R. T. Rawlings, Rebecca, Goldsmith, Gaiety, Florence Tranter, Kathleen, Arthur Rawlings, S. Mortimer, Chieftain, and Alice Emily. Mr. John Walker, Thame, Oxon, was second; Mr. M. V. Seale, Vine Nurseries, Sevenoaks, third; and Mr. S. Mortimer, Swiss Nursery, Farnham, Surrey, fourth. Mr. Mortimer led the way for forty-eight blooms, distinct, with Shotsam Hero, T. S. Ware, George Barnes, and Perfection in fine order. Second came Mr. M. V. Seale; and third Mr. John Walker.

In the class for thirty-six show and fancy blooms distinct, Mr. J. T. West was placed first; Messrs. C. Kimberley & Son, Stoke Nursery, near Coventry; and Mr. Geo. Humphries, The Nurseries, Kington Lanley, Chippenham, taking second and third places respectively. Mr. J. T. West showed the best twenty-four show and fancy blooms, distinct; and Mr. H. Harris, Writtle Road, Chelmsford, the best twelve blooms, distinct.

Messrs. J. Cheal & Sons, Crawley, Sussex, staged a superb eighteen bunches of Cactus varieties, six blooms going to a bunch, winning, thereby, the first award. Mr. J. T. West had the finest twelve bunches of Cactus sorts, Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, making a good second. Twelve bunches of decorative varieties were best shown by Mr. M. V. Seale. This exhibitor also had the finest twenty-four bunches of Pompon varieties – a grand lot. Mr. J. T. West was first in the smaller class for twelve bunches of the same material.

Messrs. J. Cheal & Sons added yet another to their list of successes by securing the premier award for twenty-four bunches of single varieties, distinct, ten blooms going to a bunch. Messrs. J. Burrell & Co. were second here.

In the amateurs' classes competition was not so keen. The following exhibitors were credited with first awards:—Mr. A. Starling, gardener to H.H. Raphael, Esq., Rosecourt, Havering, Essex, for twelve show and fancy blooms, distinct; Mr. E. Jefferies, Langley Burrell, Chippenham, Wilts, for six blooms of the same section; Mr. Jas. Strewick, Silverhill, St. Leonard's-on-Sea, for twelve and nine bunches of Cactus sorts; and Mr. J. Hudson, Gunnersbury House, Acton, W., for twelve blooms of Cactus Dahlia Mrs. Francis Fell.

In the open classes the undermentioned exhibitors won first prizes. Mr. John Walker for six blooms of Mrs. Gladstone, a like number of the dark James Cocker, and of the yellow John Hickling; and Mr. M. V. Seale for six blooms of the "tipped" Mrs. Saunders.

The miscellaneous exhibits comprised a number of most attractive groups, Dahlias, of course, being everywhere conspicuous.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., set up a very pretty bank, in which Cactus and Pompon Dahlias were exceedingly bright and showy. The blaze of colour they presented was lightened and toned down by the insertion of plants of Lilium philippinense, and some dwarf Bamboos.

Messrs. Wm. Paul & Son, Waltham Cross, Herts, contributed a fine collection of Peaches, Figs, Pears, and Nectarines in pots. All the trees bore heavy crops of grand fruit. A very pretty group of garden Roses was also contributed by this well-known firm, including the charming Polyantha section, and a new China Rose Queen Mab, exhibiting a lovely shade of Apricot.

A very choice group of hardy flowers was sent by Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E. It included four dozen excellent blooms of show and fancy Dahlias. On either side of these appeared pyramidal bunches of Cactus and Pompon Dahlias in considerable variety.

Asters, Phloxes, and Heleniums also added their quota to the general effect.

Certainly one of the prettiest exhibits was one for which Messrs. Cutbush & Son, Highgate, N., were responsible. In addition to Dahlias of all sections, Solidago virgaurea, Tritomas, and Heleniums were conspicuously brilliant.

Dahlias were grandly shown by Messrs. H. Cannell & Sons, Swanley, Kent. Over 100 large bunches of Cactus varieties, and 140 of Pompons were staged. In addition to the brilliancy of the flowers which was beyond all praise, the excellence of the arrangement was well worthy of commendation.

Messrs. John Laing & Sons, Forest Hill, S.E., were the most extensive exhibitors. They set up a superb group of Tuberous Begonias, and stove foliage plants in a style that fairly surpassed themselves. In addition to this they had a bright collection of hardy cut flowers, and a group of cut Roses and hardy fruit, all in first-class condition.

Hardy cut flowers were also shown by Mr. John Charlton, 37, Ye Pantiles, Tunbridge Wells.

ROYAL HORTICULTURAL.

The meeting of Tuesday the 8th inst. was noticeable for the extensive collections of Dahlias of all classes. Stove and greenhouse plants, China Asters, Gladioli, hardy herbaceous plants and hardy fruits were also more or less abundant and conspicuous. Orchids were more numerous than on last occasion.

A group of Orchids was exhibited by Messrs. J. Veitch & Sons, Chelsea. Conspicuous and good in their several ways were Sobralia Veitchi (Veitch's variety) Laeliocattleya Nysa, L. Pallass, Cycnoches chlorochilon, C. Loddigesii Harrisoniae, C. bicolor and many other interesting things. The plants were set up with Palms and Ferns (Silver Flora Medal).

A smaller but very interesting group of Orchids was staged by Messrs. F. Sander & Co., St. Albans. Well flowered and interesting things were Maxillaria striata grandiflora, Zygopetalum Gautieri, Habenaria militaris, Burlingtonia fragrans, Miltonia moreliana, etc.

Messrs. B. S. Williams & Son, Upper Holloway, also set up a group of Orchids with Palms and Ferns. Most notable was a fine piece of Renanthera lowiana bearing its characteristic flowers of two kinds, and differing in form and colour. Pescatorea Klabochorum and Cypripedium Charlesworthii were also well done (Silver Banksian Medal).

Walter Cobb, Esq. (gardener, Mr. Howse), Dulcote, Tunbridge Wells, exhibited Miltonia Moreliana Dulcote var., and Odontoglossum Oerstedi majus. A Cultural Commendation was awarded to Baron Sir H. Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, for Sophrocattleya Veitchi; he also showed Laeliocattleya callistoglossa ignescens.

G. Shortland Ball, Esq., and E. Ashworth, Esq., both of Wilmslow, Cheshire, showed cut flowers of Orchids. N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne, showed some Cattleyas. C. L. N. Ingram, Esq. (gardener, Mr. T. W. Bond), Godalming, showed Laeliocattleya Charles Darwin; and W. S. Ellis, Esq. (gardener, Mr. W. S. Barrell), Hazelbourne, Dorking, showed the new Oncidium panduratum.

An extensive collection of Dahlias consisting of a fine lot of Cactus varieties, singles and pompons representing the leading and best types were shown by Messrs. J. Cheal & Sons, Crawley, Sussex (Silver Gilt Banksian Medal).

A fine group of Crotons was shown by — Darnell, Esq. (gardener, Mr. Davies), Devonshire House, Stamford Hill (Silver Gilt Banksian Medal). Near it was a pretty group of Chrysanthemums and Lilies from Mr. T. S. Ware, Hale Farm Nurseries, Tottenham (Silver Banksian Medal). Mr. J. H. Witty, Nunhead Cemetery, S.E., also set up a large group of Chrysanthemums edged with Maidenhair Ferns (Silver Banksian Medal).

A very extensive group of stove and greenhouse plants was set up by Earl Percy (gardener, Mr. G. Wythes), Syon House, Brentford. Crotons, Palms, and Ferns were conspicuous, and Nepenthes mastersiana, and N. mixta were notable for the enormous size of their pitchers.

Messrs. John Laing & Sons, Forest Hill, set up an attractive group of stove and greenhouse, flower and foliage plants, including Crotons, Palms, Streptocarpus, Orchids, and Gloxinias (Silver Flora Medal).

Mr. T. S. Ware staged a large collection of Cactus, decorative, and single Dahlias, set up with Bamboos and Eulalia. Blanche Keith was a very fine yellow Cactus variety. All were set up in masses (Silver Flora Medal).

A large and showy collection of China Asters in many varieties was exhibited by Messrs. Dobbie & Co., Rothesay, N.B., and Orpington, Kent. They also had very select strains of the Scotch, French and African Marigolds (Silver Banksian Medal).

A Silver Banksian Medal was also awarded to F. Reckitt, Esq., J.P., (gardener, Mr. F. W. Burt) Caen Wood Towers, Highgate, for a group of Caladiums, Dracaenas, &c. A collection of new Cactus and Pompon Dahlias was shown by Mr. C. Turner, Slough. Hardy flowers, Begonias, Coleus, and Tomato, were shown by Messrs. Young and Dobinson, Stevenage.

A fine and showy collection of Lilies, Gladioli and other bulbous plants was shown by Messrs. R. Wallace & Co., Colchester (Silver Flora Medal). T. W. Girdlestowe, Esq, Sunningdale, set up a tastefully arranged collection of Single Dahlias, (Silver Banksian Medal). Messrs. Jones & Sons, Shrewsbury, exhibited a large group of Cactus and other Dahlias in some cases made up in shower bouquets, and sprays and bunches, each flower separate in Bamboo holders (Silver Banksian Medal).

Mr. S. Mortimer, Swiss Nursery, Farnham, staged a collection of show, fancy and Cactus Dahlias in fine condition (Silver Gilt Banksian Medal).

Mr. J. T. West, Tower Hill, Brentwood, Essex, had a large collection of show, Pompon and Cactus Dahlias (Silver Flora Medal). Messrs. Keynes, Williams & Co., Salisbury, had a stand of Cactus Dahlias.

Messrs. James Veitch & Sons, Chelsea, had several new plants of great merit, and which received certificates. Messrs. Burrell & Co., Howe House, Cambridge, exhibited an extensive collection of Gladioli (Silver Gilt Flora Medal). Mr. W. Salmon, West Norwood, exhibited annuals (Bronze Medal).

At a meeting of the fruit and vegetable commitee, Messrs. John Laing & Sons exhibited a large collection of Apples, including some of splendid size. Lord Foley (gardener, Mr. Miller), Esher, Surrey, showed a fine collection of Apples, Pears, Peaches, &c. (Silver Knightian Medal).

A collection of Cabbages and Kohl Rabi were exhibited by Messrs James Carter & Co., High Holborn.

The first prize for the best flavoured Pear was taken by Mr. C. Herrin, Dropmore, with Souvenir du Congrès. Benoni was the first prize Apple, shown by Col. Brymer, M.P., Dorchester.

EDINBURGH SHOW.

(BY SPECIAL WIRE).

FROM the Channel Islands to Modern Athens is a pretty long cry, but it is a journey of quite a comfortable achievement if the advice is followed of my excellent friend, Mr. Annan, who, in Glasgow, presides over the destination of the Midland Railway Company. However, I must confess, that in the South I acted upon my old practice and travelled by the excellent service afforded in the new arrangement of the Great Western Railway Company to London. Leaving Jersey at 9 a.m., Captain Lefevre showed us what the "Ibex" could really do, and when landed at Weymouth, one of the fastest runs on record was registered by steamer and train reaching Paddington in excellent time for dinner in the evening. From St. Pancras by the Midland Dining Cars, one feels that after all, life is worth living, and travelling through the romantic land of Scott and Burns, Glasgow is reached without a mishap. Thence across to Edinburgh is an easy run, and here we find our worthy friend Mr. William Young again in harness with his customary urbanity of manner planning out and superintending the operations connected with the Royal Caledonian Society's Annual Autumn Show, Of course, the Waverley Market is again the venue of the show, and from a cursory inspection overnight it is quite evident that there is likely to be a full house so far as exhibits are concerned numerically. The main lines of former years as to the arrangement of the groups, etc., has again been followed, and the appearance of the exhibition as a whole is noble and imposing. Bearing in mind the fact that the opening ceremony is invariably an occasion of the meeting of the wealth and beauty of the northern capital and its environs, my readers will appreciate the successful issue to which this show is annually brought. The chief nurserymen are well represented with tasteful exhibits alike in quality and artistic arrangement.

Messrs. Laing and Mather, the well-known nurserymen of Kelso, as customary staged a very chaste and beautiful exhibit comprising new hybrid single Chrysanthemums including the charming Princess May and a new Carnation of exceptional merit named Viscountess Melville, a dark strawberry self with the sweetest of sweet perfumes. This has already met with a considerable demand at the hands of very many of those cultivators qualified to judge of its merits.

Messrs. W. and J. Birkenhead, Sale, Manchester, are showing close upon 600 Ferns of every conceivable variety, hardy, stove, greenhouse, filmy, and all the rest of them. The varieties comprise upwards of 400 sorts. The whole exhibit is quite up to the usual good form of this firm of Fern growers. In fact both in quality and variety, we do not remember to have seen a better show of these famous plants.

Messrs. D. & W. Buchanan, of Forth Vineyards, Kippen, staged a table of 60 square feet, containing a choice arrangement of Grapes and Tomatos embellished with the familiar autumn-tinted vine leaves. Two of the bunches weighed 9 lb. each, and the Tomato Forth Vineyard Selected was really unusually fine in shape, colour, and finish.

Mr. John Downie, 144, Princes Street, Edinburgh, had in accordance with former precedent a most impressive display. His table was arranged with excellent effect, and included a fine collection of Liliums, dwarf named Cannas, conspicuous being Austria and Italia, two new varieties of great merit, Dracaenas, Crotons, Ferns, Caladiums, etc., Caladiams comprised the leading new varieties, including Mrs. Harry Veitch, Comte de Germiny, Reine de Danemark, Ville de Hamburg, Verdi, and others. The whole was edged with Panicum, Carex, Abutilon Souvenir de Bonn, and Caladium argryites. The centre pillar was decorated with branches of the Crab Apple "Jno. Downie," as pyramids and standards. The same firm had also a table of single and double Begonias, composed of the finest named and seedling varieties of great merit, and which formed a most attractive display, as may well be imagined. They secured the first prize for twelve table plants all very choice.

Messrs. Thomas Methven & Sons, of 15, Princes Street, staged two large tables, one composed entirely of Begonias, single and double, comprising the most notable and best varieties in cultivation. The other exhibit referred to, contained foliage and flowering plants neatly and elegantly arranged in their customary good taste.

Messrs. W. Fell & Co., Hexham, also exhibited an excellent table with a nice range of colour. Mr. Henry Eckford, of Wem, shows Sweet Peas in his well known style; and Messrs. Jno. Ford & Co., art decorators, exhibit a pleasing variety of Scotch Moto Ware and other similar articles of *vertu*.

The Ichthemic Guano Company, from Ipswich, are also in evidence, having a tastefully arranged group, covering 100 square feet, intended to illustrate the virtues of their speciality.

The staging as usual was carried out by an efficient staff under the direction of Mr. Moncur, whose ever obliging and courteous attention, under sometimes trying circumstances is a matter of real merit.

Messrs. Dickson & Co., Waterloo Place, are extensive exhibitors with a large variety of excellently grown specimens.

As regards the competitive entries the large total of 2,120 separate exhibits is chronicled in the secretary's books; and on looking into the details which go to make up this vast quantity of floral, pomological, and leguminous subjects, we find the Grape classes tremendously strong; whilst for one Apple alone—Lord Suffield—of which six specimens are required on a dish, as many as fifty entries are staged. Three hundred and sixty Beet roots are also shown by sixty competitors. The season for outdoor cultivation has been a good one, and a reliable judge from the West of England tells me that, on a recent trip through East Lothian, he saw the gardens everywhere laden with fruit.

Messrs. Jas. Dickson & Sons, Hanover Street,

Edinburgh, exhibited a collection of Coniferae, selected from their world known nursery stock. These form a feature in themselves.

The leading entry in the collection of twelve dishes of fruit is staged by Mr. A. Kirk, gardener to J. Thomson Paton, Esq., Norwood, Alloa, who takes the first prize presented by the corporation of the city of Edinburgh. His Grapes are simply perfection and carry everything before them. Golden Hamburg, Gros Maroc, and Alnwick Seedling Grapes leave nothing to be desired, and are the admiration of everyone. The Melon and Pears are also very noteworthy, and the entire collection does the exhibitor great credit. Very few points behind is Mr. J. Hunter, gardener to the Earl of Durham, Lambton Castle. All his small fruits are quite equal to the leading entry, but in the Grapes he loses some points. The third prize goes to Mr. Wm. Smith, The Gardens, Oxenford Castle.

Eight dishes of fruit are best staged by Mr. J. Hunter, who is emphatically first, although Mr. Kirk, who is second, has given his opponent a good race. Six bunches of Grapes of three varieties are grandly put up by Mr. J. Leslie, gardener to A. Coates, Esq., Perth, quite up to his usual form. We congratulate this successful competitor on an unusually fine entry. Closely following are Messrs. D. & W. Buchanan, who take second prize with a magnificent board.

In the class for a circular table of plants, Mr. Geo. Wood, gardener to J. Buchanan, Esq., Oswald House, Edinburgh, is justly adjudicated the winner, with a wealth of Orchids and Liliums and a graceful edging of variegated foliage plants. Mr. J. Macintyre, gardener to Mrs. J. Gurney Pease, Darlington, secured the second position.

The Orchids are comparatively a weak section for such a show as this. Four specimens are best staged by Mr. David Wilson, gardener to Hugh Steven, Esq., Kelvinside, Glasgow. Mr. W. Hutchinson, was second with four graceful plants from Aberdeen. Thirty-six Roses in magnificent form are shown by Messrs. James Cocker & Sons, Aberdeen, who take leading honours, followed by Messrs. D. and W. Croll, Dundee, in a well sustained competition.

First for eighteen Roses are Messrs. T. Smith & Sons, Stranraer. Mr. Donald McBean, gardener to J. C. Cunningham, Esq., of Craigends, was second. In the vegetable classes Mr. Johnstone is first with one of his usual fine exhibits, the stronger points being Cauliflower Autumn Giant; Cucumber Lockie's Perfection; and Peas Alderman, also in fine order. Mr. W. Harper, gardener to R. T. Richardson, Esq., Perth, was a good second.

The following members of the council have had the brunt of the burden of the day, and are to be congratulated upon the successful issue of the show: Messrs. Malcolm Dunn, David Laird, Alex. Milne, John Methven, David W. Thomson, Mitchell, Buchanan, and J. Morrison.

DUCKS IN THE GARDEN.

These, when a few weeks old, if turned into the vegetable garden for two or three hours, early in the morning, and again for an hour or so when it is getting dusk, are an immense help in ridding it of insect pests. Nothing seems to come amiss to these voracious creatures when young; and the older birds will consume all the slug, snails and worms that come in their way. True, in some respects, their presence is not very desirable, and we have known them to do a considerable amount of damage among the Crocuses when they are coming through the ground in spring. At the same time, when hedges are infested with snails, the letting a few ducks hunt them through will do much to keep down these vermin.—*W. B. G.*

RED-FLESHED PEACH.

Seeds of a very uncommon Peach were brought from Italy and reared in Maresfield Park Gardens, Uckfield, Sussex, where the trees have been fruiting for some years past. The variety comes very true from seed, and its characteristic feature is that the flesh is of a dark red from immediately beneath the skin to the stone. The flesh is also very juicy and somewhat different in flavour from that of the varieties most commonly grown in this country. We have tasted Peaches less worthy of cultivation, however, and the colour is decidedly novel. The chief fault we have to it is that the fibrous tissue is rather too strongly developed, and the skin is dull in colour. Mr. Alexander Findlay, Maresfield Park Gardens, exhibited half-a-dozen good-sized fruits at the meeting of the Royal Horticultural Society on the 25th ult.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Horse Chestnut Trees on the Decline.—*T R*: If the trees are not too far gone and not decayed in the centre, it is possible to restore them to health with a few years' perseverance. You do not tell us whether the trunks are sound, nor whether the ground is too wet or too dry. If the ground is wet, it must be drained; if dry and poor, then it must be fed. The matter would be easier provided the ground around the trees was bare on the top so that you could dig it and then apply a heavy top-dressing of rich material annually. As you want to preserve the grass, then we advise you to give light top-dressings of good soil, leaf mould, and well-rotted farmyard manure any time during the winter. With the compost you might mix a shovelful of wood ashes to every barrowful of the compost. While the ground is fairly moist in winter you can water the trees at frequent intervals with liquid manure from the stable or cow houses. If the trees are healthy but starving, this treatment can hardly fail to bring them round again to a thriving condition. But attend to drainage if necessary. If the ground is too dry, get a water cart and give the trees liberal supplies in summer. You can apply artificial manures if you like, such as kainit and superphosphate in winter and early spring, and sprinklings of nitrate of soda at two or three intervals in summer.

Potato Seed.—*J. T. W.*: Let the Potato Apples hang till they fall from the haulm of their own accord, then cut the fruits open and squeeze out the seeds into dry sand; or you may squeeze them out on a piece of thin cotton or linen, tuck up the ends forming a bag, and squeeze the bag repeatedly in water to wash away the juice. Then allow the seeds to dry and keep them so till March or earlier if you have convenience to sow them in boxes in a warm greenhouse or stove.

Treatise on Violet Growing.—*A. J. B*: We have never heard of their being such a treatise, and do not think that any one in this country has yet considered Violet culture of sufficient importance to merit a book all to itself. If any recent treatise on the subject has as yet escaped our notice, we shall inform you when we hear of or see it.

Books on the Viola.—*A. Saunder*: The book has not yet been published in English, so that the best plan would be to communicate directly with the author himself. The address, Dr. Veit Wittrock, Stockholm, Sweden, will find him.

Roots of Cyclamens Eaten.—*Wm. Boyd*: The grubs you sent are those of an Otiorhynchus, either O. sulcatus (the Black Vine Weevil) or O. tenebricosus (the Red-legged Garden Weevil). We would advise you to search the house at night with a lantern, catch some of the weevils, which prowl at night, and send them on to us for the name. In the meantime, when you have discovered their haunts, spread a white sheet upon the ground by day, go in at night with a dark lantern, and turn the light suddenly upon the plants which they frequent, and this will cause them to drop upon the white sheet, so that you can collect and kill them before they escape. On the other hand, you may lay down some loose boards as traps, and the weevils will hide beneath them. Examine the traps every morning till the weevils have all been caught. You should at the same time cement every crack and crevice of the wall where they might hide. The weevils are beetles of small size.

Communications Received.—J. Addison.—*Cor.*—R. G. W.—A. S. G.—Geo. Potts.—W. B. G.—H. J. S.—A. C.—Box of Tomato plant, no name.—J. L.—George Cooling & Sons.—W. J. Clarke.—Amateur.—M. A. Gallet.—James Milligan.—Thos. C. Steel.—Iris.—Luscombe L Cousins.—T. S.—M. G.—Hardy.—W. T.—A. S. W.

TRADE CATALOGUES RECEIVED.

Dobbie & Co., Rothesay, N.B.—Dobbie's Autumn Catalogue of Hyacinths, Tulips, Narcissi, and other bulbs; Carnations, Chrysanthemums, Herbaceous Plants, &c.

Dobie & Dicks, 66, Deansgate, Manchester.—Autumn Catalogue of Dutch Bulbs, and other flowering roots.

Wm. Cutbush & Son, Highgate Nurseries, London, N.—Border Tree, and Malmaison Carnations, Pinks, Cloves, &c.

Geo. Bunyard & Co., Royal Nurseries, Maidstone.—Catalogue of Fruit Trees.

Barr & Son, King Street, Covent Garden, London.—Barr's English Daffodils and Tulips, Lilies, &c.; also Barr's Descriptive Catalogue of Hyacinths, Tulips, Narcissi, Crocuses, &c.

W. P. Laird and Sinclair, Dundee.—Catalogue of Bulbs and Roots for Spring and Summer Flowering.

COVENT GARDEN MARKET

September 9th, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100lbs	30 0	
Grapes, per lb.	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....	2 9	3 6
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	0 0
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	1 6	2 0
Asters, doz. bches	3 0	6 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Carnations, doz. bchs.	4 0	6 0
Eucharis ...per doz	1 6	3 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	2 0	4 0
Gladiolii, doz. spikes	1 0	1 6
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	2 0	5 0
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	2 0	6 0
Pink Roses, doz.	1 6	2 0
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays ...	1 6	2 6
Tuberoses, doz. blooms ...	0 3	0 4
Primula, double, doz. sprays	0 6	0 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Corkcombs, per doz....	3 0	4 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, In var. doz	6 0	24 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Fuchsia, per doz.	3 0	6 0
Heliotrope. per doz.	4 0	6 0
Liliums, various doz.	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Mignonette	4 0	6 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, doz. ...	4 0	9 0
Pelargoniums, scarlet,		

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SPLENDID FOR ALL PURPOSES.
Largely used both at Home and Abroad.
SOLD BY ALL SEEDSMEN

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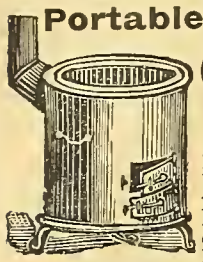
SOLE MAKERS:—
WM. THOMSON & SONS, LTD.,
TWEED VINEYARD, CLOVENFORDS, N.B.
Price Lists and Testimonials on application.
ANALYSIS SENT WITH ORDERS OF ½ CWT. AND UPWARDS.

Portable Washing Coppers.



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226, WALWORTH ROAD,
LONDON, S.E.,
Manufacturers of Portable Coppers for Washing, Brewing, Farm, and Ashphalte purposes, and American Cooking Stoves. All sizes in stock from 25s. each, complete. Price Lists free, and Carriage Paid.

SPECIAL OFFER.

To induce Gardeners to Test and Prove the value of this remarkable Manure, we will deliver, carriage free, to any station in the United Kingdom, 1 cwt. of "LE FRUITIER" for 20s. including with each order, 1 bag of FERTILISING MOSS, the new and most successful medium for Plant Culture.
33 *Silver and Bronze Medals and Diplomas awarded to*
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Sectional Greenhouses.

Seventh year of advertising. Simply bolt together, with staging complete, span-roofs from 55/-, lean-to from 48/-. GARDEN FRAMES from 15/- Best materials and workmanship guaranteed. Send for Catalogue, containing complete specification, and compare.
CROWTHER, Horticultural Builder,
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FERNS & FERN CULTURE,
By J. BIRKENHEAD, F.R.H.S.

How to grow Ferns, with selections for Stove Warm, Cool, and Cold Greenhouses; for Baskets, Walls, Wardian Cases, Dwelling Houses, &c.
Price 1s.; by post, 1s. 3d.
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SOILS, &c.
SPECIALLY SELECTED ORCHID PEAT.

Black and Brown Peat
Silver Sand and Loam
Cocoa Nut Fibre Refuse
Leaf and Peat Mould
Specially prepared Mould
Sphagnum Moss
Guano and Dissolved Bones
Bones, ½ inch and ¼ inch
Bone Dust, guaranteed pure
Blood and Bone Manure, highly recommended
Horticultural Charcoal [Paper
Tobacco Cloth, far superior to
Mushroom Spawn
Russia and Archangel Mats
Pot Washing Brushes
Virgin Cork and Raffia [Twine
Tanned Netting & Tarred
Trug Garden Baskets
Flower Sticks, from 1 to 5 feet
Wooden Labels, from 4 to 12in.
Thin Bamboo Canes
Rose and Dahlia Stakes, about 5 feet
Orchid Baskets and Teak Rods
Greenhouse Blinds made to order
Patent Bass Brooms
Smyth's Orchid and Hothouse Shading

Write for Price List, free by post.
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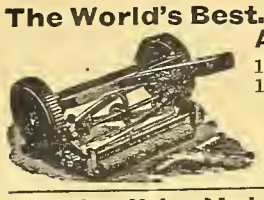
VINES & VINE CULTURE.
THE BEST BOOK ON GRAPES AND THEIR CULTURE.
By ARCHIBALD F. BARRON,
HANDSOMELY BOUND in CLOTH, PRICE 5s., post free 5s. 3d. from
THE PUBLISHER OF "THE GARDENING WORLD," 1, CLEMENT'S INN, STRAND, W.C.

SANKEYS' famous GARDEN POTS
Bulwell Potteries, Nottingham.

Messrs. Dicksons, Limited Chester, write: "The Flower Pots you have so largely supplied us with are light, strong, and well made, and in every respect highly satisfactory."
Messrs. Richard Smith & Co., Worcester, write: "We beg to say that we are highly satisfied with your Garden Pots They are well made, light, yet strong, and we like them better than any other we have ever used."
Mr. William Bull, 636 King's Road, Chelsea, London, writes: "For nearly thirty years I have been using your Garden Pots, and still find them the best and cheapest."
Largest Manufacturers in the World. No Waiting. Millions in Stock. Carriage and Breakage Free on £10 Orders. Half Carriage on £5 Orders. Samples Free.
Agent for London, Mr. J. H. SANKEY & SON. Iron Bridge & Essex Wharves, Canning Town, London, E.

W. COOPER, Ltd.
(The Original Inventors of Cheap Greenhouses) HORTICULTURAL PROVIDERS, **755, OLD KENT ROAD, LONDON, S.E.**

The World's Best. COOPER'S "BEAT ALL" LAWN MOWER.



10-in. ... 18/6 | 14-in. ... 24/-
12-in. ... 19/6 | 16-in. ... 27/6
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Grass catcher, to fit any Machine, 5/- each.
Packed f.o.r. London.

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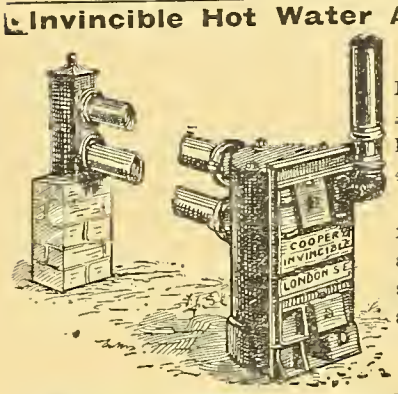
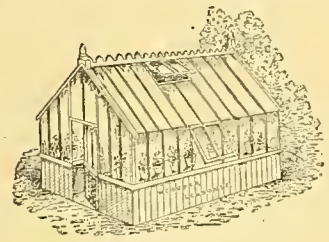


Boiler—only price £2. Capable of heating 75 feet of 4 in. piping.
Lowest estimates for complete apparatus for any sized house on application.



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Everything complete, ready for erecting, From £2 16s.
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WELL MADE.
Having bought up the whole of a Manufacturer's Stock of 5,000, we are enabled to sell these at ridiculously low figures.
Special Job Line, 3/- each, 33/- doz.

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For Cucumbers, Tomatos, Melons, &c.
Everything Complete from 50/-

HORTICULTURAL GLASS.

Best 15 oz. in 50 feet boxes.
10 by 8, 12 by 8, 12 by 9, 13 by 9, 14 by 9, 14 by 10 } at 4s. 6d. per box.

4ths, 15 oz. in 100 and 200 feet boxes.

12 by 12, 12 by 14, 12 by 16, 12 by 18, 12 by 20, 12 by 24, 14 by 16, 14 by 18, 14 by 20, 14 by 24, 16 by 18, 16 by 20, 16 by 24, 18 by 20, 18 by 24 } 100 ft. 8s. 200 ft. 15s. per box.

21 oz. in 100 and 200 feet boxes.

4ths, 21 oz. { 9 by 7, 10 by 8, 12 by 10, 14 by 10, 12 by 14, 12 by 16, 12 by 18, 12 by 20, 12 by 24, 14 by 16, 14 by 18, 14 by 20, 14 by 24, 16 by 18, 16 by 20, 16 by 24, 18 by 20, 18 by 24 } 100 ft. 11s. 200 ft. 21s per box.

Note.—Delivered free on rail, London, by our own vans (not ex wharf, which means a cost of 1/6 per box for collection).

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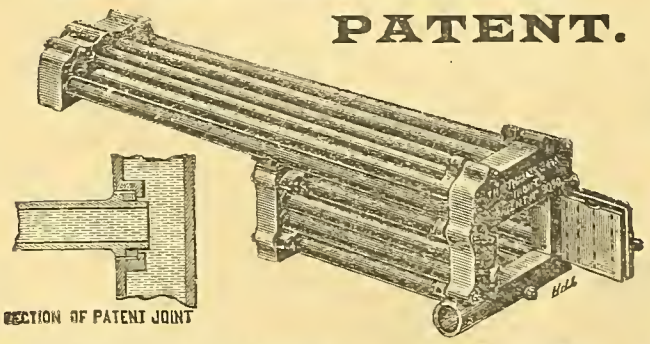
THE THAMES BANK IRON COMPANY,
UPPER GROUND STREET, BLACKFRIARS, S.E. (Telegraphic Address—HOTWATER, LONDON. Telephone—No. 4763.)

"CHAMPION" HORIZONTAL TUBULAR BOILER.
THE BEST ALL-ROUND BOILER IN THE MARKET.

AWARDED THE
ONLY GOLD MEDAL
AT THE
International Horticultural Exhibition
1892,
FOR
THE BEST BOILERS & HOT-WATER APPLIANCES.



PATENT.

It combines all the advantages of its class so well known, and by the improved method of forming the joints—viz., with India Rubber Washers, THE OLD AND TOO OFTEN INEFFECTUAL WAY OF CAULKING THE JOINTS IS ENTIRELY DISPENSED WITH.

HOT-WATER BOILERS OF EVERY DESCRIPTION, PIPES, CONNECTIONS, VALVES, VENTILATING GEAR, ETC.
INSPECTION INVITED. PRICE LIST ON APPLICATION. ILLUSTRATED CATALOGUE, 1s.

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THE SPRINGTHORPE.—For Japanese and Incurved, all sizes, 9/- per dozen.

☛ ALL FREE FOR CASH WITH ORDER.

H. J. JONES,
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GRAPE VINES AND ROSES.

JOHN COWAN & CO. have this season a large and splendid Stock of Grape Vines suitable for fruiting in pots and planting vineries.

Also a large and splendid Stock of Tea and other Roses in pots.

Descriptive and priced catalogue post free on application to the Company.

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CUTBUSH'S MILLTRACK MUSHROOM SPAWN.

Everyone can readily grow Mushrooms, and by using this Spawn will ensure success. All growers speak in high praise of the quality. Numerous testimonials. None genuine unless in sealed packages and *printed cultural directions* enclosed, with our Signature attached. Price 6s. per bushel, 1s. extra for package, or 1s. per cake, free per parcels post.

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Freehold five acre poultry farms in the United States only £20, convenient to Philadelphia, close to Railway station. Adapted to raising fruits, vegetables, poultry, &c. To be sold by instalments of 4s cash and 4s. per week, if desired, Title insured.

D. L. RISLEY, 63, Chancery Lane, London. New settlement. Increasing population! Capital investment

ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Malda Vale, London, W.

Primula, The Lady.

CERTAINLY no PRIMULA of recent years has given such satisfaction as this. It is the only one in the Sinensis class highly appreciated for cut flower. Will last a week in water. Plants in 60's, 4s. 6d. per doz., plants by post, 2s. 6d. per doz.
H. CANNELL & SONS, SWANLEY.

Primulas, Cinerarias, and Calceolarias.

H. CANNELL & SONS have these in just the condition to give the greatest satisfaction and together with our perfection of variety, what a life and charm they would give wherever well grown. Seedlings, 2s. per doz.; in pots, 4s. per doz. SWANLEY.

Blaze of Flower.

IT has frequently been said, if I could grow Zonals like Mr. Cannell, I would have a glare like him all the winter. We are sending free, full particulars and a list of varieties, with prices Just what to do. Now is the time to commence. 8s. per doz.; in 5 in. 12s. per doz.
H. CANNELL & SONS, SWANLEY.

CINERARIA

Grandiflora, prize medal strains, flowers 2 ins. across. Strong Seedlings 1/- per doz.
PRIMULA Seedlings, 2/- per doz.
CYCLAMEN Seedlings, 2/- per doz.
SMILAX Plants, good stuff in pots, 3/- per doz.

YOUNG & DOBINSON,
Holmesdale and Highfield Nurseries,
STEVENAGE, HERTS.

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, SEPTEMBER 19th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 21st.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens,

TUESDAY, September 22nd.—Sales of Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.

WEDNESDAY, September 23rd.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens.

THURSDAY, September 24th.—Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, September 25th.—Sales of Orchids and Bulbs by Messrs. Protheroe & Morris, and of Bulbs by Mr. J. C. Stevens.

A CENTURY OF PROGRESS.—It is gratifying to all concerned when by steady industry a reputation and an ample competence can be built up in the course of a busy lifetime; but a hundred years is a long chapter of history, and takes at least three generations to accomplish. Mr. George Bunyard, of the Royal Nurseries, Maidstone, is well known to many of our readers, and by reputation to a still larger number, under the title of Messrs. George Bunyard & Co. In view of the fact that the centenary of the firm was celebrated in fitting fashion on Tuesday and Wednesday last, it may not be inopportune to recount a few of the facts anent the origin, rise and progress of the important establishment at Maidstone, on the Medway. With its rich pastures, fruit plantations, Hop fields, and beautiful scenery, it is not surprising that Kent should have been styled the "Garden of England," and less so that this title should emanate from and centre round the county town which lies in a romantic valley, watered by the river just named, and surrounded by various spurs and eminences of the North Downs, which form a setting or framework to the pleasing and enchanting landscape, with its varied associations.

Just one hundred years ago on the 16th of September, Mr. James Bunyard, the grandfather of the present proprietor, purchased some land and built premises, suitable for a nursery establishment in those days, in the West Worough, and held several acres near the Mote estate. The venture was successful, as the issue proved, and a flourishing local business soon sprung up. This was maintained in a flourishing condition for many years till the advent of railways and cheapened transit widened its sphere of action, influence, and affluence. James Bunyard died in 1844. The father of Mr. George Bunyard was born in 1804 and died in 1880, after having served not merely his day and generation, but greatly advancing the business bequeathed to him.

Mr. Geo. Bunyard became connected with the trade as early as 1855, was promoted to the rank of partner in 1863, and became sole proprietor in 1881. No striking advance was made by the firm, till the present proprietor made his influence felt in its affairs. The real initiative to the present prosperity and far-reaching influence of the establishment on the Medway, was made in the third generation of the founder, when, in 1869, twenty acres of land were taken at Allington. The land being of the nature of a light sandy loam, overlying the green sand, below which at no great depth is the Kentish rag, which extends to a depth of 70 ft., proved highly suitable for horticultural purposes, but particularly fruit culture; and the relatively small area of twenty acres has been increased from time to time, till at present the Allington Nurseries consist of more than 100 acres under cultivation, and mostly occupied with the fruit trees whose reputation has spread not only to the four quarters of the British Islands, but beyond them.

Another important advance was made in 1880, when Mr. Bunyard was entrusted with the formation of an extensive plantation of fruit trees in the West of England. As his own nurseries were at that time inadequate to furnish the trees required for this plantation, after supplying his own customers, he had to purchase a considerable proportion, and the superiority of the soil of his own nurseries for the growth of fruit trees dawned upon him. This led to a great increase of stock. About this time the firm commenced exhibiting splendid collections of fruit at various exhibitions in the principal cities of Great Britain and Ireland. The various gold and silver medals gained in this way are merely indications of the superior character of the fruit grown in Kent, but particularly Apples, which for size and colour have been the wonder and admiration of our fellow countrymen in various parts of the island. The firm has not hesitated to exhibit in open competition for the prizes offered, and has taken the premier position on many an important occasion.

At the Allington Nurseries fruit trees pruned and trained in all the leading forms may be seen; but a very large proportion consists of pyramidal Apples and Pears, as well as bushes and standards of the former. About two-thirds of these nurseries are occupied with fruit trees, of which there are something between 700,000 and 800,000. The old adage that "who plants Pears, plants for his heirs," no longer holds good, for by working Pears on the Quince stock, and Apples on the Paradise stock, a crop may be obtained from the pyramidal trees during the second year from the bud, or a few even the first year in the case of grafts. About 120,000 trees, on an average, are worked annually. The large and splendidly coloured fruits annually seen at the leading exhibitions are, to a great extent, obtained from these young trees, incredible as it might seem to one who has only become

acquainted with the old system of waiting till standards on the Crab should come into bearing.

The firm of Messrs. Geo. Bunyard & Company, is best known to our readers for its pre-eminence in fruit culture; but Roses are also cultivated to a considerable extent at the Allington Nurseries, there being something like 30,000 saleable plants at present. There is also some nursery ground at Boxley, where Strawberries are the leading feature. Mr. Bunyard also carries out a great many experiments, and in the matter of Strawberries alone, he has tried about 170 varieties with the result that 110 varieties have been weeded out, leaving 60 of the best sorts in cultivation. Various seeds are also grown on the farms at Boxley, and enjoy a considerable reputation. The old or original nurseries near the South-Eastern Railway Station were cut up by the formation of new streets and the building of houses; but the remainder of the ground exists in the form of about a dozen isolated nurseries, all within a short distance of each other, and readily accessible. Here a retail florist's business is carried on. Altogether there are about fifty-five glasshouses, in which stove and greenhouse plants of various kinds, Ferns, Carnations, Chrysanthemums, vines, etc., are grown. Peaches, Figs, Tomatos, and other fruits are grown in the houses at the Allington Nurseries. Herbaceous plants are also cultivated to some extent, including some interesting subjects. Fruit trees, however, constitute the leading speciality of the firm. The retail trade is carried on at the premises in West Borough, and at High Street, Maidstone. Altogether, there are over 300 acres of land under cultivation to supply the wants of the establishment. During the long career of this old firm, many changes of fashion amongst flowers have taken place; and amongst the evidences of this are some old catalogues which speak of the reputation enjoyed by the Dahlia in its palmy days when prices, ranging from 7s. 6d. to 10s. 6d., were obtainable for a single plant. Needless to say, the extent of the modern business entails a great amount of labour. Five foremen take charge of the various nurseries, and at Allington there is a manager. These with their subordinates count more than 100 men regularly employed, while the number is augmented during the busy season.

Mr. George Bunyard has been on the Council of the Royal Horticultural Society since 1892, and was made a Vice President during the early part of the present year. As far as we remember, he is the only one in the trade who has been admitted to that distinction. Another important success scored by the firm was that, by Royal Warrant, dated August 17th, 1895, Messrs. George Bunyard & Co. received the appointment of "Fruit Tree Nurserymen" to Her Majesty the Queen at Windsor. More recently the firm was honoured with a similar appointment from H.R.H. the Prince of Wales, during the month of February last. These appointments explain the change of title from The Old Nurseries, to The Royal Nurseries, Maidstone. For the details of the centenary show see p. 41.

Newtownards Flower Show.—The forty-first annual show of the Newtownards Horticultural Society was held in the grounds of Messrs. A. Dickson & Sons on the 4th inst. Lord Dunleath, the Marquis of Londonderry, Major Crawford, and Sir S. Black were the principal prize winners in the classes for those who keep a gardener. Amongst amateurs, Dr. Henry, Mr. Stevenson, and Mr. M. Murray were the most successful. Messrs. A. Dickson & Sons took the lead amongst nurserymen. The above were in the section for pot plants. In the fruit classes, Lord Macnaghten, the Marquis of Londonderry, Lord O'Neill, and the Marquis of Downshire took the leading prizes.

The Countess of Dundonald has purchased an estate of 360 acres of agricultural land in North Wales for £9,900.

Oranges are being sent from three different sources to this country, at an earlier period than usual. They are coming from Palermo, Naples, and Adelaide.

On Sunday, the wife of Mr. W. P. Laird, of Monifeith, presented her husband with a son and heir. We tender him our sincere congratulations, and are happy to hear that both mother and babe are doing well.

Marriage of Mr. Henry Cannell Junr.—We have pleasure in recording that the eldest son of the founder of the famous Swanley Nurseries, was married at Inverurie on the 9th inst. to Miss Christine Robertson of Inverurie. We understand that the honeymoon is being spent in the Highlands.

Mr. John Richardson, for many years Curator of the Liverpool Botanic Gardens, has recently resigned that position on a superanuation of £150 per annum, from the Liverpool Town Council. Mr. Richardson by his courteous and gentlemanly bearing in his important position, has made a host of friends, who wish him many years of health and strength to enjoy his deserved leisure and retirement.

Mr. Henry Knight, Director of Parks and Gardens to the King of the Belgians, died quite recently at Laeken, Belgium. The deceased was at one time employed at Dalkeith Palace Gardens, N.B., and was afterwards head gardener to the Duke of Roxburgh, at Kelso. The late Mr. W. H. Smith, Henley, chose him as his head gardener, from which situation he was appointed by the King of the Belgians.

Gardeners' Royal Benevolent Institution.—At the recent show of the Devon and Exeter Horticultural Society, a fruit and flower stall was provided in one of the tents. This was presided over by Madame Bryce, of Bystock, East Devon, assisted by several of her lady friends. The result of the sale was a sum of £16, which goes to the fund of the Devon and Exeter Auxiliary of the Gardeners' Royal Benevolent Institution.

Omission.—Our reporter the other week omitted to notice the really excellent seedling Begonias shown in the exhibit by the Ichthemic Guano Co., at the Royal Aquarium. These plants were of unusual size and compact habit, and considering they were February seedlings in 60's, it reflects credit on the cultivator, Mr. H. J. Jones, as also on the properties of the Ichthemic Guano upon which the plants were raised.

Crystal Palace Fruit Show.—On Thursday October 1st, and the two following days, the Royal Horticultural Society's great show of British fruit will be held at the Crystal Palace, and promises to be quite up to the usual standard of excellence. Entries for competition will be received up to Saturday, September 26th, and schedules of prizes may in the meantime be obtained from the R.H.S. office, 117, Victoria Street. A lecture will be given each day on the following subjects:—October 1st, "The Importance of British Fruit Growing from a food point of View," by Mr. Edmund J. Baillie, F.L.S. October 2nd, "The Cider and Perry industry," by Mr. C. W. Radcliffe Cooke, M.P., October 3rd, "Gathering, Storing, and Profitable Utilisation of Apples and Pears," by Mr. John Watkins F.R.H.S. It is hoped that practical fruit growers who attend the conference each day will make up their minds to join in the discussion.

Ramsay Challenge Cup.—Councillor Wm. Blackbird, of Swalwell has won the Ramsay Challenge Cup, two years in succession at the Swalwell flower show. The recent show was the seventh that has been held, and during that time Councillor Wm. Blackbird has been first on four occasions, and second on the other three. A large number of friends assembled at the Highlander Hotel, Swalwell, the other week, to congratulate him on his being again successful. On September 1st, 1895, he exhibited the largest and finest Leeks ever seen in the North, at such an early date. One of them was 12 in. long, 2¼ in. thick, and had the appearance of having been turned in a lathe, so smooth and uniform was it in shape. About eight years ago he won four Leek shows held at Gateshead, and also the great Derby, held at the Cannon Inn, Low Fell.

Hyacinths from Holland are said to be exceptionally fine this season, as a result of the fine weather they enjoyed during the period of maturity.

The Channel Islands Revisited.—The first of a series of articles by our special correspondent appears in the present issue, and will be followed by other contributions, week by week.

Overheard in a suburban garden.—Mrs. A——: "Why do my Sunflowers all look into your garden?" Mrs. B——: "They are ashamed of the low company they have in yours" Mrs. A——, with a black scowl on her face: "What low company?" Mrs. B——: Groundsel, Chickweed, grass and such like. —*Snaggs*.

Soil for large Onions.—Skilled gardeners can raise Onions of very respectable size in soil of a varied description, by plenty of feeding and good tillage. The soil of Bedfordshire is sandy, light and very fertile. The black warp land of Lincolnshire is also very suitable for Onions. By sowing the seed in autumn and transplanting the Onions in spring, bulbs of great size and as mild as those from Spain, can be produced.

Paper on Gladioli.—At a meeting of the Royal Horticultural Society on the 8th inst., Mr. G. Bunyard in the chair, a paper on this subject by Mr. J. Burrell, Howe House Nurseries, Cambridge, was read by Mr. John Weathers, the assistant secretary. The paper dealt with the opinions of growers as to the most suitable soils and fertilisers for the cultivation of Gladioli, and was listened to with great attention by a large audience.

Flax in Kent.—An experiment in Flax (Linum usitatissimum) culture has been conducted this season in the Isle of Thanet, Kent, and the results are stated to be very successful. In April last 4½ acres were sown, and a very luxuriant growth was made. The experiment is to be repeated on a larger scale next year. We fail to see why any experiments are necessary, seeing that Flax culture in this country is a very ancient industry. Flax was extensively grown in Scotlaud from the south as far north probably as the Moray Firth, more than a hundred years ago, and only died out within our memory, but has recently been revived in various parts. The question is whether such a crop would give a profit after paying for rent, labour, and dressing in this country; if so culture is easy.

Flower Show at Greenock.—The annual flower show of the Royal West Renfrew Horticultural Society was held in the Town Hall, Greenock, on the 3rd and 4th inst. In all the divisions there was an increased number of entries and competitors over that of former years. The entries numbered 1,170, being 196 more than those of last year. Mr M. Campbell, Blantyre, took the leading award for eighteen varieties of Dahlias, which were in splendid condition. He likewise took the lead in the classes for forty-eight fancy Pansies and twelve Carnations or Picotees. Henry Thomson, Esq., was also a very successful exhibitor in the section for pot plants, taking first prizes for six table plants, six corridor plants, six variegated plants, and various other subjects. Pot plants made a fine display.

The fertilisation of Plants.—This was the subject of a lecture delivered by Mr. W. J. Pollard, at the monthly meeting of the Bristol Amateur Horticultural Society the other week. A large audience assembled to hear the speaker, who described the sexual organs of plants, and illustrated his descriptions by means of photo-microscopic slides, shown by the oxyhydrogen lantern. He gave pictorial descriptions of self-fertilised flowers as well as those fertilised by insects and the wind. Those plants and flowers, which required the aid of insect life, were clothed in gorgeous raiment, and had sweet nectar concealed wherewith to attract visitors. He passed on to the Orchids, the most highly developed forms of plant life, and finished with a series of slides showing the method of fertilising a Carnation flower, artificially. Then he showed his audience how to label the seed with an account of its parentage for reference. The series of summer excursions carried out by the society was brought to a close by a visit to Ashton Court, where Mr. Noble, the new gardener, met the party and acted as guide, philosopher, and friend. Many questions were asked by the visitors and answered by Mr. Noble.

A Problem in Algebra.—Given A. B. C. to find Q. The answer is—Take *cab* and drive through Hammersmith.

Dibdin House Collection of Orchids.—We are notified that Messrs. Hugh Low & Co., Clapton, have purchased the entire collection of Orchids and seedlings, belonging to the late Mr. F. G. Tautz, Dihdin House, Hanger Hill, Ealing, W.

We regret to chronicle the death of Sir T. D. Brodie, Bart., of Idvies and Gairdoch, who died at his Scotch residence on Sunday the 6th inst., after a short illness. The deceased nobleman who was in his sixty-fourth year was a great patron of all that appertained to horticulture and forestry, and his generous interest and support will be missed throughout his wide sphere of influence.

The Fig-leaved Hollyhock.—The large, soft or clear yellow flowers of Althaea ficifolia have been a pleasing and interesting feature in one of the borders at the north end of Kew Gardens for many weeks past. The stems and hranches are allowed to hang loosely, and the small tufts of flowers (sometimes only one) at the ends of the stems have a graceful elegance as they sway backwards and forwards in the soft sunshine of August and September.

Musa Ensete in Cornwall.—At the present time, a fine specimen of this Musa may be seen in the kitchen garden of Walter Pike, Esq., J.P., of Camborne, West Cornwall. His gardener, Mr. S. Lawrence, raised the plant from seed about eighteen months ago. The present season has enabled it to make fine growth, for it stands 5 ft. high, and the stem is 3 ft. in circumference. It is the intention to house it during the winter.

Death of Mr. Richard Curnow.—It is with deep regret that we have to announce the death of Mr. Richard Curnow, of Messrs. Hugh Low & Co., which occurred at sea while on his way home on sick leave from Columbia. Mr. Curnow has been in the service of Messrs. Hugh Low & Co., upwards of twenty-two years, the last nineteen of which he had spent as one of their Orchid travellers. He was, without doubt, thoroughly at home in his employment on foreign service. Some three months ago he contracted a bad attack of malarial fever, from which he was recovering, but very slowly, when returning home, but succumbed to a stroke of paralysis on August 25th last.

The Lapwing is a much persecuted hird.—In spring the eggs, which constitute delicate eating, and are used for making the finer kinds of varnish, are collected by the thousand. In autumn the birds are shot, and eaten hy people who foolishly imagine they are eating something of a dignified and gamey nature. The flesh constitutes very indifferent eating, but that seems of no consequence to the consumers, so long as they think they are eating game. At present the bird may be seen in quantity in every London game dealer's window. This is much to be regretted, for the bird is of blameless character, and on the contrary is of priceless value to the farmer and gardener on account of the vermin it destroys. Its extermination would he a great loss to the country at large.

Dutch Horticultural and Botanical Society.—At the floral committee meeting of August 8th, 1896, the committee awarded First-class Certificates to Mr. A. Buis, Jun., of Aalsmeer, for Phlox decussata fol. aur. var.; to Mr. C. G. Van Dijk, of Zeist, for Rudbeckia laciniata fl. pl. Gold ball, Cactus Dahlias Mrs. Barness, and W. B. Wright; to Mr. K. Keessen, Jun., of Aalsmeer, for Cornus Spathii var.; to Messrs. E. H. Krelage & Son, of Haarlem, for Gladiolus Lemoinei Yvette Guilhert, G. L. Emile Augier, G. L. Jane Dieulafoy, G. L. Prof. Le Monnier, G. nanceianus Pacha, G. n. Canrobert, G. n. Général Duchesne, and G. n. Jules Finger; to Mr. C. G. Van Tubergen, Jun., of Haarlem, for Canna Austria and C. Italia; and to Mr. N. de Zwaan, of Utrecht, for Begonia grandiflora erecta cristata. Certificates of Merit were also awarded to Mr. Egb. Kloosterhuis, of Veendam, for Acer Pseudoplatanus argyreum and Robinia neomexicana; and to Messrs. E. H. Krelage & Son, of Haarlem, for Gladiolus Lemoinei, J. J. Weiss, G. L. Mad. Deshordes Valmore, G. L. Deuil de Carnot, and G. nanceianus Julien Girardin.

Channel Island fruit has been having a good innings lately. No less than 1,893 haskets of Tomatos and 1,298 of Grapes were shipped from St. Peter Port, Guernsey, in one day, by the South-Western Railway Company's boat.

"Ice King Primrose."—Popular names never cease to assume new forms. A correspondent sent some of it to *Gardening* (American) and the editor pronounced it to be a kind of Oenothera or Evening Primrose. "Ice King" was, no doubt, originally a mistake or misspelling of the word evening by the label writer; or it might have been due to a slip of memory after once having heard the name. We have noticed many similar instances. For instance we have seen the Chrysanthemum L'Ile des Plaisirs, labelled Lily of Pleasure.

The Comical Toad.—A writer in *Gardening* (American) writes: "Have you ever fed a toad with a caterpillar or Potato bug? If not you have lost one of the most comical sights to be had, and one which we in our hurry to get every creature out of harm's way are apt to overlook. The toads are very useful little beasts, ugly though they he, and one can train them so that they do not fear our approach. How alert are they after dark, hopping in the walks of the garden and making many a snatch at the bugs they come within reach of. It takes five years for a toad to he full grown."

Refrigerated fruit.—Fruit, and particularly Apples, are very successfully kept in refrigerated chambers in the United States, and possibly this has influenced the Kent County Council in their decision to build a large cold store at Dartford for the use of fruit growers in that county. It is to be hoped that the experiment will prove successful, for it will certainly be imitated in other counties, if it proves a paying concern. Little is known as to how long fruit may be kept sound by the refrigerating process; hut if fruit growers can avoid glutting the market by this means, it will be a great gain.

"Knowledge."—The September number of this monthly periodical contains an article on "Some Curious Facts in Plant Distribution," being the fourth of a series by Mr. W. Botting Hemsley, F.R.S., of Kew. In this chapter he deals with some remote islands in the Atlantic and Indian Oceans. The Seychelles in the Indian Ocean are about thirty in number, and are notable as the home of the Coco de Mer (Lodoicea sechellarum), which is, or was, common only in the Praslin Island. Formerly these islands were covered with a forest vegetation, which is fast disappearing before cultivation and forest fires. Living samples of this striking Palm may be seen in the Palm and Victoria houses at Kew. St. Helena, in the Atlantic, presents another very interesting case of an endemic flora which has almost disappeared, owing to the ravages of goats and the feller's axe. The soil has even heen washed from the rocks in many cases by tropical rains, since the destruction of the native vegetation which covered the hills and mountains to a high altitude. The original flora of St. Helena bespoke a great antiquity, geologically speaking. In the same periodical is an article on "The Affinities of Flowers," by Felix Oswald, B.A., Lond. This is illustrated with neat drawings and dissections of the Harebell, Daisy, Rampion (Phyteuma) and Hemp Agrimony (Eupatorium cannabinum). The subject is treated very much in the same way as it would be at a practical lesson in botany, short of the actual specimens. Those interested in the subject of colour, will find an article on "The Causes of Colour," by J. J. Stewart, B.A., Cantab., B. Sc., London. As a hall of iron is heated, it first gives off dark rays, then appears of a dull red changing first to yellow and then to white, according to the rapidity of the vihrations of the particles of iron, hrought about by the heat applied.

TUBEROSES.

In gardens where there is a heavy demand for white flowers wherewith to make buttonholes, sprays, and bouquets, the Tuberose (Polianthes tuberosa) is well nigh an indispensahle subject. Provided a good batch is potted up it is not a difficult matter to have a succession of bloom lasting throughout the greater part of the year. When the tuhers, or hulbs as they are commonly hut erroneously called, arrive in the autumn the whole of them should be potted off without delay. For the smaller ones 5-in. pots will do very well, although 6 in. will be better for the larger ones, one being placed in each. The compost should consist of two parts of good fibrous loam, and one part of dried cow-manure rubhed through a sieve with a good sprinkling of sharp sand. A little silver sand should he placed so that the bottom of the tubers rests upon it, for they always seem to start away better when treated thus. The pots should not be filled too full of soil, and the tuber should peep out of the soil for about one third of its total depth.

After potting, the majority of the plants may be taken off to a cold frame, where they may be stood upon a bed of ashes near to the glass. About a score of the best may be transferred straight away to the stove or a forcing pit. They will do very well if stood beneath some spreading plant, and there will then he no necessity for providing a special place for them. The syringe should be employed now and again to sprinkle them and to assist them to start, and this is the only moisture the plants will need for the time being. It is not a good plan to deluge the soil with water immediately after potting. Other hatches of plants should be introduced at intervals in order to keep up the succession.

Once they are in full swing they must have plenty of water, and as soon as the flower spikes start to make their appearance occasional doses of liquid manure will be of service, for Tuberoses must not be starved under any circumstances.

Where large batches are forwarded at the same time the plants should be stood together in a corner of the stove. Keep the syringe well at work among them whenever it is possible to do so, as both red spider and thrips are very partial to the succulent leaves, and they soon disfigure them if allowed to gain a footing.

There are several varieties in cultivation such as Double African, Double Italian, Double American, and the Pearl. The last named is the best for general use as it is a good deal dwarfer than the others.

CELOSIAS AS BEDDING PLANTS.

One of the most striking and effective bits of colour that can possibly be conceived, just now, is a bed of the above in Regent's Park. Happening to pass that way recently I was attracted by the glare, which, on closer inspection, turned out to be a really beautiful display of Celosias of the most unique tints—apricot, strawherry, orange, lemon, etc., besides other shades including crimson and scarlet. Each plant assumes a pyramidal form, which the individual feathery plumes of inflorescence also take, the result being, as aforesaid, unique and pleasing.

That such tender annuals should be employed for bedding-out, and employed with such effect, and in London too, is one of those problems which have taken years to solve, hut which has now been solved by care, forethought, selection and successful culture. Whatever else obtains in Regent's Park—and many pretty combinations and landscape effects do ohtain—Mr. Jordan is to be commended for his admirable show of Celosias. Doubtless, this year, he has heen largely assisted by nature, but the fact remains that if these plants had not been experimented with, nature would never have had the opportunity of holding up the mirror, as it were, for future guidance.—*C. B. G., Acton, W.*

EUPHORBIA JACQUINIAEFLORA.

Some years ago, when I was a subscriber and occasional contrihutor to the columns of that excellent monthly periodical *The Florist and Pomologist*, there appeared an article on this brilliant winter-flowering plant, from the pen of a well-known gardener and horticultural writer, in which he stated that he was "possessed of a secret anent its culture, worth one's birthright"; so, being of an inquiring turn of mind, and ever open to hearing the best methods of cultivating so charming a flower, I penned a reply, and begged of the writer to divulge, and not keep a light under a bushel, as I, and doubtless other readers would be glad to be enlightened. I rememher sometime afterwards there appeared another article from his pen entitled "Culture, the chief source of improvement"; hut the great secret never came out.

We have cultivated this subject in various ways; and if merely growing it for cut flower purposes, prefer to have it planted out in a narrow bed in a stove or propagating house to produce the finest

sprays. For large specimens in pots it is necessary to prune into shape — when they show signs of starting into growth—some of the previous seasons plants, that have been resting since flowering; reduce the old ball, and soak it in a tub of tepid water for a few hours so that it may become soaked through.

The plants can be repotted into the same size pots, if necessary, giving them good drainage. The compost should consist of fibrous loam and good peat in equal proportions with a good sprinkling of sharp sand. If small plants are required for furnishing, cuttings should be taken with a heel off the old stock plants. Insert two or three in a small pot and place them under a handlight on a brisk bottom heat; when rooted keep them near the glass and shift into 48's or 32's when sufficiently rooted. They may be grown during the summer months in a pit. We have some in such a structure; and to make them break more freely after pinching than is their wont, I tied the tips down to stakes. In that horizontal position they broke freely, and I am well satisfied with that plan.—*George Potts, August 22nd.*

THE CHANNEL ISLANDS REVISITED.

JERSEY FLOWER SHOW.

VICTOR HUGO's well-known reference to this lovely island of the sea affords, perhaps, the most fitting keynote to the impressions of a visitor for the first time to the principal of the Channel Islands. But the casual visitor fails to fully realise the beauties of the place, because Jersey has so many treasures in the picturesque that it affords a continuous fund to the admirer of Nature, whether in her refined or ragged moods. Thus it is that a visit may well be repeated. The approaches to the port of landing have been altered very much of late years, and the old-time practice of landing in small boats is now of so rare occurrence as to be almost a thing of the past.

At the invitation of some of the members of the Jersey Horticultural Society, our correspondent a fortnight ago found his way along that charming stretch of sea and landscape in the direction of St. Aubins. This lovely bay stretches for some miles along the west coast of the island, and, save for the limited protection of St. Elizabeth's Castle, is open to the rolling tide of the Atlantic Ocean. The site selected this year was the Triangle Park, a comparatively small enclosure, but serving its purpose nevertheless as a recreation ground in fairly handy proximity to the town. The last show we were at some years ago in Jersey was held in the grounds of the Government House, and although that demesne is much more interesting in sylvan beauty, yet the Triangle Park is so handy for the large numbers who visited the show as to make up, in some measure, for the shortcomings on the other hand.

Principal amongst the contributions was Mr. H. Becker's marquee, almost entirely filled with one of the choicest displays of Dahlias that we have ever witnessed. The grand wealth of bloom was remarkable, and the grower in charge of this department (Mr. Hamill) is certainly to be congratulated, not only upon the successful character of the exhibit, but also upon the very fine condition in which the blooms were presented.

Messrs. Joshua Le Cornu & Sons, of High View Nurseries, also showed in the same section; whilst in one of the other tents Mr. Philip Le Cornu, of The Jersey Nurseries, near Almorah, showed Roses and Dahlias. The ubiquitous Ichthemic Guano Company were, of course, represented, in fact we shall soon begin to think that a flower show without them would be very like the Irishman's description of a nightcap without the whisky.

Principal among the amateur competitors was Mr. Reeves, head gardener to Mrs. Robin, Steep Hill, whose many contributions enabled him to score as a frequent prizetaker, and whose entries would really have made an excellent show in themselves. Mr. Reeves is evidently an all round man, and not only were his Orchids and general plants very good, but he also showed fruit in excellent form. Not the least interesting was a curiosity in the way of the Cape Cactus known as the Turk's Cup, growing apparently in a tub containing a lot of "potchards" in imitation of the conditions which obtain on its native heath.

Space forbids anything like reasonable mention of the many good things sent in by other exhibitors.

C. J. Nicole, Esq., whose gardener is Mr. Albert Woods, showed in excellent form Liliums and Pelargoniums, also some wonderful Coleus growing to a height of 6 ft. and 7 ft. The same gentleman also contributed in the classes for groups.

In the table decorations the leading prize was awarded to Mr. W. Glenen, who chose as his subject the Maypole with the usual coloured ribbons training gracefully from the centre, the whole arranged upon silvered glass. Lilies, Orchids, Roses, Pelargoniums, and Adiantums were drawn upon, and the exhibit was at once striking and original. Other interesting classes were those for Tomatos packed in baskets ready for travelling, which naturally elicited a strong competition.

The Grapes were also a strong class, and the secretary, Mr. C. F. Lefevre, may well pride himself upon the united efforts of his hard-working committee, which all tended to make this a successful show.

There is no doubt that in Jersey a very wide scope is offered for a considerable development in the way of flower shows. There is nothing that your seaside visitor likes better than a ramble amongst the exotics and the hardy plants which are usually to be met with at the, so to speak, common or garden show. Couple this with the fact that, so far as independent amusements are concerned, Jersey is not too well supplied, and there seems to be room and opportunity for the committee to considerably enlarge their sphere of action.

(*To be continued.*)

PLANTS RECENTLY CERTIFICATED.

First-class Certificates were awarded the undermentioned subjects by the National Chrysanthemum Society on the 1st inst., at the Royal Aquarium.

DAHLIA, MR. STEPHEN WALKER.—A fine new show variety of medium size, and light mauve-pink in colour. Mr. S. Mortimer, Rowledge, Farnham.

DAHLIA, MRS. KINGLEY FOSTER.—A true Cactus bloom of great merit, orange-buff in hue. Mr. J. Stredwick, Silver Hill, St. Leonard's.

DAHLIA STARFISH.—See the above description. Messrs. Keynes, Williams & Co.. Salisbury.

KEYNES WHITE.—This is not as the name suggests, pure white, being suffused with creamy-yellow. It belongs to the Cactus section. Messrs. Keynes, Williams & Co.

DAHLIA, BRIDESMAID.—A Cactus form exhibiting a deep mauve-pink hue. Messrs. Keynes, Williams & Co.

DAHLIA, REGULUS.—This is a superb deep crimson Cactus variety of more than ordinary size with very long and pointed petals. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge.

DAHLIA, MRS. GORDON SLOANE.—This is another true Cactus flower exhibiting a shade of rich coral-red. Messrs. J. Cheal & Sons, Crawley, Sussex.

DAHLIA, POLLY ECCLES.—For description see above. T. W. Girdlestone, Esq., Sunningdale, Berks.

DAHLIA, NAOMI TIGHE.—Another single of great promise, chrome-yellow in colour, with a narrow central zone round the disk of bright chestnut-red. T. W. Girdlestone, Esq.

GLADIOLUS ROSALIE.—The blooms here are fully 4 in. in diameter, the segments broad, and of great substance. The colour may be described as a delicate coral-pink. The lower segment is also striated with carmine. Messrs. J. Burrell & Co.

GLADIOLUS, IMPERATOR bears blooms of great size, the largest, fully 6 in. in diameter. It is rich salmon in colour, the broad and massive segments being striated with white down the centre. Messrs. J. Burrell & Co.

GLADIOLUS ZEPHYR has lilac blooms, striated on occasion with carmine. Messrs. Burrell & Co.

ROSE MRS. RUMSEY.—For description see p. 22. Mr. W. Rumsey, Waltham Cross.

THE following Dahlias received First-class Certificates at the National Dahlia Society's Show at the Crystal Palace on the 4th inst.:—

CYCLE.—A bright rosy-magenta flower of true Cactus form. Messrs. Keynes Williams & Co., Salisbury.

FANTASY.—A brilliant orange-scarlet Cactus variety with long, incurved, claw-like florets. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge.

TRILBY.—A single maroon-crimson form tipped with rosy-lilac or white at the edges of the petals. T. W. Girdlestone, Esq., Sunningdale, Berks.

EMMIE.—A light rose single flower, the petals tipped and edged with bright carmine. T. W. Girdlestone, Esq.

FOLLY.—A bright single white and rose variety, the petals edged with crimson. T. W. Girdlestone, Esq.

NAOMI TIGHE.—See list of Dahlias Certificated at the Aquarium on September 1st. T. W. Girdlestone, Esq.

POLLY ECCLES.—A fine, single buff, of excellent form, with a crimson zone in the centre. T. W. Girdlestone, Esq.

CHARLES WOODBRIDGE.—A grand crimson Cactus flower, flushed with rosy-magenta. Mr. T. S. Ware, Tottenham, N.

MISS WEBSTER.—The flowers of this Cactus variety are of great size, with long, pointed white florets. The plant grows vigorously and flowers freely. It has received twelve certificates as a Cactus Dahlia, and one as a decorative sort. Messrs. Dobbie & Co., Orpington, Kent.

STARFISH.—This Cactus variety is of medium to large size, and brilliant scarlet. The florets are long and pointed. Messrs. Keynes, Williams & Co.

ROSE QUEEN MAB.—A new Apricot hued China Rose, very pretty. Messrs. Wm. Paul & Son, Waltham Cross.

The undermentioned subjects received certificates according to merit from the Royal Horticultural Society on the 8th inst.

Orchid Committee.

ARACHNANTHE LOWEI.—This grand Orchid has received several names such as Vanda of Lindley, Renanthera, and the above, which is adopted in the *Genera Plantarum*. The fine plant shown by Messrs. B. S. Williams & Son, Upper Holloway, bore twenty-one flowers on a raceme. Eighteen of them were dark crimson-red, mottled with yellow; two were yellow, with a few crimson spots and had broader segments; one was intermediate in colour. The species is, therefore, di-tri-morphic with two or three flowers differing from all the rest. The *Genera Plantarum* says there is only one yellow flower. Surely this is evidence of good cultivation. First-class Certificate.

MILTONIA SPECTABILIS MORELIANA DULCOT. VAR. *Nov. var.*—The sepals and petals of this splendid variety are of an intense blackish-violet. The lip is nearly of a uniform rich dark purple. The flower as a whole is of large size and handsome. The variety came out of a recent importation. First-class Certificate. Walter Cobb, Esq., (gardener, Mr. Howse) Dulcote, Tunbridge Wells.

LAELIOCATTLEYA CHARLES DARWIN.—This was obtained from Laelia elegans Turneri, crossed with the pollen of Cattleya maxima. The sepals and petals are of a clear glossy purple. The lip has a pale lilac tube, and two yellow blotches at the base of the claw; but the sharply-waved lamina appears lobed, though not really so, and is of a rich dark purple. An Award of Merit was accorded it on August 27th, 1895; but on this occasion it was accorded a First-class Certificate. Chas. L. N. Ingram, Esq., (gardener, Mr. T. W. Bond) Elstead House, Godalming.

MAXILLARIA STRIATA GRANDIFLORA. *Nov. var.*—The flowers of this variety are of great size and produced singly on the scapes. The sepals are fuscous yellow, striped with crimson; and the petals are yellow with seven brownish-crimson lines. The three-lobed lip is wavy and white, with numerous forking purple veins. Award of Merit. Messrs. F. Sander & Co., St. Albans.

CATTLEYA BICOLOR LEWISII. *Nov. var.*—The sepals and petals of this singular and very distinct variety are almost of an apple-green. The lamina of the lip is white or blush, and the lower half is of a dark purple. The column is tinted with purple. Altogether the colours present a singular combination. Award of Merit. E. Ashworth, Esq., (gardener, Mr. Holbrook), Harefield Hall, Wilmslow, Cheshire.

LAELIA ELEGANS OWENIAE. *Nov, var.*—The sepals and petals are of a clear rosy-purple. The lamina of the lip is of a rich dark purple with a pale edge, and very handsome; the tube both externally and internally is white. Award of Merit. Thos. Statter, Esq., (gardener, Mr. R. Johnson), Stand Hall, Manchester.

CATTLEYA EUPHRASIA. *Nov. hyb.*—This splendid Cattleya was raised from C. Warscewiczii fertilised with the pollen of C. superba. The sepals and oblong petals are of a clear rosy-purple. The lip is of great size, bifid, and of a rich crimson purple, with paler edges. The throat is yellow and a purple band runs along the centre of the tube. Altogether it is a beautiful and handsome hybrid. Award of Merit. Messrs. James Veitch & Sons, Chelsea.

LAELIOCATTLEYA CLIVE. *Nov. hyb. bigen.*—This beautiful bigeneric hybrid was raised from Laelia prestans crossed with the pollen of Cattleya dowiana. The soft rosy sepals and the darker elliptic petals are those of the female parent. The huge orbicular lamina of the lip is of an intense, velvety, maroon-crimson, with orange lines in the throat and a paler blotch at the apex. It is a very striking and distinct hybrid. First-class Certificate. Norman C. Cookson, Esq., (gardener, Mr. Wm. Murray), Oakwood, Wylam-on-Tyne.

LAELIOCATTLEYA BYRAN. *Nov. hyb. bigen.*—This was obtained from Cattleya gaskelliana and Laelia crispa, the latter being the male parent. The sepals and elliptic petals are of a warm rose. The lamina of the lip is wavy and of a rich velvety-purple, with a pale purple edge; the tube is white internally with a yellow throat and purple lines to wards the base of the tube. Award of Merit. Norman C. Cookson, Esq.

Floral Committee.

ACIDANTHERA BICOLOR.—Something like a dozen species of Acidanthera are known to science, from tropical and extra-tropical South Africa. The flowers are not unlike those of a Gladiolus, and belong to the same family, but they have a long slender tube. They are white with broad white segments having a large, conspicuous, bronzy-crimson blotch at the base of each on the inner face. The species requires a greenhouse temperature, and is as handsome and striking as it is rare in cultivation. First-class Certificate. Messrs. James Veitch & Sons.

POLYPODIUM NERIIFOLIUM CRISTATUM.—This is a strikingly distinct new variety of Polypody with fronds 2 ft. to 3 ft. long, and arching. The leathery, oblong pinnae are finger-like, but develop a tassel or crest at the apex, and being numerous form a line surrounding both sides of the frond. First-class Certificate. Messrs. James Veitch & Sons.

BEGONIA ODORATA ROSEA PLENA.—A truly double form of this species has at last been produced, for the blooms are as double as a Rose, but flattened like a Camellia. They are of a beautiful soft rosy-pink, with numerous petals, and fragrant. The flower stalks are long and stout. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

LOBELIA CARMINE GEM.—At the previous meeting this was accorded an Award of Merit, but on this occasion it was deemed worthy of a First-class Certificate. It is a hybrid of the Mexican type of Lobelia such as L. splendens, L. cardinalis and L. fulgens, with leaves similar to those of the first named. Three branching and floriferous specimens, 3 ft. to 4 ft. high were shown. The flowers are of a beautiful carmine hue. Sir Trevor Lawrence, Bart.

CAMPANULA BALCHINIANA.—This is a garden form of C. garganica with handsomely variegated foliage. The leaves are silvery white with the exception of a green blotch in the centre of each. Award of Merit. Messrs. W. Balchin & Sons, Hassocks, Sussex.

ARALIA TRILOBA.—The leaves of this distinct looking type are tripartite, with long, finger-like, drooping segments. First-class Certificate. Mr. Wm. Bull, King's Road, Chelsea.

HELIANTHUS ANNUUS WANTAGE STAR.—The heads of this variety (or rather hybrid, for H. annuus and H. cucumerifolius were the parents) are about 4 in. in diameter, and bright yellow with a large, dark brown centre. Award of Merit. Mr. Fyfe, The Gardens, Lockinge, Wantage.

ADIANTUM CAPILLUS-VENERIS CUNEIFORMIS.—The fronds of this striking variety are 2 ft. long, with distant, cuneate, light green pinnules, finely serrulate at the margins. The branches of the fronds are thinly arranged, making this a useful basket plant. Award of Merit. Lady Emily Foley (gardener, Mr. Ward), Stoke Edith, Hereford.

DRACAENA WARRENI.—This is a production from D. Gladstonei crossed with D. vivicans, and has long, arching, deeply channelled leaves of a glossy metallic or bronzy-purple hue, with a narrow, red margin. Award of Merit. Mr. Albert Offer, Handcross Park Gardens, Crawley.

DAHLIA MABEL.—This is a fancy variety, striped and mottled with crimson and purple on a pink ground. It is of good form, and fitted for exhibition purposes. Award of Merit. G. St. Pierre Harris, Esq., Orpington.

DAHLIA FANTASY.—For description see above. Award of Merit. Messrs. J. Burrell & Co., Howe House, Cambridge.

GLADIOLUS ALICIA.—A spike of this bore twenty-five flowers and buds. The flowers are white with a purple blotch on one or two of the lower segments. Award of Merit. Messrs. J. Burrell & Co.

GLADIOLUS PAINTED LADY.—Very distinct is this sort with white flowers, shaded blush and striped crimson, rose and pink. Award of Merit. Messrs. J. Burrell & Co.

GLADIOLUS APOLLO.—The blooms are soft salmon, with a crimson blotch on the lower segment. Award of Merit. Messrs. J. Burrell & Co.

DAHLIA DANIEL CORNISH. Here we had a show variety with bright red flowers of fine form. Award of Merit. Mr. J. T. West, Tower Hill, Brentwood.

DAHLIA FLOSSIE, orange-scarlet, tinted purple; D. AFRICAN, dark maroon-crimson, with long, pointed florets; and D. STARFISH, brilliant scarlet, are Cactus varieties of considerable merit. Award of Merit to each. Messrs. Keynes, Williams & Co., Salisbury.

DAHLIA LEOPOLD SEYMOUR, soft yellow, tinted and blended with pink on the outer florets and very pretty; D. MRS. GORDON SLOANE, crimson-scarlet; and D. HARRY STREDWICK, maroon-crimson, with huge flowers and incurved, twisted florets, are highly meritorious Cactus varieties. Award of Merit to each. Messrs. J. Cheal & Sons, Crawley, Sussex.

DAHLIA POLLY ECCLES, D. FOLLY, D. NAOMI TIGHE, and D. TRILBY are all single varieties. For description see above. D. JEANNETTE is also a single Dahlia, having white rays, edged with crimson-scarlet. Award of Merit to each. T. W. Girdlestone, Esq., Sunningdale, Berks.

DAHLIA IONA is a Cactus variety with soft orange-salmon flowers of large size, with long, pointed florets.

D. DAGMAR, blackish-crimson; D. NERISSA, bright rose and the best of its type; D. GUINEVERE, golden, with fiery-crimson edges to the florets; and D. ADRIENNE, dark crimson-red, are all pompon Dahlias of average size for their class and neat in form. Award of Merit to each. Mr. C. Turner, Slough.

THE PLANT HOUSES.

The Stove.

IT will be necessary now to devote all attention towards the ripening and maturing of the growths made during the spring and summer. This will put the plants in the best possible condition for withstanding the harmful influences of the dull season, which is now within measurable distance of us. The blinds will only be needed for a few hours in the middle of the day, and should be drawn up soon after 2 p.m. If a good syringing and damping down is then given, and the top ventilators closed, no fear of scorching need be entertained. Towards the end of the month all the blinds may be taken down, except it is decided to leave them out through the winter to be used as covering during frosty nights. All permanent shading should be washed off at the same time.

ARISTOLOCHIAS, BOUGAINVILLEAS, and other climbers that may be still in flower may receive a little liquid manure occasionally for a few weeks longer, as if they flower at all freely there is a good deal of strain upon them.

CALADIUMS.—As fast as these plants show signs by their increasing shabbiness that their course for this season is nearly run they should be removed to a warm pit, where they may be allowed to finish. Do not cut off the water supply all at once, as such a proceeding is very detrimental to the tubers, but less water may be given than during the heyday of their growing season.

GLOXINIAS.—The same remarks will apply to these. Take them out and give them a place on a shelf near the glass in a warm pit. They must not be exposed too rashly to the rays of the sun, however, which are often pretty strong towards the end of September. A light covering of tiffany may be required during bright days for a week or so to prevent scorching.

PANICUM AND TRADESCANTIA.—Fresh batches of cuttings should now be put in to supply plants to take the places of those that have done duty during the summer months, and have now outlived their beauty. Where the practice of inserting the plants in a little ridge of soil at the edges of the stages has been followed, the old plants and the old soil should both be removed, and new material substituted. The cuttings will then have time to root and establish themselves before winter sets in, and they will then not look quite so forlorn as they do when rushed in at the last moment.

Greenhouse and Cool Conservatory.

September is usually a month of surprises, and some of these surprises are of anything but an agreeable nature, as more than one gardener finds to his cost when a few degrees of frost playfully nip a lot of his winter stuff that has been left outside unprotected. As a rule the end of the month is quite late enough to defer the housing of many half hardy subjects, unless, of course, the season proves exceptionally mild and open, when we are sometimes tempted to procrastinate a little. At any rate, it will not be long before all the under-glass room will be wanted, and things may be got in readiness as far as possible against the time when prudence dictates the removal of many plants into safer quarters.

TUBEROUS BEGONIAS.—Remove these to a cold frame as soon as they are done with, They may be stood together pot thick, and should the plants be too tall to admit of the lights being put on the stakes may be taken out as there will be no further need for them. This will allow the lights to be put on during heavy rain or the intervention of frost. The plants should be allowed to go gradually to rest.

FUCHSIAS.—These will do very well if stood under the shelter of a wall in a corner of the frame yard where they will get plenty of sun. A degree or two of frost will not harm them there, although they must be protected during very severe frosts. These, however, let us hope will not trouble us just yet.

COLEUSES.—Like many other subjects the Coleuses have done their share for this year. The old plants have lost a good deal of their lower foliage, with by far the greater part of their beauty. The tops should now be taken off, and inserted as cuttings. Use very sandy soil, insert half a dozen cuttings in a sixty pot, and give them a place upon a shelf close to the glass in a warm house. They will soon root, and will pass through the winter without being again disturbed. Cuttings may be taken from them next spring.

ZONAL PELARGONIUMS.—If a goodly number of these have been grown on for winter flowering, so as to allow of a succession of bloom being kept up from the beginning of November until February or March, a batch of plants may now be allowed to develop their bloom buds, still keeping the buds picked off the rest. This earliest batch will do very well in a cold frame, for the next six weeks until they are in a fit condition to be taken into the conservatory. Feeding with manurial stimulants may now be indulged in pretty freely.

CLERODENDRON FALLAX.—Although this handsome Clerodendron needs stove heat to grow it well in its earlier stages, once it has commenced to open its blooms it should be transferred to the greenhouse, where it may be allowed to remain until the blooms have all fallen. This is one of the most useful subjects we have for the show house during the early autumn months.

AZALEAS.—No time should be lost in getting these under cover, especially where the bloom buds are fairly plump. Thrips have been a terrible nuisance this year, and fortunate are the Azaleas they have not visited. Before taking the plants indoors lay them on their sides, and give them a thoroughly good syringing with a fairly strong solution of Nicotine Soap, which, next to fumigation, will do for the thrips the quickest of anything. Follow this up with a good washing with clear water, wash the pots, clean the surface of the soil, and finally give them a nice light position near the glass in the greenhouse.

ERICAS that have been plunged should be lifted and taken indoors within the course of the next week or two. The gardener must in all cases, however, be guided by the weather.—*A. S. G.*

HINTS FOR AMATEURS.

Calceolarias.—These, as they well deserve, are held in high favour everywhere, more particularly the yellow-flowered varieties. The cuttings root fairly well in shallow pans, but an even better plan is to make up a small bed of soil some 6 in. or thereabouts, in depth, in a cold frame. The soil should be very sandy, and a layer of silver sand some quarter of an inch in depth should be laid over the soil. Cuttings, some 3 in. or 4 in. in length may usually be obtained in abundance from the side shoots of the old plants, without interfering in the least with the flower trusses. Three or four of the lower leaves of the cutting should be removed as in the case of the Pelargoniums, and the transverse cut below the node made neatly. From 1 in. to 1½ in. will be deep enough to insert the cuttings in the soil. The lights should be put upon the frame, and the latter kept fairly close for a week or two, after which air may be given in increasing quantities, should the weather prove favourable. It will be advisable here also to allow a margin of cuttings for possible deaths during the winter months.

Pentstemons. — There are no more beautiful hedding plants than these, and they are as easy of propagation as they are beautiful in appearance. Cuttings should be put in now of any specially fine variety. The side shoots will, as a rule, furnish plenty of material for the purpose. The cuttings should be from 3 in. to 5 in. in length, 4 in. being a good medium. They should be treated in precisely the same way as the Calceolarias, when almost every one of the cuttings may be expected to produce a plant by next spring that will be suitable for bedding out in the ordinary way.

Violas.—It is manifest that these occupy a prominent position in any flower garden, small or large, no matter whether it be situated in the country or in the town. In town gardens, indeed, they are indispensible, so well do they resist the baneful effects of the smoke, but in order to succeed with them there they have to he treated very differently to those grown in the country. London fogs play terrible havoc with the young plants during the winter, and hence the cuttings or divisions, whichever plan is followed, have to receive the protection of a cold frame during the inclement months, otherwise their existence is greatly endangered. In the country the cuttings may be put in, in a prepared piece of ground under the shelter of a wall, or if the old plants are divided, the divisions may be consigned straight away to their permanent quarters. In this matter, therefore, our readers must use their own discretion. Cuttings root very readily now, and dividing up the plants is at once a safe and an expeditious method of propagation.

As a rule the plants throw up numerous young growths near the crowns. These may be cut out with a sharp knife and dibbled into a bed of soil in a cold frame, made up in the same way as for the Calceolarias and Pentstemons. After having been watered they will not require very much water all through the winter. Nothing like coddling should be attempted. Plenty of air should be given, although during showery weather the lights, instead of being pushed down should be tilted up by inserting a brick or a block of wood between the light and the frame.

Nasturtiums.—The dwarf growing varieties may be increased very readily by cuttings. A 60-size pot will hold six or eight cuttings easily. The soil should be made nicely firm in the pots, and covered with a thin layer of sand. A place should be given the cuttings in a corner of a cold frame. If the whole of the frame cannot be kept close owing to the presence of other plants, the cuttings should be covered with a small hand light or a bellglass for a few weeks until they are rooted, after which they will pass through the winter very well if stood upon a shelf in the greenhouse.

Cuttings of all the foregoing common bedding plants will strike very easily either in the open air or in a cold frame, if inserted now, and no amateur need be afraid of trying his hand to propagating them. There are numbers of other subjects, that enter largely into many bedding arrangements, that require a little more coddling, and the exercise of a little more skill to increase them with any amount of certainty. We must leave the consideration of these until a subsequent issue.

After the cuttings, have been taken the beds will naturally look rather desolate, as most of the flowers will have been taken away with the cuttings. The dead and yellow leaves, too, at the base of the stems, which have hitherto been hidden by the younger growth, will show up pretty plainly. It will be necessary, therefore, to give the beds a thoroughly good picking over and cleaning. All dead leaves, old flower trusses, and weeds must be removed, and the soil hoed over in order to loosen the soil which will have been trodden down a good deal by the trampling about consequent on taking off the cuttings. The plants will soon pull round, and if we have a favourable autumn, and the frost keeps off, these beds may look presentable for some weeks yet.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Hollyhocks.—As you come from the north of Yorkshire, *Robert L.*, your best plan to keep your Hollyhocks safely through the winter will be to lift them up about the end of the month, and transfer them to boxes. The roots may be lightly covered with any soil that comes to hand, and the boxes placed in a frame or underneath the stage in a greenhouse. You may propagate from the old stools in the spring.

Unripe Tomatos.—It is pratically certain that by far the greater part of the fruit upon your Tomato plants will not ripen out of doors, *J. T. Bingham.* You may let it hang as long as possible so as to give it every chance of maturing itself. If frost threatens, you must cut them all and take them inside out of the way, or they will inevitably be spoiled. If you lay the fruit on a shelf, or better still, hang it up in a warm room, it will ripen off gradually. Of course, the flavour of these artificially ripened fruits will not be so good as that of those ripened naturally upon the plants, but still it will be passable.

Sickly Violas.—There is very little wonder that your Violas look sickly, *X.*, the wonder would be if they did not, under the circumstances. They are infested with red spider which has played terrible havoc with them. You say that Scarlet Runner Beans have been growing close to them. It is more than likely that the red spider attacked the Beans first, and spread from them to the Violas. The dry season has caused the spider to be very prevalent this year and we have noticed many cases of Runner Beans in suburban gardens that have been literally covered with it. Your only plan will be to pull the Beans out of it, and cut your Violas back.

Mushrooms in an Asparagus Bed.—There is nothing very extraordinary in what you relate, *Electric.* Ground dressed with the remains of an old Mushroom bed will frequently produce Mushrooms, even, although, the bed has been apparently exhausted for months before it has been disturbed. We remember a case in our own experience, where a bed after having been made up in the usual way to all intents and purposes, turned out a failure, for not a single Mushroom did it produce. After waiting three months and no signs of life being then shown, the bed was turned out and the manure thrown up in a heap outside. A few days of showery weather followed, and shortly after, much to our surprise, we found the heap of manure literally covered with Mushrooms of first-class quality, which happened to come in very useful at the time.

Snakes in a Back Yard.—A startling title this, and it must have been a startling title too, *F. W. M.*, to send an account of it on in hopes that it may interest some of our amateur readers. In the spring of the present year he had a hotbed put up in the yard at the back of his house. The Cucumbers were planted in the ordinary way, but somehow or other they failed to do well. Weeks passed and they did not move a bit, so at last it was decided, for lack of a better idea, to take the hotbed down, and to try and find out if anything was the matter. After the process of demolition had been in progress a short while, an ominous hissing was heard, for the fork had disturbed a nest of snakes, an old one and several young ones. War was declared, and the snakes promptly despatched. Thinking he had at last found out the secret of his Cucumbers not doing well, our correspondent repaired the damage to the hotbed. After this, the plants grew away famously and cropped heavily. *F. W. M.* thinks the snakes and the eggs must have been brought to the place in the fermenting material, and this is probably what really occurred.

Sieves.—Three sieves will be amply sufficient for all purposes, *W. G.*, viz., 1 in., ½ in., and ¼ in. mesh. The largest size (1 in. mesh), is handy for separating stones, sticks, etc., from leaf or any other soil. The ½ in. and ¼ in. sizes are the most useful.

Storing Onions.—If the necks are long enough, *Dahlia*, you may "rope" your onions. Get stout sticks about 1¼ inches in diameter, split them down the middle by two cuts made at right angles to each other. The necks of the Onions may be inserted in these cracks, the one above the other until the top of the stick is reached. Then bring the split portions together and tie them securely with stout string. The Onions will then be held firmly in their places. The strings may be suspended from the roof or hung against the walls of the storehouses.

Pruning Raspberries.—You will be quite safe *L. Vince*, in cutting out the old canes of the Raspberries now, as you suggest, and not waiting till the winter.

Stinkpots is a common name often applied to Stapelias, *X.*, and all who are acquainted with the disagreeable odour exhaled hy the flowers of these remarkable plants, will agree that the sobriquet is not inaptly bestowed.

The Neapolitan Violet.—*Rover* asks if it is worth while growing Neapolitan Violet as well as Marie Louise? as the latter is such a much better doer in all ways than the former. Certainly it is well worth growing! Neapolitan is rather later in blooming than Marie Louise, and comes in when the latter is rather past its best. For size and colour of the bloom, as well as for general utility, Marie Louise can give Neapolitan points.

Fruit Room.—The shed of which you write, *Cosmos*, would make an admirable fruit room, provided it undergoes a little preparation first. We should advise you to have the walls whitewashed, but do not paint the racks; they are far better left clean, and besides the smell of paint would not be dissipated before the fruit room was wanted. The thatched roof will, if anything be better than tiles, as it will keep the frost out better. You must have some wooden shutters made to fit the windows closely. These must be put up in frosty weather.

Violets in Frames.—An ordinary cold frame is the best structure for growing Violets in during the winter months. The brick pit you mention *F. R. Knighton*, would do very well, but will require to be partially filled up with a mixture of stable manure and leaves. This should be trodden down as firmly as possible, and a layer of soil some 10 in. in depth placed on the top. The soil should consist of two parts of good mellow loam, and one part of well decayed stable manure, or leaf soil, well mixed together. The surface of the soil when the bed is finished, should be from 6 in. to 8 in. away from the glass, to allow for the shrinking of the fermenting material. Where a shallow pit or frame is used, and but little fermenting material has been employed, the surface of the soil should be within a foot of the glass.

Tomatos with curled leaves.—The specimen you sent us, *Amateur*, was perfectly healthy. Some varieties of Tomatos, even of the best sorts, have their leaves curled up in the same way as those you sent, whether grown under glass or out of doors. Ham Green Favourite is particularly liable to behave in this way under the best of cultural treatment, and yet bears heavily. There is nothing to complain of except on the score of appearance. Three-fourths of the varieties in cultivation have their leaves more or less curled, especially out of doors.

BUNYARD'S CENTENARY SHOW.

THE firm of Messrs. George Bunyard & Co., having completed a century of its existence, Mr. George Bunyard, the sole proprietor, thought it a fitting opportunity to celebrate the event by the holding of an exhibition of fruits, flowers, and vegetables. Prizes to the value of £150, were offered by the firm for competition by gardeners of all classes down to the cottager. The schedule of prizes was so arranged that each class of growers were kept in divisions by themselves, so that all had a fair chance of winning prizes on their own merits. These opportunities were amply taken advantage of in all except the flower classes which were supplied by the firm in great variety including a fine collection of China Asters. The fruits and vegetables were shown in remarkable quantity and of quality that could hardly be equalled north of the county of Kent, particularly in the case of Apples and Pears. We have much pleasure in presenting our readers with a portrait of Mr. George Bunyard.

FRUIT TROPHY CAR.

A REPRODUCTION of the "Fruit Trophy Car," which figured in the Lord Mayor's Show of 1893, occupied the centre of the large hall in the Corn Exchange, Maidstone, and had a most gorgeous effect. Baskets of Apples and Pears, many of the former highly coloured, were piled up in a four-sided pyramid, narrowing at the top, and surmounted by two Palms. At each corner was an upright iron pillar supporting a circular device worked with Crab Apples and other highly coloured berries. The pillars represented Kent, Devon, Hereford, and Somerset, the principal Apple counties; they were connected with the centre by means of rods draped with flowers of Dimorphanthus mandshuricus, and hung with bunches of small Grapes. Apples constituted the bulk of this trophy but Pears, Grapes, and Tomatos were noticeable, the latter occupying the angles of the pile. A large Gourd formed the base of each corner of the pile resting on the car. The spaces between the baskets were decorated with Ferns, and Selaginellas. The sides of the car were draped, and bore the mottoes, "God giveth the Increase," and "Britain can grow her own Fruit," one on each side. Narrow tables surrounded the car, and carried baskets of Apples and Pears piled up in conical form. Behind them was a line of Crataegus Pyracantha Lelandi, loaded with fiery orange berries. The car had an imposing appearance and was entirely occupied with fruit grown in the firm's nurseries. It comprised seventy baskets.

MISCELLANEOUS EXHIBITS.

At each end of the car was a long table, one of which was filled with Ivy-leaved Pelargoniums and double and single zonal Pelargoniums all in the pink of health and profusely flowered. The other table bore a line of pyramidal Apple trees in pots, and carrying heavy crops of fruit. There were also pot vines and Figs in fruit. Gladioli, Roses, flowering shrubs and herbaceous plants occupied the rest of this table. Both were very conspicuous and entirely furnished by Messrs. Geo. Bunyard & Co.

A group of Crotons was exhibited by Mr. Walter Jarman, gardener to H. L. Campbell Brassey, Esq., Preston Hall. The platform occupied by the band was also draped and decorated with Palms, Ferns, and flowering plants by Messrs. G. Bunyard & Co.

A table of Apples, Pears, and Plums, not for competition was exhibited by Mr. Solomon Tooth, market gardener, Somerfield, Maidstone.

FRUIT (RESTRICTED CLASSES).

Division A contained three classes open to all Kent gardeners and elsewhere, where customers of the firm. The first prize for twelve dishes of fruit was taken by Mr. W. Jarman, gardener to H. L. C. Brassey, Esq., who had splendid samples of Pears, Apples, Peaches, Nectarines, Cherries, Plums, Alicante and Muscat of Alexandria Grapes, the latter being well finished. Mr. C. Earl, gardener to O. E. d'Avigdor Goldsmith, Esq., Tonbridge, was second, with good Grapes, Apples, Pears, and a Pineapple, etc. W. Lewis, gardener to T. Oliverson, Esq., East Sutton Park, was third. He had some enormous Apples.

Mr. T. Robinson, gardener to W. Lawrence, Esq., Hollingbourne, took the first position for eight dishes of fruit comprising Grapes, Peaches, a Melon, &c. He had two finely coloured bunches of Black Alicante. Mr. H. Relf, gardener to A. T. Killick, Esq., Weavering Street, took the lead for six dishes of fruit, which included two splendid dishes of Pears, and beautifully-coloured Worcester Permain. Mr. W. Kennard, gardener to Herbert Monckton, Esq., Astley House, was second. Mr. E. Coulter, gardener to Mrs. W. Philpot, Toke Place, Linton, was third. This class was for gardeners employing a boy only.

COLLECTIONS OF VEGETABLES (OPEN CLASSES).

The premier award for a collection of eighteen kinds of vegetables, was won after a severe struggle, by Mr. John Snow, Wadhurst Park. His Cauliflowers, Parsnips, Beets, Carrots, Onions, Leeks, and Potatos were very fine and most interestingly displayed, and on account of this latter feature alone he gained the first place, so close was the competition. The second post of honour was taken by Mr. E. Clements, gardener to the Rev. H. H. D'Ombrain, Westwell, who was equal in number of points, but had the vegetables less tastefully displayed. Mr. T. Robinson, took the third place with a very good lot.

MR. GEORGE BUNYARD.

The first prize for a collection of nine kinds of vegetables was taken by Mr. W. Kennard, who had them neatly displayed in a round basket. Mr. E. Coulter was second.

FRUIT (OPEN CLASSES).

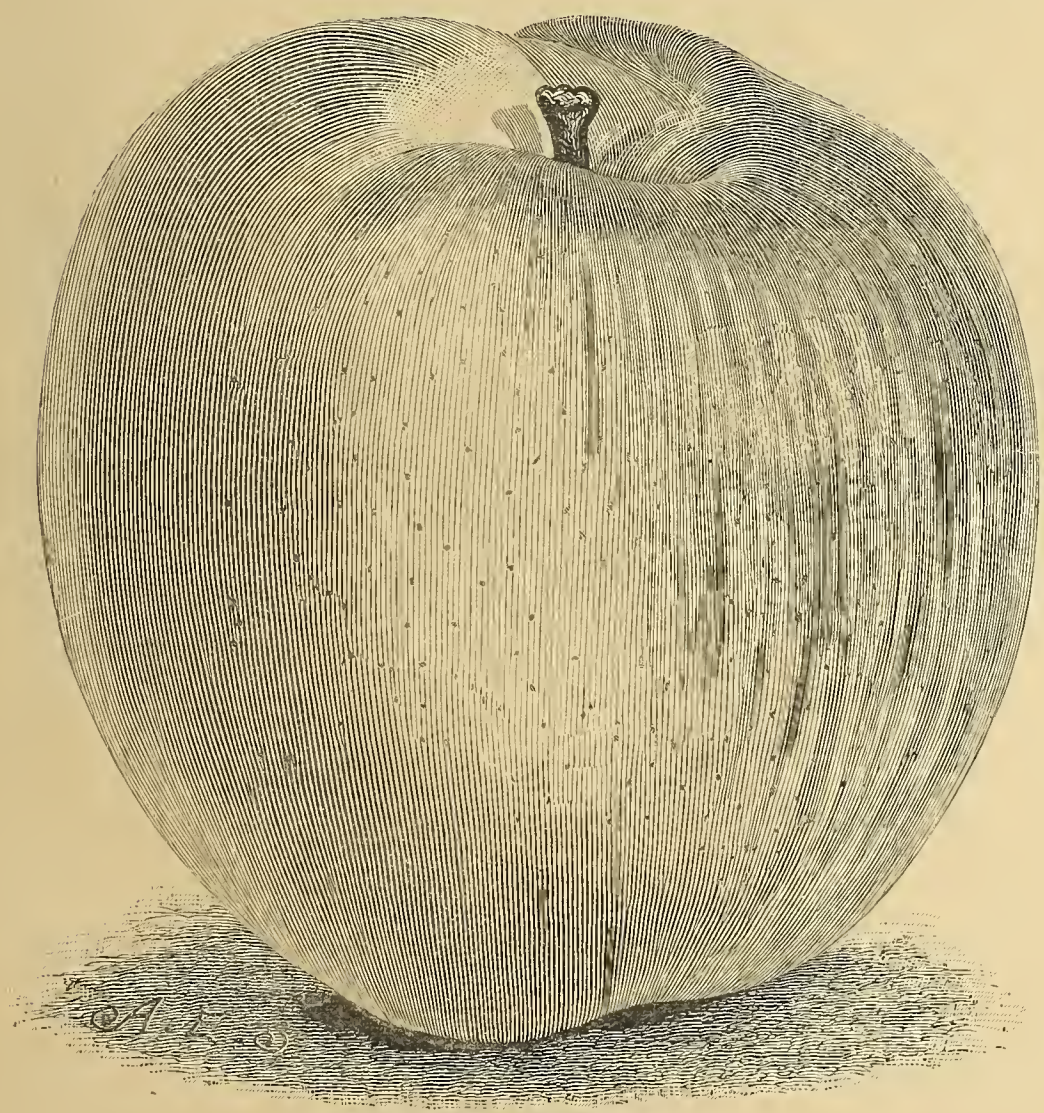
The first prize for three varieties of Grapes was taken by Mr. John Snow, with well-finished Black Hamburgh, Alicante, and Muscat of Alexandria. Mr. T. Robinson was second. Mr. C. Earl was awarded first prize for two bunches of Muscats, which were of huge size. Mr. John Snow had by far the bast Black Hamburgh Grapes, he was followed by Mr. C. Earl; and Mr. W. Kennard was third.

Mr. T. Robinson had the largest and best bunches of Buckland Sweet Water Grape. Those shown by Mr. W. Kennard were much smaller, but most beautifully finished. Mr. T. Robinson was first for any other white Grape, showing Foster's Seedling. Mr. G. Rabjohn, gardener to the Hon. R. P. Neville, Burling Manor, had the best Black Grapes for size of bunch and berry.

Mr. Woodward, gardener to Roger Leigh, Esq., Barham Court, tock the lead for six dishes of Peaches, which were of great size and finely coloured. Mr. A. Browning, gardener to S. Lee-Smith, Esq., was second.

Mr. W. Jarman took the lead in a class for three dishes of Peaches, which were moderate in size, but handsomely coloured. Mr. C. Earl was a good second. In the class for Nectarines Mr. John Snow had the largest and finest fruits, though those shown by Mr. Woodward were more highly coloured, and gave him the second place. Mr. C. Earl was third. The latter had the best dessert Plums. Mr. H. Relf had splendid samples of cooking Plums, taking the first prize; Mr. C. Earl was second. Mr. T. Robinson had the best pair of Melons; and Mr. C. Earl had the best single red-fleshed Melon; Mr. T. Robinson was first for a white-fleshed variety. Mr. C. Earl had the best Morello Cherries, which were of large size and almost black.

Mr. W. Lewis had the best Barham Court Tomatos; and was followed by Mr. G. Humphrey,



APPLE MRS. BARRON (See p. 42)

gardener to A. M. Dorman, Esq., Ashford. The latter came to the front for yellow Tomatos, and for dessert varieties, showing Sunbeam and Bunyard's New Green Gage.

Mr. W. Lewis took the premier award for six dishes of Pears, which were large and handsome. Mr. J. Rabjohn had the best three dishes of Pears, which were of great size and nicely coloured; those shown by Mr. Graves, gardener to the Rev. E. Bartram, Wakes Colne, were very creditable, but less mature; Mr. J. Sims, gardener to W. B. Prosser, Esq., Maidstone, was third with large samples.

Mr. W. Lewis took the premier honours for twelve dishes of cooking Apples which were of enormous size and looked as if they had been polished. Peasegoods, Nonsuch, and Lane's Prince Albert were grand. He also had the best six dishes which fully maintained his reputation, Mr. Graves took the second place; and Mr. A. Browning was third, all having Apples of such grand proportions as can only be seen in the south.

Mr. A. Browning led the way in the class for six dishes of dessert Apples, which were marvels of colouring. Mr. Graves took the second place here with a beautiful lot; and Mr. W. Lewis was third. The latter took the first prize for a dish of Lady Sudeley Apple, now ripe.

VEGETABLES (DIVISION B. OPEN CLASSES).

This class of garden produce was quite a feature of the exhibition. Mr. Thorner, gardener to Miss Balston, Thornhill, Maidstone, had the best Beet, the roots being of fine form. Mr. C. J. Beale, 119, Wheeler Street, had the best Runner Beans. Mr. W. Munn, Hollingbourne, had the finest stump-rooted Carrots. Mr. Thos. Hosmer, Meopham, took the lead for long-rooted Carrots showing Bunyard's Scarlet Perfection in admirable form.

Mr. Thos. Hosmer rightly took the lead for a dish of twelve bulbs of Bunyard's White Spanish Onion which were the finest in the show. Mr. W. Jarman was second with smaller but nicely ripened specimens. Mr. E. Clements staged the best St. John's Day Cabbages. Mr. W. Froud, gardener to T. B. Henson, Esq., Tonbridge, had the best Ellam's Early Cabbage. Mr. E. Clements had the best dish of Puritan Potato, and took the same honour for Windsor Castle Potato. Mr. S. Coward, gardener to V. de Michell, Esq., Ashford, showed the best Snowdrop variety, in beautiful samples.

COMPETITION OF SOCIETIES.

DIVISION D, was open to societies of cottage gardeners or allotment holders. There was a great competition, and the variety and excellence of the vegetables were truly remarkable. The Milton Society (secretary, Mr. W. W. Budds) took the leading award, with splendid samples of Cauliflower, Onions, Potatos, Tomatos, Celery, Cabbages, Leeks, Carrots, &c. The Ightham Cottage Gardeners' Society (secretary, Mr. Jas. Williams) took the second place with an imposing display of Cauliflower, Brussels Sprouts, Onions, Beans, Potatos, Carrots, Beet, &c. The Higham Horticultural Society (secretary, Mr. F. W. Duckrell) was third. The Westwell Cottage Gardeners' Society was fourth; St. Michael's and St. Peter's Horticultural Society, Maidstone, fifth; Yalding Cottage Gardeners' United Improvement Society, sixth; North and South, King Street Cottage Gardeners' Society, Maidstone, seventh; and the Goudhurst and Cottage Gardeners' Society, was eighth. There were ten entries making a most imposing display.

CUT FLOWERS AND COTTAGER'S EXHIBITS.

The gardeners of Kent did not take advantage of the prizes offered for cut flowers, a deficiency which was made good by Messrs. Geo. Bunyard & Co. The quantity of vegetables shown, however, by the gardeners, amply demonstrated the wide spread enthusiasm for this class of garden produce. The soil and climatic conditions that prevail in Kent, coupled with the skill of the gardeners, have made such a name for this part of Britain, that it might well be termed the "Garden of England."

The cottage gardeners responded to the offer of prizes by forwarding a great variety and quantity of vegetables which were arranged in a long corridor by themselves. This part of the competition was confined to cottagers and allotment holders, using less than a quarter of an acre of land; and judging by the exhibits put up, they made a good use of the land. The vegetables shown comprised Runner Beans, Carrots, Onions, Cabbages, Potatos, Parsnips, &c., all of Bunyard's strains and varieties. Space forbids detail concerning these exhibits, further than to say that a great many of them were of a high order of merit.

LUNCHEON.

The firm provided the judges, and others forming a large party with an excellent luncheon. Mr. Geo. Bunyard presided, and in due course proposed the toast of "The Queen, the Prince and Princess of Wales and other members of the Royal Family," which was loyally responded to. The chairman said that The Queen was the best monarch we have ever had upon the throne, and compared her rule with that of other countries. He then proposed "The Judges," at the same time explaining the absence of Mr. Owen Thomas (the Queen's gardener), and the Rev. W. Wilks. He called upon Mr. G. Gordon and Mr. J. Hudson to respond.

Mr. Gordon said that the vegetables had given the judges a great amount of trouble in allocating the awards, and that they were worthy of the exhibition and the exhibitors. Mr. J. Hudson corroborated this evidence, and said that they were sorry to have to disqualify two exhibits for not complying with the schedule, and advised the gardeners to carefully read the schedule before making up their collections.

Mr. J. Wright proposed "The Chairman," and said that Mr. G. Bunyard had been engaged in the trade for over forty years, and that all present were proud to see him at the head of the firm, and occupying the proud position he held that day. He had done magnificent work for the cause of fruit, and was now at the head of the most important fruit growing establishment in the country or in the world. He had the freedom of London conferred upon him at the Fruiterer's Show in 1893. Some people had put forward the fallacious statement that fruit was being overdone in this country, but he (Mr. Wright) quoted facts to the contrary. He was pleased to state that Mr. Bunyard, Junr., had been taken into the business that day. Maidstone was the metropolis of fruit growing in the United Kingdom. The Rev. H. H. D'Ombrain was described as the father of the National Rose Society. The reverend gentleman in speaking of the firm of Messrs. Geo. Bunyard & Co., said that honesty and integrity were the foundation of its whole reputation.

Mr. G. Bunyard, sen., in replying, said that his son had been introduced to the business, but had to earn his spurs before he should receive them, that is, before being made a partner; but he was to train his son to regular and careful habits of observation, and business tactics, for he intended to keep his establishment in the front rank of everything that was good. With reference to the exhibition, if there was any surplus after paying expenses, it was to be divided between the Gardeners' Royal Benevolent Institution, Royal Gardeners' Orphan Fund, and the Church Institute, Maidstone. In connection with these institutions he introduced Mr. G. J. Ingram, and Mr. A. F. Barron, who were present; also Mr. J. Hudson, treasurer of the Gardeners' United Horticultural Benefit and Provident Society. Before sitting down he paid a tribute of praise to his manager and his men for the assistance they had rendered him.

A large party was afterwards conveyed to the Allington Nursery to see the trees. We must defer notice of this for another occasion. The accompanying illustration (p.41) represents the Apple, Mrs. Barron, a kitchen variety of great merit, which is grown to handsome size on dwarf bushes at the Allington Nursery.

ROSES IN CALIFORNIA.

BEAUTIFUL as the Rose gardens of our own island are, they give us but a feeble idea of the glory, the beauty and luxuries of the Roses of Southern California when in the height of their flowering season the whole country side seems to be one blaze of colours. Go where you will, look in which direction you please, thousands of richly coloured blooms meet the eye. Delicate Tea Roses grow beside the lowliest mountain cabin with an abandon of which we can have but faint conception, whilst the sides of old barns, deserted cattle and horse corrals, and ruined buildings of all descriptions, are covered o'er with the choicest climbing Roses in many varieties, all of them growing with tropical luxuriance.

On the road to Los Angeles, and about Pomona, there abound hedges of Marechal Niel, Cherokee, and Jacqueminot Roses, all loading the air with their delicious perfume, and flooding the valleys with their brilliant beauty. Even in the streets of the older settled towns large branches bearing blooms every whit as perfect in form and colour as those sold in New York, Philadelphia, Boston, and other eastern cities at four dollars a dozen, thrust themselves invitingly over fences, or clamber at their own sweet will over Cypress hedges. In scores of streets there are rows of Pepper trees, up the shaggy stems of which Cloth of Gold, Beauty of Glazenwood, and Devoniensis Roses have been trained so thickly as to entirely cover the trunks from sight. No pen can properly describe the right royal appearance of these trees during the summer months. Overhead is the grateful shade of the deep green leaves, whilst the branches bearing them are all festooned and mantled with thousands of brightly hued Roses, long sprays of which droop downwards to the very ground.

Not only do Roses exhibit this wondrous freedom of growth, but under the influence of an exceptionally mild climate, and in the almost total absence of nipping frosts, vegetable life in all its forms attains an unwonted luxuriance of growth. Only a few times in the year does the thermometer fall as low as 37° Fahr., and thus plants of all descriptions are able to grow away without check or hindrance from youth to extreme old age. There are hundreds of climbing Roses in this part of the country that have grown from 25 to 30 ft. in three years, At Riverside there is a La Marque Rose bush, some fourteen years of age that has twisted its branches serpent like about the trunk and limbs of a patriarchal Pepper tree to such an extent that when the Roses are in bloom the tree presents the appearance of a huge bouquet of greenery, bestarred with thousands upon thousands of white blossoms. Such a sight must be seen to be appreciated for adequate description is beyond the realms of possibility.

FRITILLARIAS.

UPWARDS of fifty species are included in the genus Fritillaria, many of them possessed of no mean share of beauty, although perhaps the majority are rather more curious than pretty. All are hardy, free flowering subjects, many of them suitable either for culture in pots or for a nook in the rockery, whilst several are perfectly at home when naturalised in the grass. Fritillarias love a rich, well-drained soil, and they are very impatient of stagnant water lying round their roots. Whenever they are planted, it should be in a position where they need not be disturbed oftener than every three or four years. When grown in pots a cold frame is the best place for them, and nothing like hard forcing should be attempted.

F. MELEAGRIS, or the Snake's Fritillary, as it is commonly called, is a native of this country, although Oxfordshire would seem to be the headquarters of the wild plants. This is one of the most useful members of the genus, suitable for planting in the mixed border and the rockery, as well as for culture in pots. The plants run to about 1ft. in height, and bear large bell-shaped flowers, checkered heavily with rosy-purple. This species is very variable, and there are several handsome varieties in many shades of colour. Of these, the pure white form is one of the best. It should find a place in every garden.

F. AUREA.—A charming species from Asia Minor produces its large golden-yellow flowers in April. They are mottled with black and very showy. This plant usually reaches a height of 6 in.

F. ARMENA.—Another dwarf species was introduced from Armenia about the year 1878. It flowers at the same time as F. Meleagris, the blooms being large, solitary, and soft yellow in hue. F. a. rubra, a very pretty variety, has plum-coloured flowers.

F. PUDICA, which hails from North-western America has bright yellow flowers with a brownish-purple zone at the base, externally. They measure fully 1 in. in diameter, and about the same in depth. They are also slightly fragrant. The stems are only 3 in. or 4 in. in height. This is a charming plant for pot culture.

F. IMPERIALIS, properly known as Crown Imperial, is totally different in habit from all the foregoing. Grown in good soil, the stems run to fully 3 ft. in height, and bear at the top a cluster of bell-shaped pendant flowers, surmounted by a tuft of bright green leaves. This is also a very variable species, and of its numerous forms the following are well worthy attention:—Sulphurine, buff; Orange Crown, orange-red; Rubra, red; and Aurora, a curious shade of bronzy-crimson.

HERBACEOUS FLOWERS FOR COMPETITION.

In reply to "Plantsman" (p. 28), one reason I have for objecting to the inclusion of Lilies in hardy herbaceous collections is that in most cases they are grown in pots and flowered under glass. All those mentioned by "Plantsman," I am aware are good and quite hardy, doing well in most seasons out of doors. This also holds good for Lilium auratum, L. Harrisii, etc., often seen in hardy collections; but who can tell whether they have been treated as pot plants or cut from the open border? True they can be grown in the open, and with a covering of glass or tiffany can be tolerably well represented, and may be as clean and well grown as those flowered in pots under glass. It is annoying to say the least of it, when one sees fine heads of L. auratum, L. Harrisii, and many of the varieties mentioned by "Plantsman" doing duty in stands of hardy herbaceous flowers, when it is perfectly well known they have been flowered under glass. Instances of this are for ever cropping up where Lilies are allowed in this sort of competition, and I certainly think those societies do well who exclude them for the above reason. They should certainly not get the cold shoulder altogether but should get a class to themselves as they are well worthy of encouragement whether grown indoors or in the open border.—*Coila.*

VIOLAS.

We have been much interested in the report of the "Viola Conference" and other matters in The Gardening World respecting these very beautiful and useful bedding plants, and are much pleased with the revived interest that is being taken in them. Since the time that they were so prominently brought into notice by the liberal use made of them in the spring gardening so ably carried out many years back at Cliveden, the interest in them has ebbed and flowed like the fashions of ladies' bonnets, and the only explanation that can be given as to why they have apparently fallen into the background in popular favour several times during the last thirty or forty years is to assign it to a mere freak of fashion. They certainly have not decreased in either beauty or usefulness. Some twenty-five or more years since they were frequently shown in baskets in the miscellaneous groups at the large London shows, and always attracted a good deal of attention. This is by far the best way of exhibiting them, and with ordinary care in lifting them and placing them on a bed of damp moss at the bottom of the baskets they can be packed closely, and present a mass of flower equal to any seen in a bed at any time. We have made the same baskets do duty at several shows in succession, and this plan gives the public a fair chance of seeing the habit of any particular variety exhibited. Their value as bedding plants consists in their freedom of flowering more than in the size of individual blooms; and we maintain that showing the plants in flower, rather than single blooms or any arrangement of them, either in bunches or sprays, is the thing that the Viola Society should encourage.

It is a notable fact that among our cultivated flowers there are in all sections a few that come to the front and hold their position in public favour. This is notably the case among Roses. Look at Gloire de Dijon and General Jacqueminot, which came out in the same year; and among Violas the same rule holds good. For instance, Bluebell, one of the earlier of the tufted Pansies as some delight to call them, is still popular and possibly as largely grown as any.

There is one cultural point we insist upon in our own practice, which many we believe neglect; that is the constant removal of all seed vessels. Picking all withering flowers off is the best plan, as it makes things doubly sure. This promotes continuous flowering, and is especially desirable during a dry season. We raise a fresh stock from cuttings every autumn, finding it gives better results than dividing the old plants, and prefer autumn planting when it is possible to carry it out. Last autumn we planted beds of them over Hyacinths, with an edging of Crocus, and owing to the mild open winter there has rarely been a time from then unto the present moment when these beds were flowerless; whilst all through the spring and summer, till dashed about lately by the heavy rains, they have been a mass of colour. True, during the hot dry weather they were well watered, but then nothing would do with us unless it received some amount of attention in the same respect. With a little management they can be made to do almost anywhere, although a rich moist soil is the most suitable, and like almost everything else in the hardy flower garden they like generous treatment. Those having to do with light sandy soil should, if possible, give them some turfy loam and well-decomposed cow manure. Very heavy soils may be made more suitable by the addition of decayed stable manure and a good dressing of coarse sand or road drift. They are rarely troubled with insect pests above ground, but wireworm is in some places troublesome. These should be trapped with pieces of Carrot on a short stick inserted just below the surface. This will draw the wireworm from the plants, when they can easily be found and destroyed by lifting the bait out of the ground. The stick marks the position of the bait and serves as a handle to it.

There is at present a large number of varieties to choose from. Those who wish to take up the cultivation of them will do well to visit some establishment where they are grown and choose for themselves. We think, owing to want of interest in them by the gardening fraternity, many really good and beautiful things have been lost to cultivation. We well remember seeing Mr. Grey's varieties at the Eglington Castle—some of them very beautiful—over twenty years back, and think that with few exceptions they are lost. The Scotch climate is certainly more favourably to them in the general run of seasons, but with ordinary care and trouble they can be made to do equally as well in the south, as has been amply demonstrated over and over again.—*W. B. G.*

USE AND ABUSE OF THE PRUNING KNIFE.

This instrument in the hands of a careful and observant operator may be very useful, and doubtless is indispensable to successful culture; but on the other hand, what an expensive article it is when used by the thoughtless and ignorant, like George Washington, who, as I remember reading in my school books, used his hatchet on his fathers trees simply for the sake of cutting and with equally disastrous results. How many crops might not be saved and valuable food procured by a few minutes reflection? But it seems that some folks with a pair of secateurs or a knife, must clip, clip, clip, indiscriminately, without a thought or a look at Nature's wonderful way of working. As an instance, a gentleman, wishing to make his garden profitable (and he had every advantage a well-drained loamy soil could give him), planted about eight or nine years ago, a number of standard Apples, Plums, and Pears in variety. Of course they grew luxuriantly. Each autumn and winter they were all carefully pruned, the stronger the growth the harder they were cut. Each year found them thicker with twigs (very useful pot flower stakes) and leaves, but very little fruit. About three years ago the garden changed owners, and in the winter of '94, when I took charge of the garden, the knife had done its work. Take a stout twig and a blunt knife and make a cut upwards obliquely, at the same time bending the twig; that portion below the knife will split three or four times. Such was the state of these trees when I first made their acquaintance, with good patches of American blight, with their swollen, knobby sores festering the old wounds on the Apples and Pears at any rate.

The Plums had been treated exactly as the Apples and Pears, and the first summer growths, 4 ft., 5 ft., and 6 ft. long were made and very little or no fruit. The two following winters I simply thinned out the growth from the centre of the trees, not too hard the first year, and admitted air and light, taking out all weak and useless growth, also branches that crossed and intertwined or pointed towards the centre of the tree, allowing the strongest shoots to remain their full length. At the same time I had a trench dug around the tree about 2 ft. deep and 3 ft. 6 in. away from the stem.

As a result of such treatment the trees are this year almost without exception heavily laden with fine fruit, particularly Victoria and Gisborne's Plums, indeed, so much so that I was obliged to support the branches, many that I could not prop in time, breaking down. Indeed, even now after the fruit is gathered, the trees, instead of being as formerly with branches and twigs erect, have assumed quite a pendulous appearance. It appears very plain that had the original planter of those Plum trees kept his knife in his pocket, they would not have required nine years to perfect a crop of fruit.—*A. P.*

MILLFIELD NURSERY.

Probably the most of our readers have never heard of the Millfield Nursery, but like the Dyson's Lane Nurseries, it belongs to Mr. H. B. May, well known as a fern cultivator of the first order. The Millfield Nursery, within a mile of the Dyson's Lane establishment, was originally started for the purpose of fruit growing, and that is its leading feature yet, but an overflow from the other place has found its way here.

We passed through the vineries recently and found that the Gros Colman grape was the most popular, house after house being filled with it. There was no preparation of soil by the introduction of fresh material for the vines, which were simply planted in the natural soil, a good brick earth of a reddish colour. It is very fertile judging from the appearance of the crop. Two bunches are allowed upon each lateral; but as the shoulders are taken off at the time of thinning, the bunches are moderate in size, and average about 1½ lb. each. This is done for appearance sake in packing the bunches, which must all be of uniform outline. This is the third year of cropping, and the vines bear a heavy crop though not overloaded. The same conditions prevailed in four other vineries we passed through, the chief difference being a week or two between the stages of maturity of the grapes in each respective case. There would be something between 1½ tons and 2 tons of fruit in each house, no mean harvest indeed. The fifth house had heavier bunches, if anything, than the rest, the vines evidently having made more progress since planting.

From thence we passed into a Muscat house fruiting for the first time, and bearing heavy bunches on the lower half of the rods, one or two being allowed to each lateral. Next to this came a mixed house in which were three rods of Alicante, two of Gros Colman and the rest Muscat of Alexandria of two seasons growth, and bearing some bunches on the current season's leading shoots. Alongside of this was a house of Tomato Chemin, bearing a heavy crop of fruit, being harvested as it ripened. By the side of this was a houseful of young plants 2 ft. to 3ft. high for a succession.

Roses form an item at the Millfield Nursery, and we entered a house containing Tea Roses 8 ft. to 9 ft. high, and grown in large 32-size pots. Amongst many others, we noted well-grown samples of Climbing Niphetos, Celine Forestier, Maréchal Niel, Crimson Rambler, etc. Very beautiful were something like 2,000 to 3,000 plants of Ampelopsis Veitchi, grown in 48-sized pots,and all neatly trained to stakes of one height. While wending our way through structures of various kinds we had evidence of the value of Tomatos, for they occupied nine long double-light frames, and were fruiting well. Here were McGregor's seedling and some crosses effected with The Conference by which heavier cropping sorts were obtained.

Ferns are largely grown here of the more common and useful market kinds. The structures in which these are grown are low, but the pathway is deeply sunk in the ground thus affording facilities for the workmen attending to the plants, and at the same time making it an easier matter to maintain a moist atmosphere in the house. Here we observed a houseful of Cyrtomium falcatum in 48-sized pots, consisting of capitally grown stuff. The freest of the forms of Pteris grown for market is the new P. Wimsettii, raised from spores and now in 48's, the regular market size. It is a beautiful compact habited Fern with peculiarly cut fronds of a leathery character. There was a houseful of it, for it finds a ready sale, and is particularly useful for decorative purposes. A third house was occupied with Polypodium aureum and Pteris tremula; a fourth with Pteris cretica albo-lineata, and P. c. cristata, both standard varieties for market work; a fifth with Adiantum cuneatum, and A. elegans, notable for its dwarf habit; and a sixth house with Maidenhair Fern mixed with some other kinds for the sake of variety. Pteris cretica major, P. c. albo-lineata, and P. c. cristata, were the varieties used in the making of this pleasing combination of two Ferns in one pot.

Roses again asserted their rights, for we came upon a house full of Crimson Rambler in 24-sized pots, making fine specimens. Here also were some bush Roses in pots. Rosa Fortunei was accommodated in another house in company with a collection of Tea Roses in 24, 32 and 48-sized pots according to their age and size. Crimson Rambler and Teas in 32-sized pots monopolised another structure. Close by, a fine collection of variegated and green Ivies in 60-sized pots, shared the space with small Roses in 48's.

Near the propagating pit was a houseful of Adiantum elegans, and Pteris in splendid condition, especially the first-named which is a beautiful and graceful Maidenhair, when seen in perfection. A fine lot of Polypodium aureum in 48-size pots, held their own in a house close by. Each plant of all the sorts above named constitutes a specimen in itself when grown to that perfection which characterises Mr. May's culture with this useful class of plants. In the propagating pits we noted the cradle or nursery where the baby Ferns are reared. The earliest visible stages consist of green patches having little in common with the appearance of an adult Fern. These sporelings or seedlings as many would call them, are next "patched" out in boxes, which then present the appearance of something green and insignificant set out at regular distances all over the boxes. The prothalli (for that is the technical name of the young plants) are afterwards singled out and placed in thumb pots, after they have thrown up a few tiny fronds that now bear some resemblance to the parents. In other pits close by the same varieties of Ferns may be seen in larger pots into which they have been placed by stages as they advance in growth. The smaller sizes are spoken of as store pots, and sometimes the younger ones not yet potted off are sold in what are termed store boxes. In any case many Ferns are sold while yet quite small, and are put to a great variety of decorative purposes, for they are very ornamental long before they attain anything like their full size.

In the open air there were plantations of various Pelargoniums, both zonal, variegated, bronze and tricolors. Of the latter class, Masterpiece is a very beautiful variety. They were being grown for the purpose of stock from whence to get cuttings. Some sixty to seventy varieties of Clematis were plunged in pots out of doors, including C. Jackmanni and C. J. superba, with much darker flowers. The beautiful C. indivisa lobata was grown in quantity. All these varieties of Clematis are propagated here, there being a large stock of C. Vitalba, for the purpose of getting roots on which to graft the choice, named, garden raised improved sorts.

PRESTON AND FULWOOD HORTICULTURAL SOCIETY.

About a score of the members of this Society, at the invitation of Mr. Imighton, paid a visit to his Nursery at Walton-le-Dale on the 3rd inst., mainly to inspect the collection of Sunflowers, but as a matter of course, the ranges of glass houses were traversed, which contained subjects suitable for furnishing and supplying the shop in Church Street, Preston, with cut flowers.

The number of varieties of Sunflowers was about twenty-four, including one plant of a seedling that promises to be a good thing. After these were examined, other portions of the grounds were walked over and when we came to the fruit trees a stand was made in front of Gold Medal Apple tree sent out from this Nursery. This was the original tree. The variety is usually prolific, and all the trees, even maidens, carry a heavy crop this year. The fruit is large and not unlike Grenadier, but the growth is quite distinct, being short jointed and sturdy, whilst Grenadier is weakly and sprawly a great drawback to any Apple or Pear in this part, where in nine seasons out of ten we experience gales of more or less severity before the fruit is fit to gather, that force it from the trees.

This is the third outing the members have made this season, the first being to Howick House, near Preston, to inspect the tuberous Begonias, once famous for its collections of hardwooded exhibition plants in Mr. Shuttleworth's days, and for its collection of Orchids when Mr. Wrigley was in possession. Now, the present owner, Mr. Charnley, of Preston, has made it famous for its collection of tuberous Begonias, by getting together all the best named varieties, as well as packets of seeds from those firms who have made the Begonia a speciality.

The next visit was made to the Earl of Lathom's, Lathom House, Ormskirk, to see the carpet bedding, which is not equalled in the north. It was Mr. Hathway, the late gardener's fame in this direction that commended him to the notice of the Southport Corporation, which has engaged him as superintendent of their parks and gardens. Mr. Ashton, the present gardener, is likely to keep up the reputation of Lathom; and those who are in the habit of paying the place casual visits declare that the carpet bedding and the gardens on the whole never looked better. The appearance of the Chrysanthemums surprised many of the visitors, on account of their dwarf, sturdy habit, and rude health. Mr. Ashton cuts his plants back, and informed the visitors he could have exhibition blooms that way.—*Cor.*

LILY OF THE VALLEY.

Mr. T. Jannock, of Lily of the Valley fame, is undoubtedly in the front rank of the cultivators of this charming flower, and hence the paper he gave on forcing it, at the Royal Horticultural Society's meeting on August 25th, could not fail to be of a most practical nature. Dr. Masters occupied the chair, whilst, in the absence of the essayist, the paper was read by Mr. J. Weathers.

In his opening remarks Mr. Jannock said that half a century ago Lilies of the Valley were grown for forcing purposes in the neighbourhood of Hamburg. In 1859 no nurseryman grew more than 60,000 crowns annually. In 1871-72 a great increase was made, and at the present time thousands of acres in England and on the Continent were devoted to the culture of this popular Lily.

It was grown in nearly all sorts of soils, although it preferred a light sandy one. It does not do well in cold clayey soil, and the crowns grown in such a medium do not force well. A light position sheltered to the east and north, and open to the south and west was the most satisfactory.

The ground must be prepared by a thorough digging and manuring. Whatever manure was used it must be well decomposed; that coming from an old hotbed answered admirably. He preferred planting in autumn in rows 7 in. or 8 in. apart, 1 in. being allowed between the crowns in the rows. Too deep planting should be avoided, the crowns only being buried so that their tops were level with the surface of the soil. A path should be made between every eight rows, so as to facilitate the giving of the requisite attention. A good mulching of cow manure or well-rotted stable manure should be given after planting, and during the following season of growth careful attention must be paid to watering.

Crowns usually need three full seasons, or more properly three and a half, before they bloom, but occasionally by high cultivation they may be got to flower in two years from the time of planting. Under ordinary circumstances they then bloomed every alternate year afterwards.

Crowns for forcing must of necessity be well ripened, and it was also very important that they should have a rest, although it might be but a short one before starting them. They should be potted up in October and November. For a 5-in. pot, twelve good crowns would be sufficient. Those who force Lily of the Valley on a large scale use boxes, allow- 1 in. between the crowns.

After potting, the pots or boxes should be plunged in coconut fibre, the crowns covered with a light layer of moss, and kept from the light. They should be given a temperature of 80° Fahr. to commence with. This might be increased to 95° after the lapse of the first fortnight. The temperature subsequently should never rise above 100° or sink below 80°. As soon as the growths are 2 in. in height, the moss should be removed. When the lower bells begin to open, the plants may be taken to a cooler house and syringing must be discontinued.

After Christmas has turned, continued Mr. Jannock, forcing becomes very much simplified. Warmth and moisture were the two most important items in forcing Lily of the Valley. The plants, moreover, should never be allowed to get dry. It was not generally known that forced Lilies would bear a good deal, and might easily be sent by post or rail without their being injured in the least. He, the essayist, had sent some by post to Pietermaritzburg, and in spite of the length of the journey they arrived in splendid condition.

With regard to varieties he had found the Berlin much better than the Dutch or Hamburg varieties for early work.

Mr. Jannock concluded by remarking upon the practice of retarding the crowns. This, he said, was as yet in its infancy, and it would be as well if its consideration was deferred to a future essay.

Dr. Masters, on rising to propose a vote of thanks to Mr. Jannock, spoke of the practical value of the paper as coming from a man who was, perhaps, the foremost in the cultivation of the Lily of the Valley. Although the forcing of this pretty flower was such an elaborate process, it might encourage some of his hearers to know that it might be grown with the best of results in a London back garden.

Mr. John Weathers mentioned a case that had come under his own notice of an old iron cistern that had been utilised for forcing Lily of the Valley. It was divided into two compartments by an iron plate; the lower half was filled with water, the crowns being placed in the upper compartment. An oil lamp was kept burning beneath it, and the whole affair acted well.

GARDENING MISCELLANY.

DERIVATION OF SCUTELLARIA.

It would have been more satisfactory to me if the editor had added a note to the letter of *C. B. G.*, stating that the blunder was one of the printers' making; but the correspondence may well close.—*J. C. Stogdon.*

PENTSTEMON JEAN MACE.

This is without doubt the finest scarlet Pentstemon I have yet seen; during the past few weeks it has been the gayest bit of colour in the garden. It is a bright scarlet self, with pure white throat; the flowers are of finest form, large and finely arranged on tall, well-built spikes. For massing it has few equals, and the spikes individually are also good for competition. —*Coila.*

CARNATIONS.

Among the most beautiful and uncommon Carnations which we have examined this season is Viscountess Melville, of fashionable colour, bright crushed-strawberry. The substance is firm, and the flower large lasting late into the season. This appears to be one of the best which Messrs. Laing and Mather, of Kelso have raised, and we hope it is one of the hardiest of its class It is of great advantage to amateurs and others, who have not much glass accommodation, to have hardy Carnations which can be rooted and planted out during autumn in well prepared soil. Many of the best sorts now in cultivation are in better condition when planted out in autumn, than those coddled in pots and planted out during April. That does not mean, however, that the great numbers which are kept in pots during winter are "coddled."—*M. Temple, Carron.*

HAMMERSMITH HORTICULTURAL SOCIETY.

This society made what might be termed a new departure recently by visiting the famous "Home of Flowers," at Swanley and the extensive seed grounds at Eynsford, in the occupation of Messrs H. Cannell & Sons. The visitors saw much of interest and beauty at both places. A few notes on some of the principal subjects observed may be of interest to your readers.

At Swanley the zonal Pelargoniums were a great feature, so freely flowered were the plants, which were represented by all the best varieties in cultivation. From the system of culture pursued here with regard to these plants, they would appear to be perpetual bloomers, for, at whatever period of the year a visit may be paid to Swanley, these useful decorative plants are always seen in fine flower. Several houses were devoted to double and single flowered Begonias, a great speciality of the firm; and what a wonderful range of colour they present us with.

The dwarf French Cannas deserve a passing note, with their rich Gladiolus-like flowers. The following are the names of a few of the best noted:—Queen Charlotte, Aurore, Conquerant, Duchess of York,

and Egandale. A house devoted to the culture of Cacti attracted attention by reason of its curious and beautiful occupants.

In the outside department, the Dahlias (in all the sections) were presenting masses of colour; the varieties, too, grown are only of the most select character. How very effective are the Cactus shaped varieties. Oporto Tait is considered to be the finest scarlet yet sent out.

An immense stock of Chrysanthemums was noted, some 6,000 plants, in fine health, promising well for future floral results. The selection of hardy herbaceous plants grown by the firm is a good one. Much more might be said with regard to Swanley did space permit. I therefore pass on to

EYNSFORD,

where a wonderful display of China Asters was observed. They were a gorgeous and delightful sight, representing as they did all the most noteworthy varieties in commerce, and occupying some three acres of ground. The display of hardy flowers (annuals, etc.), generally, has been a good one here this year. Owing, however, to the hot dry weather experienced, the flowering season has not been so prolonged as usual. Some fine beds of Onions were noticed, including such sterling sorts as Cranston's Excelsior, Ailsa Craig, etc.

Altogether, the deputation from Hammersmith spent an enjoyable day by the courtesy of Messrs. H. Cannell & Sons, and to some the visit was of great educational value.—*One of the Visitors.*

LAW NOTICE.

UNSTAMPED MEASURES.

A prosecution of no small importance to market gardeners and the general public was commenced before the Brentford Justices on the 5th inst. Mr. Alfred Reffell, Market Gardener, Staines, and of Brentford Market, was summoned under the Weights and Measures Acts, at the instance of Inspector W. Tyler, for using a measure that was not duly stamped. According to the evidence, John Mason asked defendant's salesman at the Brentford Market, the price of Peas per bushel, and the salesman said "two shillings." Mason bought a bushel of Peas, which were tipped into his cart. Thereupon the inspector, who was standing by, seized the bushel basket as an unstamped measure, and therefore illegal. The inspector gave Mr. Reffell's salesman a chance to get a duly stamped measure and test the bushel basket he had used, or to come to the office and get it stamped; but such a measure could not be found in the market nor was the basket taken to the office to be stamped even after the expiry of a month. Hence these proceedings.

The case came on for a second hearing on the 12th inst, when Alfred Reffell appeared to an adjourned summons, taken out by Mr. Walter Tyler, inspector under the Weights and Measures Act for West Middlesex, for having an unstamped measure in his possession. Mr. Stephen Woodbridge, solicitor, appeared on behalf of the inspector, and Mr. Biron, barrister, represented the defendant. For the defence, Mr. Biron contended that the basket in which the Peas were placed was not a measure, but simply used as an article of "conveyance," and, therefore, not liable to be stamped. It was known in the trade by the three different names of sieve, bushel and basket; but that the term "bushel" never implied that the article was used as a measure.

Mr. Reffell on the first hearing of the case added to the evidence that it was the custom of the trade not to sell by measure, but that buyers took the baskets of fruit as they saw them. Mr. William Poupart, of Twickenham, and president of the Market Gardeners', Nurserymen and Farmers' Association said that the baskets were not known as measures in the trade, but that any buyer in the wholesale "line" had his Potatos and other produce served to him in such baskets, and never thought of asking to have the produce measured. Fruit and vegetables were sold by parcel and not by measure. The baskets could not be used as measures, because they were always varying in size according to age, the effect of the weather and bad usage. He considered it would ruin the trade if these baskets had to be stamped. To each of these several statements brought forward as evidence, the chairman of the bench replied that the customs pursued were illegal. John Aspbee, superintendent of Covent Garden Market, and other witnesses gave similar evidence. After a lengthy argument between Mr. Biron, and Mr. Montague Sharpe, the Chairman of the Bench, Mr. Sharpe, said that the Bench were unanimous in their opinion that if a bushel basket was used in any transaction, it must be denominated as an Imperial measure, and must, therefore, be stamped. The defendant would be fined 20s., and have to pay £3 10s. costs. The bench would be willing to grant a case, because they considered the point so important that it would be advisable to have it settled by a higher court.

SOCIETIES.

GLASGOW SHOW.

THE Autumn Show of the Glasgow and West of Scotland Horticultural Society was, as usual, held in St. Andrew's Halls on Wednesday and Thursday, the 2nd and 3rd inst. Mr. J. G. A, Baird, M.P., formally declared the exhibition open. Mr. John Coats, who is now the Secretary and Treasurer, is to be congratulated upon the *tout ensemble* of a well managed exhibition. Mr. Baird, in his opening remarks, demurred to the practice of showing Pansies and Carnations with paper collars, and considered that these blooms showed themselves to much greater advantage if, instead of being decapitated, they were shown in a proper receptacle either of glass or pot-ware.

Generally the season has been a favourable one for plants and vegetables, and of this the exhibits furnished ample evidence. Plants arranged for effect were considered best shown by Mr. H. Millar, gardener at Auchenraith, Bothwell, who had laid levy upon some excellent Crotons, Eulalia, Grasses, and Pancratiums. Mr. David Wilson Westmount was first with a very excellent lot of Orchids, whilst in the classes for bouquets and sprays, Mr. Mackintyre, of Helensburgh was adjudged first honours. The herbaceous flowers made a very strong show, and were in themselves an exceedingly fine feature. In the fruit classes that well-known cultivator, Mr. John Leslie, of Pitcullen House, Perth, again carried all before him, his Grapes being fully up to his average form. In the class for the heaviest bunch his entry scaled 9 lb. Messrs. Austin and McAslan had with commendable forethought presented for competition a Silver Cup for the best collection of vegetables. This naturally elicited a very keen competition, and after some difficulty in the adjudication, owing to the strong entries, the trophy was eventually carried by Mr. John Gray, of Uddington. The same firm also materially assisted in the interior display by a very effective decoration of the platform of the large hall, in which excellent use had been made in the tasteful arrangement of extra plants, Ferns, Lilies, Crotons, grasses of all kinds, interspersed with Begonias and Liliums in flower, flanked on either side with a fine group of bedding Begonias, and supported in the distance with several Japanese Maples.

From Messrs. J. and R. Thyne, Great Western Nurseries, Glasgow, came a very striking contribution, which was, perhaps, one of the finest pieces of grouping ever staged by this firm. Here were to be found fine Crotons and Dracaenas with a ground work of Ferns, and an effective edging of variegated Panicum.

Messrs. Smith & Simons showed in a well designed group—Hydrangeas, Pancratiums, Orchids, and Scarborough Lilies in flower.

Mr. T. S. Ware, of Hale Farm Nurseries, Tottenham, staged a large collection of tuberous Begonias, for which he has gained so many distinctions during the past few years.

Messrs. D. and W. Buchanan, of Kippen, showed as usual a tasteful exhibit, in which their vine leaves, Grapes, and Tomatos were prominent.

Mr. M. Cuthbertson, of Rothesay, showed hardy flowers and vegetables, amongst the former being his two new Violas—Mrs. R. Kennedy Mitchell and Sweetness.

Messrs. James Cocker & Sons, Aberdeen, also showed herbaceous flowers and early Chrysanthemums, whilst Mr. John Smellie, Busby, came in with a variety of blooms, including the seedling Viola, "Lizzie Paul." Mr. John Forbes, of Hawick, came with his favoured Carnation, "Yuletide."

Messrs. Dobbie & Co., Rothesay, made a special feature of Dahlias, which in themselves formed quite a show of their own. Singles, doubles, Cactus, and, in fact, all the newest varieties were in evidence on their stand; whilst Mr. Matthew Campbell, of High Blantyre, also showed a similarly fine exhibit in the same section, including the varieties with which he obtained so many first prizes at Shrewsbury a fortnight since. As usual the Ichthemic Guano Co. were there.

Messrs. W. Paterson & Co., of Charing Cross, showed a chaste and delicate arrangement of the florists' art, in bouquets, shower and otherwise, and some beautiful devices—all of which contributed to the success of the show.

MILTON AND SITTINGBOURNE HORTICULTURAL.

THE ninth annual show of flowers, fruit, and vegetables, of the Milton and Sittingbourne Horticultural Society, was held in the Board Schools, Milton, Kent, on the 2nd and 3rd inst. It was declared by competent judges to be one of the finest displays of horticultural produce ever seen in Kent, and certainly the finest in that part. Hardy flowers, but particularly vegetables, were splendid, and included such things as Cauliflowers, Onions, Potatos, Marrows, Beans, Tomatos, Turnips, Carrots, and Beet, all in magnificent condition.

The burning and most exciting question, however, which the judges had to settle, was which of the competing societies had earned the Kent Champion Belt, offered by Messrs. H. Cannell & Sons, Swanley, Kent. The belt accompanied by substantial money prizes, forms a competition which has already existed some years, and was instituted by the well-known Swanley firm. For a time the belt was retained in West Kent, but the Milton Society had an eye upon it, and made a great effort to secure the same, and succeeded the second time. Then the Rodmersham Society secured it in the following year for their own parish. The Miltonians were dissatisfied and carried the belt back again last year, in the face of great and exciting competition as recorded in these pages. The struggle was as keen as ever on the 2nd inst., when the Rodmersham Society was again victorious, and now holds the Champion Belt for the year.

These competitions were originally instituted with the object of promoting the higher cultivation of vegetables by amateur and cottage gardeners. The scope of the exhibition was greatly enlarged last year, when Mr. H. Cannell, at last year's exhibition, announced that the conditions of the competition would be altered for the future, and that fruit and flowers would be added to the vegetables. From a spectacular point of view there has, therefore, been an immense improvement, and the range of horticultural skill has been greatly supplemented. There were ten entries for this particular competition, on the present occasion, from the following societies:—Milton, Ash-next-Sandwich, Chatham, Eynsford, Gillingham and New Brompton, Ightham, Milsted, Murston, Rodmersham (the winner of the belt), and Rochester and Strood. The competition was for ten varieties of vegetables, six dishes of hardy fruit, and a stand of annuals or other hardy flowers. The Milton Society had the best display of flowers; but the Rodmersham Society decidedly came to the front for fruit, The Apples and Pears were well coloured and properly matured. The Cauliflowers, Onions, Turnips, Marrows, Beans, Tomatos, Carrots, and Beet, were particularly fine. The Milton Society was not very far behind, however, for the Potatos shown by it were considered the finest in the exhibition. The Onions shown by these two societies were considered the finest ever seen in Kent.

Amongst other exhibits there was a great improvement in quality over that of former years. Mr. J. Butler, of Sittingbourne, had a grand stand of double Dahlias which readily secured for him the first award. Mr. A. Judges, gardener to Lord Teynham, Lynsted, and an old Dahlia grower was second. This class was open to nurserymen and gardeners. In the gardeners' and amateurs' classes, Mr. J. Fountain had the best China Asters in good competition. Mr. W. Champ, gardener to F. C. Lowe, Bobbing, had the best Roses. Mr. W. Saunders, gardener to A. J. Thomas, Esq., Rodmersham, had the best three dishes of Grapes and the best four dishes of fruit. Rodmersham sent the best seven vegetables; but Mr. E. Chopping, Milton, showed the best six and four dishes of Potatos. Messrs. J. Carter & Co., offered some special prizes, which were taken by Mr. T. Mills, and Mr. G. Lurcock in the order named.

BIRKENHEAD SHOW.

A TWO days' exhibition was held on the 2nd and 3rd inst., in connection with the Agricultural Show. The entries numbered over 900, a considerable increase on former years. The exhibits were fully up to the usual form, the fruit (especially Grapes) and cut flowers being highly creditable.

For five foliage and five flowering plants, W. H. Watts, Esq. (gardener, Mr. J. Bracegirdle) staged the premier lot, the pick being Kentia fosteriana, K.

Canterburyana, Ixora Morceii, Clerodendron halfourianum, Allamanda hendersonii, Croton Queen Victoria, Erica retorta major, etc. For a group arranged for effect, Mr. E. Bradshaw was to the fore with a clean-looking group, W. H. Watts, Esq., being second with a greater variety of flowers. For three stove or greenhouse plants in flower, distinct, G. G. Webster, Esq , was to the fore ; and for a similar class for foliage plants, Mrs. Banner (gardener, Mr. R. Pinnington) secured the premier award. For a single greenhouse plant, G. Webster, Esq., was first ; single Palm, W. Laird, Esq. ; stove plant, G. Webster, Esq., with a well flowered Bouvardia ; one foliage plant, Mrs. Banner, with a well grown Cycas revoluta ; three Ferns, W. Laird, Esq., was well in front with bright specimens 5 ft. in diameter ; single Fern, Thos. Brocklebank, Esq., scored with Adiantum farleyense. Mrs. Banner was to the fore for one Orchid and also for the three ; but they were unnamed, and this failing was noticeable in nearly all cases and should be looked after by the Committee.

The first prize-winners for Bouquets and sprays were S. Johnson, Esq., A. J. Stanley, Esq., C. J. Procter, Esq., and J. Moore, Esq. For Roses, J. Lancelotte, Esq., and O. Roberts ,Esq., led the way. For Dahlias, J. H. Howell, Esq., E. M. Ratcliffe, Esq., C. Oldred, Esq., and J. Clarke, Esq., took the leading prizes. G. Webster, Esq., and Mrs. Banner, took first prizes for cut flowers of stove and greenhouse plants ; whilst Messrs. Littlemore & Moore, and L. Brown, Esq., were leading winners for outside grown cut flowers.

Fruit.—For six distinct kinds Messrs. Banner took the lead with good black and white Grapes, Melon, Peaches, Pears, Plums, and Figs. F. D. Leyland, Esq. (gardener, J. J. Stephenson), Woolton Hall, was a good second. For six kinds of hardy fruits, E. H. Harrison, Esq., was to the fore. For two bunches Black Hamburghs, Mrs. Paterson (gardener, Mr. T. Ferguson), was adjudged first ; and for any other black, the same exhibitor won with Madresfield Court. For two bunches of Muscats, — Hudson, Esq. (gardener, Mr. R. Breeze), won with heavy bunches ; for any other white, Mrs. Banner won with Buckland Sweetwater ; for six Peaches, J. H. Ismay, Esq. ; six Nectarines, Mrs. Banner ; one Melon, scarlet-fleshed, Mrs. Banner ; and for a green-fleshed variety, C. J. Procter, Esq. In the class for six Lord Suffield Apples, F. D. Leyland, Esq., had the best out of a strong competition. The same exhibitor won the twelve and six red Tomatos, Messrs. Littlemore & Moore, and C. Oldham, Esq., being the winners for the yellow varieties.

For twelve kinds of vegetables, C. MacIver, Esq., staged the best ; and for eight kinds, C. J. Procter, Esq., was foremost. Henry Middlehurst, Esq., Liverpool, was awarded a Gold Medal for an excellent display of roots, flowers, bulbs, etc. Messrs. Dicksons, Chester, staged a large table of plants and cut flowers of high merit.

STIRLING HORTICULTURAL.

The annual exhibition of the Stirling Horticultural Society was held in the Albert Hall on 3rd and 4th inst., and was opened by W. H. Dobie, Esq., of Dollarbeg. The entries were rather more numerous than last year, there being well on for 1,100. The display all over was considered the finest ever staged under the auspices of the society. Some competent critics who had seen the show in the western city, were observing that for *quality*, Stirling carried off the palm. Among the chief prize-takers were Messrs. Thos. Lunt, Keir ; J. Carmichael, Touch ; W. Rutherford, Airthrey Castle ; J. Waldie, Dollarbeg, &c. There was a musical fête both evenings, and the drawings at the door were fully larger than last year.

Messrs. James Cocker & Sons, Aberdeen, took the premier award (a Gold Medal) for the best thirty-six Roses in at least twelve varieties, with twelve spikes of Gladioli in at least six varieties. The Rose blooms were in grand form. The same firm has won this prize on former occasions. Mr. T. Lunt, Keir, took the first prizes for six stove and greenhouse plants and one specimen. Mr. A. M'Millan, Dunmore, took the lead for stove and greenhouse Ferns ; but Mr. J. Carmichael, Touch, had the best British Ferns. The latter was also to the fore for table plants. Mr. W. Rutherford, Airthrey, took the leading prizes for Black Hamburgh, Muscat, and any other white Grape, for one Melon, six Peaches, and six Apricots. Mr. John Waldie, Dollarbeg, showed the best single bunch each of black and white Grapes. Mr. T. Lunt was awarded the first prize for a group of plants arranged for effect. Mr. W. Rutherford exhibited the best four bunches of Grapes, two varieties. Mr. J. Waldie showed the best collection of ten kinds of vegetables. This and the previous two were extra prizes. Muscat Grapes, Apples and Plums were shown in a highly commendable condition. There was also a large and splendid display of vegetables, following the fine season. Dahlias, Gladioli, China Asters, Marigolds and Pansies, were amongst the finest of the cut flowers. Messrs. W. Drummond & Sons, Stirling, had a fine exhibit of cut flowers and plants. A similar exhibit was furnished by Messrs. Halley Bros., Perth.

EDINBURGH SHOW.

This report forms a part of what should have appeared last week, but by a strange and regretable mistake the copy was pinned to the report of another show and laid aside. A single word where that word should not have been led to the oversight.

Amongst the local nurserymen none more consistently and loyally support these shows than Messrs. R. B. Laird & Sons. On this occasion this firm's resources were well displayed with regard to both outdoor and indoor plants. One of the outstanding features of the show was the well-arranged and highly-decorative circular table they exhibited. This method of showing stove and greenhouse plants is highly advantageous, especially in a place like the Waverley Market, where from the galleries the effect of grouping and colour are seen and can be studied without interruption. The plants were arranged in groups, that is, each species or variety was placed by itself. We particularly noticed the fine Crotons with their superb colouring ; some rare Palms, such as Pritchardia grandis and Livistona rotundifolia ; and the Caladiums (some of them of the firm's own seedlings) which we have never seen better out of London. The Dracaenas were also worthy of being mentioned. The various groups were prettily and effectively relieved by fine grasses. The Dahlias exhibited by Messrs. Laird attracted a deal of attention. Cactus, pompon, and single varieties were well represented. The singles were specially noteworthy. For many years Messrs. Laird have devoted considerable trouble in raising a good strain of single Dahlias, and after seeing this exhibit we could see that they had succeeded. Amongst the seedlings they have some that are certain to be heard of next season. Messrs. Laird were, as usual, the greatest prizetakers in the nurserymen's competitive classes, their other exhibits, in addition to those already described, showing cultural ability of a high and painstaking order.

Messrs. Dobbie & Co., Florists to the Queen, Rothesay, occupied about 200 square feet with a superb collection of Dahlias, Asters, Marigolds, &c. Two hundred distinct varieties of Cactus, single Cactus, pompon and single Dahlias were shown in large sprays, and 100 blooms of show and fancy varieties. All the most recent introductions were represented, including their own new white Cactus variety "Miss Webster." Over 100 varieties of China Asters were set up from the firm's seed farm in Kent for the purpose of showing the strains there seeded. French, African and Scotch Marigolds were largely represented, and a fine collection of forty varieties of Potatos was arranged along one side of the table.

Mr. John Forbes, Buccleuch Nurseries, Hawick, had a very extensive stand of florists' flowers, &c. Hollyhocks were exceptionally well represented by a grand array of clean, healthy-looking spikes of handsome flowers. He is doing much to again popularise this truly grand decorative flower. Carnations were also here in fine variety considering the lateness of the season. We noticed Yule Tide, his new perpetual, much in evidence ; also Buccleuch Clove, which is now such a popular favourite. Herbaceous flowers were also well represented in great variety. Dahlias in all their sections were fine, also Marigolds, Phloxes, Pentstemons, &c., all leading specialities of the firm. East Lothian stocks in six varieties, were also in keeping with the reputation of Mr. Forbes in this line.

A most attractive bank of cut flowers was set up by Mr. Michael Cuthbertson, of the Public Park Nursery, Rothesay. This exhibit consisted of about 200 tubes of herbaceous flowers, many of them new and rare. A large number of new seedling Tritonias occupied the back row, the spikes of which were of immense size and brilliant colour. Some of the newer sorts of Montbretias were well shown, the double form of T. crosmiflora being very fine. Rayon d'Or, a large golden-yellow variety, with stout petals and well-opened flowers, is the best of this colour we have yet seen. Star of Fire is, as the name indicates, the brightest coloured variety. Perennial Sunflowers were well represented, including a beautiful new seedling (Daniel Dewar) with twisted petals like a Cactus Dahlia, a novelty which is sure to be much in demand. Other flowers worthy of special note on this table were Cuthbertson's strains of striped French Marigolds, Antirrhinums, grand new Phloxes, some with blooms nearly 2 in. across and of perfect form, and a fine collection of Lemoine's hardy Gladioli, making a specially fine exhibit. Mention should also be made of the exceedingly fine specimens of Cuthbertson's Golden Ball and Snowball Turnips which were shown on this table.

Mr. M. Campbell, Auchinraith, Blantyre, occupied a 20 ft. table with Cactus, pompon and other Dahlias now in the height of their season, and making bold bits of colour on the exhibition tables everywhere. He also had a fine display of Carnations which we were astonished to see holding their own so late in the season. Summer flowering Chrysanthemums, including the new single, hybrid varieties, formed an attractive feature of the display with their charming tints of colour.

Messrs. Cocker & Sons, Aberdeen, occupied their usual position on a 40 × 5 ft. table at the entrance, on which was displayed a fine collection of Roses, herbaceous flowers, Phloxes, &c. The group was beautifully and artistically arranged. Montbretias were finely shown here, and commanded a great deal of attention—many new and rare kinds being amongst them. Gladioli of sorts, Potentillas of sorts, Hyacinthus candicans, Scabiosa caucasica, and early flowering Chrysanthemums were well represented in this very interesting collection.

Second Notice.

A leading feature in the miscellaneous section was the very interesting exhibit staged by Mr, John Ross, of the Auldgirth Apiaries, Dumfrieshire. A comparatively new feature in every conceivable form was to be found on this stand. Honey in comb in sections, and in tastefully get up jars, to which Mr. Ross had attached the very fetching name of pure heather honey, and which as may well be imagined, appealed to the public taste, and the public purse in unmistakable fashion. The same exhibitor was the chief prize-taker at the recent Dumfries show, and we should like to see some of his exhibits in London. The usual luncheon took place at 4 o'clock, at the Royal British Hotel, where host Clark provided the tables with his customary good taste. Mr. David Laird occupied the chair with Mr. Morrison and Mr. Milne as croupiers. Amongst those present we noticed Messrs. Malcolm Dunn, J. Hunter (Lambton Castle), Sharp (Forgandenny), Hugh Dickson (Belfast), W. P. Laird (Dundee), Robert Laird, Jno. Methven, T. Brothers, Mackinnon, Moir, Earnock, Cocker (Aberdeen), Dewar (Glasgow Botanic Gardens), D. W. Thomson, David Murray, Henderson, Lieut. Ardgowan, Lieut. Kier, Messrs. Cairns, Moncur, Gilbert (Scotsman), Stubbs (Ipswich), and Mr. W. Young (secretary).

After the usual loyal toasts, during the second of which a telegram arrived announcing the success of H.R.H. the Prince of Wales in the race for the St. Leger, the toast of the "Lord Provost, Magistrates and Council of the City of Edinburgh" was proposed by Mr. Milne in his usual succinct and forcible style. He considered that the City prize won that day by Mr. Kirk was the Blue Ribband of the horticultural world north of the Tweed. Mr. James Ewart responded, and Mr. Hugh Dickson, of Belfast, in response to vociferous calls, also added a few words recalling the history and circumstances of the society since the days of 1854. At that time, the speaker said the custom was to hold two or three shows a year, which were necessarily individually small but which undoubtedly laid the foundation of greater things to come, as exemplified in their present show. He considered that this happy result was due solely to perseverance, and expressed the conviction that there was no getting away from the fact that the Edinburgh Show was the show after all. Mr. Dickson concluded by submitting the toast of "Success to the Royal Caledonian Horticultural

Society," which was honoured with three times three and responded to by the Chair. The toast of the "Judges and the Exhibitors" followed, after which the health of the worthy secretary Mr. W. Young was proposed and received with honours. The veteran of eighty-two summers rose to respond and was visibly affected by the warmth of his reception. In a few well chosen words Mr. Young thanked his audience for their appreciation of his service. Mr. Young (son of Mr. W. Young), of India also responded. Mr. John Metbven ably proposed the "Competitors" adding some interesting reminiscences of the early days of the society. As a continuation of Mr. Dickson's speech, speeches by Mr. Kirk, Mr. McKinnon, and Mr. Grieve, followed; and Mr. Buchanan proposed "The Press," which was responded to by Mr. Gilbert of the *Scotsman* newspaper, who in the course of his remarks said that whatever the local press had done, it must be remembered tbat the Society's exhibition in itself provided an excellent subject for the reporter to dilate upon; and that when they found the leading horticultural paper of the day sending a special representative to detail their doings, then the society might safely reckon that their exhibition was one of no ordinary importance. The "Health of the Chair and Croupiers," having been duly honoured, a most successful and enjoyable meeting was brought to a close.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Admission to Kew Gardens.—*James Milligan*: The customary method of ascertaining whether your views can be carried out is to write to Mr. George Nicholson, curator of the Royal Gardens, Kew, London. State the age and qualifications of the young gardener seeking admisssion, and give some idea of his experience, stating how long he has been in the situations you name. If there is any vacancy, and the young man is suitable, the curator would send a form to be filled up. In any case, you should write at once.

Lilium candidum failing.—*R. M.*: It might have been the soil or the season that caused your Lilies to go off just as they should have come into flower. This species is rather fastidious under unfavourable conditions in some gardens, while in others it grows like a weed. If the soil be heavy, then lift the bulbs at once before they commence growing again, and improve the soil by addition of leaf mould and light rich sandy soil in equal proportions. If the situation is exposed to too mucb sunshine wbereby the soil gets hot, then plant the bulbs amongst low growing sbrubs. Another point you should have ascertained when they first went bad was, whether, the Lilies were not suffering from disease.

Seaside Garden.—*E. J.*: Your situation must be exposed, otherwise there should be no difficulty in growing a great variety of showy flowering plants even close to the sea, provided other conditions are equal such as good soil and proper tillage. If tbe situation is exposed we should advise you to plant a hedge to give shelter. This hedge may be Tamarisk, or Euonymus japonicus, either green or variegated. The former is the most rapid grower. Fuschia Riccartoni, F. globosa, F. gracilis, F. macrostemma and various others may be planted against walls and trained up them. Shrubby New Zealand Veronicas also do well by the sea bank. Plant also Belladonna Lilies, Carnations, Eryngiums or Sea Hollies, Hollyhocks, Centranthus ruber various species of Mallow, including Tree Mallow, also Ten Weeks and Intermediate Stocks, &c.

Iris anglica and I. hispanica.—*Iris*: We know what you mean, but the above are incorrect names for the English Iris (I. xiphioides), and the Spanish Iris (I. Xiphium). They are bulbous Irises flowering in summer, and are very easy of cultivation. They grow and flower satisfactorily in soils of a varied character, but those that are of a light, rich, and well drained character will prove most satisfactory. Plant the bulbs in autumn in well prepared ground in an open though sheltered position. They must not on any account be under the shade or drip of trees. They are perfectly hardy, and sometimes thrive many years in tbe same position. It all depends on the character of the soil, which, if heavy, must be dug up or trenched afresh. The bulbs may be lifted when they die down, preparatory to trenching the soil. A better plan would be to select a fresh piece of ground for them each time you lift them. Tbere is no necessity for keeping the bulbs out of the soil longer than necessary to prepare the same.

Glut of Fruit.—*Thos. C. Steel*: They are mostly the smaller growers who are liable to glut the local markets, owing to the fact that they gather and send in all their fruit as it ripens without considering the state of the markets. Growers on a large scale are mostly always in regular touch with the markets, that is, they have a means of knowing, from day to day, or oftener, precisely the state of the markets and the demand, so that they can to a certain extent regulate the supply. Under the circumstances, we think it would be the better plan for you to write to the goods manager of the Great Eastern Railway Company at Liverpool Street, London, and state your case courteously. The Company in question is doing what it can for the benefit of the market gardeners and fruit growers along their system of rails, and, we believe, would put you on the right track.

Names of Plants.—*A. C.*: The Carnation is evidently Old Clove, but it bad lost its scent before we received it; the other is Tropaeolum lobbianum. —*W. A.*: 1, Oxa'is valdiviensis, not a Buttercup at all; 2, Artemisia vulgaris, a wild plant that must have got into the garden by means of seed.—*H. Henderson*: 1, Aster Amellus; 2, Aster diffusus horizontalis; 3, Impatiens Roylei.—*A. T.*: 1, Laelia elegans; 2, Dendrobium bracteatum; 3, Masdevallia tovarensis; 4, Oncidium incurvum.—*A. Watt*: 1, Lonicera sempervirens; 2, Fuchsia macrostemma; 3, Trachelium caeruleum; 4, Begonia sempervirens carminea gigantea; 5, Eupatorium odoratum.—*T. M.*: 1, Erica vagans; 2, Eccremocarpus scaber; 3, Symphoricarpus racemosus (the Snowberry); 4, Cotoneaster microphylla.

Names of Fruit.—*H. J. S.*: 1, Peach, quite decayed; 2, Nectarine, decayed; 3, Plum Victoria; 4, Apple Evagil; 5, Blenheim Orange.—*J. L.*: 1, not sent us; 2, Transparent Gage; 3, Jefferson; 4, Black Diamond; 5, Washington; 6, Pear, decayed.

Communications received.—W. F. Husband, LL.B.—Mertens & Co.—Wm. J. Hardie.—Joseph Arnold.—Thomas Cockerill.— J. H. O.—A. Pentney. —J. C. Stogdon.—Fungoid, next week.—John Cameron.—H. Cannell & Sons.—T. B.—A. S. C.—Ledbury.— S. T. — V. W. — L. W.—M.—Royal Gardens, Kew.

TRADE CATALOGUES RECEIVED.

J. AND R. THYNE, 83, St. Vincent Street, Glasgow. —Dutch Flower Roots.

ROBERT VEITCH & SON, 54, High Street, Exeter.—Dutch Bulbs, Flower Roots, Hyacinths, Tulips, &c.

DOBBIE & Co., Rothesay, N.B.—Potatos—a Descriptive List of nearly 100 varieties.

E. H. KRELAGE & SON, Haarlem, Holland.—Dutch Bulbs for Autumn Planting.

T. S. WARE, Hale Farm Nurseries, Tottenham.—Bulb Catalogue, Part I, containing Tulips, Iris, Hyacinths, Narcissi; Part II, Lilies, Iris, and Narcissus; also Catalogue of Carnations, Picotees, Roses, Clematis, hardy Climbers, &c.

W. RICHARDSON & Co., Darlington.—Hints on Heating.

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CHRYSANTHEMUMS AND THEIR CULTURE. By Edwin Molyneux. Ninth Edition. By far the best practical work yet written on this subject *Price, 1s.; post free, 1s. 2d.*

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	s. d.	s. d.
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Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs	30 0	
Grapes, per lb.	0 6	1 6
Pine-apples.		
– St. Michael's each	2 6	6 0
Plums per ½ sieve.....	2 9	3 6
Strawberries, per lb.		
Tasmanian Apples, per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
ArtichokesGlobe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	0 0
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Smallsalading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips ..... per bun.	3 0	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	1 6	2 0
Asters, doz. bches	3 0	6 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Carnations, doz. bchs.	4 0	6 0
Eucharis ...per doz	1 6	3 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	2 0	4 0
Gladiolii, doz. spikes	1 0	1 6
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	3 0	6 0
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	2 0	4 0
Roses (indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	2 0	6 0
Pink Roses, doz.	1 0	1 6
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays	1 6	2 6
Tuberoses, doz. blooms	0 3	0 4
Primula, double, doz. sprays	0 6	0 6

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope. per doz.	4 0	6 0
Liliums, various doz.	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Mignonette	4 0	6 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet,	2 0	4 0

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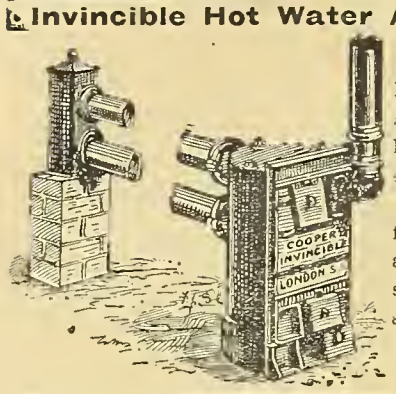

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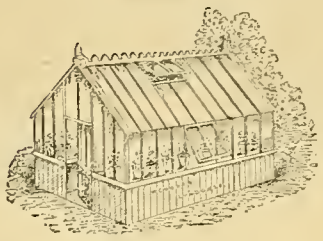

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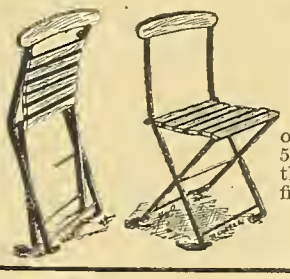

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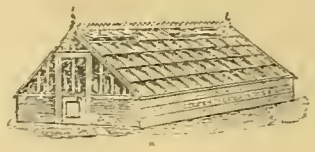

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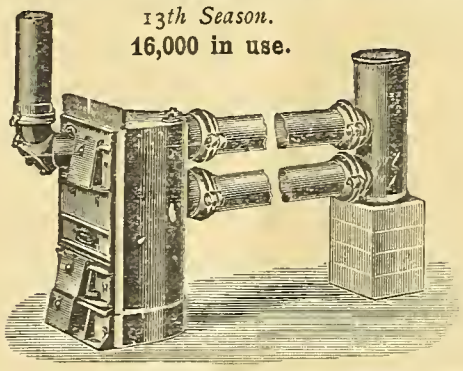

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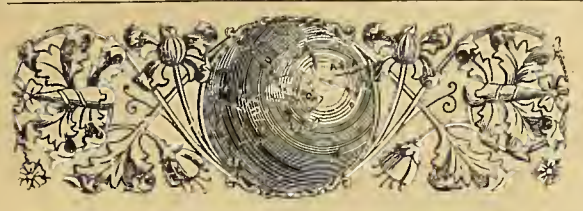

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, SEPTEMBER 26th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, September 28th.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens,

TUESDAY, September 29th.—Sales of Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.

WEDNESDAY, September 30th.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens.

THURSDAY, October 1st.—Opening of the R.H.S. three days' exhibition of fruit at the Crystal Palace. Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, October 2nd.—Sales of Bulbs and Orchids by Messrs. Protheroe & Morris, and of Bulbs by Mr. J. C. Stevens.

BURFORD LODGE, DORKING.—All those who have seen this residence of Sir Trevor Lawrence, Bart., could not have failed to be struck with its romantic situation, located as it is close under the western escarpment of the chalky and beautifully-wooded ridge of Box Hill, about a mile from Dorking in Surrey. A visit to this establishment long made famous by its fine collection of Orchids soon convinces the observant eye that flowers, not merely Orchids, but of a varied description are as popular as ever at Burford Lodge under the fostering care of their worthy owner who is come of a family long notable in the annals of horticulture.

We made a hasty survey of the establishment the other week under the escort of Mr. W. Bain, the gardener, who is affable, courteous and ready to explain the why and the wherefore of everything. Entering the conservatory, we could not but admire the elegant and showy drapery suspended from the roof, and consisting of a fine form of the white Lapageria and L. rosea White's var., with long, rich, rosy-carmine flowers. The main stems were trained under the roof, but the flowering shoots were allowed to hang freely and gracefully. Such an arrangement constitutes an excellent foil to the flaming glow of the numerous Cannas of the most recent and best improvements in cultivation. We singled out a few of the greatest decorative value, including Souvenir de Madame Crozy, a rich crimson-scarlet with a broad yellow margin, and Anthony Barton, a golden-yellow variety, richly spotted with scarlet. But where the new, large-flowering sorts were all so excellent, it would be futile in the space at command to make a selection. They are grown in small pots, yet keep up a succession for a long period by throwing up suckers from the base, which flower in due time. Indeed, they would flower all the winter, said Mr. Bain, provided the temperature were kept sufficiently high to enable them to go on growing. Lilies were also a feature of this house, particularly L. auratum rubrum and L. speciosum with its varieties. The best of the several white forms of the latter is L. s Kratzeri with large flowers of good substance, and having yellow instead of brown anthers. Blandfordia nobilis grows like a weed here, but the present is not its time of flowering. Caryopteris Mastacanthus is a blue flowered Verbenaceous plant which Mr. Bain is trying both under glass and out of doors. Tuberous Begonias were still gay, but of more special interest were the single, semi-double and double forms of the sweet-scented Begonia odorata, which are only in the initial stages of improvement, and as yet little known and less frequently cultivated. A double rose variety was recently honoured with an Award of Merit from the Royal Horticultural Society, but a rich carmine variety which we consider even finer has not yet received the recognition which it deserves. A single white variety is distinct with regard to colour.

Anthuriums, but especially hybrid forms, are also a speciality at Burford Lodge, as they have been for many years. The Anthurium house is mostly devoted to the cultivation of the white forms as well as the crushed-strawberry types belonging to A. schroderianum. We arrived at a time of the day when the house had been shut up and we felt the heat and moisture of the growing atmosphere to which the plants were being subjected. Here, as in the stove, where another collection is located, the plants had newly been repotted. This is an operation to which they are subjected annually, when every particle of the old soil is removed, even if it is necessary to use tepid water with which to wash the roots. The latter were again active, though the operation had only been accomplished a week. The stove contained A. andreanum and allied hybrid forms, including the crimson-scarlet A. a. sanguineum, and a very distinct flesh-coloured form as yet unnamed. The collection can boast of many fine forms which have received certificates within the last few years. Here also is A. warocqueanum with velvety-olive leaves about a yard long. Another rare foliage variety is A. splendens, in another house and protected by a frame, and Mr. Bain says it refuses to thrive anywhere else. Its corrugated, olive-green leaves are very striking. Very few cultivators can surmount the difficulties attendant upon the growing of this beautiful but fastidious species.

There are two grand masses of the Witch Plant (Ataccia cristata) which grows like a weed here. They are throwing up their flower spikes for the third time this season. Other foliage plants bespeak a skilful attention on the part of the cultivator, and include such things as Schizocasia sanderiana and Alocasia thibautiana. The lamina of the leaf of the latter attains the magnificent proportions of 2½ ft. by 20 in wide, and would have been large enough for a Roman shield. Their texture suggests leather, and their beautiful colour is faultless. Here also may be seen the best and the latest forms of Bertolonia in 60-sized or even smaller pots, and thriving beautifully in a frame. Madame Van Houtte is reckoned the best of those having large leaves and rosy and olive markings. One of the most recent is Harry Veitch, having dark olive leaves marked all over with minute pink spots.

The Pelargonium house is kept cool and airy, and is filled with a large assortment of single and double varieties, already a blaze of colour, but which are intended for keeping up a supply of cut flowers till November or December. Both flowers and trusses are in many cases of great size. Here also

we noted a large and splendid batch of Salvia splendens grandiflora, having numerous large spikes of bracts and flowers of a brilliant scarlet colour. The plants were summered in the open air, and have only recently been potted up. This system of culture makes them dwarf, bushy, and floriferous, with a succession of bloom that will keep on till November. The plants are now in 24-size pots. A large plant of the the orange-flowered Streptosolen Jamesoni covers a portion of the back wall and is blooming freely. A beautiful white Abutilon, named Cloche d'Argent (Silver-bell), is considered by Mr. Bain to be superior to the old Boule de Neige, and gives every appearance of being so.

Ever on the outlook for effecting improvements, Mr. Bain is always making experiments, and having planted out some young pieces of Exacum macranthum has found that the foliage puts on a healthier appearance than those kept indoors. They have recently been potted up and are now flowering. E. affine also finds a place here. A fine batch of hybrid Streptocarpus, in a great variety of beautiful colours, would be an ornament to any house. One of them having a yellow throat gives promise of a much desired break in colour. The ever beautiful Saintpaulia ionantha is also petted at Burford Lodge, and well repays the attention bestowed upon it, for the plants are a mass of rich blue flowers, not unlike those of a Violet. A collection of Sonerillas is equally as healthy and thriving as the Bertolonias, and exhibit a great variety of pearly markings and other colours. The relatively old and rare Leea amabilis also thrives well, and shows off its beautifully marked foliage to great advantage. How rich and varied are the colours of the flowers of Gesnera fulgens, even if we ignore the beautiful foliage. Some are scarlet externally and yellow internally, speckled with crimson, while others are rosy and spotted, or self-coloured white or yellow. The pyramidal masses of bloom are gorgeous.

Nor is the outdoor department neglected if we are to judge by the fine masses of bloom of various things to be seen even at this late period of the year. A bulb border in front of one of the houses is filled with a great variety of subjects that mostly bloom in autumn. The delicate pink of Amaryllis Belladonna contrasts beautifully with the profusion of white flowers arising from Zephyranthes candida, the purple of the double autumn Colchicum, the white of Cyclamen neapolitanum album, and the rich feathery blue of Crocus speciosus. Large masses of the pink Crinum Powelli, have been here for the last dozen years, and have been flowering for weeks past. We have never seen Sternbergia lutea (like an autumn Crocus) flowering more profusely than it is at the present time. It has been undisturbed for a great many years.

In another part of the garden we could not but admire the semi-double white flowers of the new and charming Anemone Lord Ardilaun, already a favourite on both sides of the Atlantic. Beside it is a clump of the Kansas Gay Feather (Liatris picnostachys), 4 ft. to 6 ft. high, and waving in the wind. Primula obconica, in a shady position, has been flowering all the summer out of doors and is so even yet. The bushy, branching Lobelia Carmine Gem, recently honoured with a First-class Certificate, stands about 2½ ft. high, but a clump of rooted cuttings put out in spring is only 12 in. to 18 in. high. It seems destined to become a popular favourite. Some standard specimens of a yellow-flowered Abutilon, planted out in spring for the second season, are now a mass of bloom. They are 8 ft. to 9 ft. high, and present a subtropical appearance. They will be lifted and housed again for the winter. The new white one will also be tried outside next spring.

A plantation of seedling Pentstemons of a splendid strain has been flowering grandly for a long time past, and looks as if it would continue the display for another month. The colours are numerous and the flowers of huge size. Already the fame of this magnificent strain is getting noised abroad. The seeds were sown on the 10th February last, so that Pentstemons may, in the near future, be classed amongst annuals. A plantation of the Gladiolus-flowered Cannas is making a grand display in the open ground. The greenhouse climber, Rhodochiton volubile, trained on wires and poles, is simply a mass of bloom such as we have never beheld under glass. The variegated Hop (Humulus japonicus variegatus) has thriven equally well, and has run up Bamboo rods to a great height, while the creamy-yellow and silvery variegation is excellent.

Although considered out of season, a great variety of Orchids may be seen in bloom at the present time, and we must return to them on a future occasion.

Jamaica Dogwood is described as a new hypnotic, the fluid extract of which has been found efficacious in dentistry.

The wood of a certain tree is used by the South Sea Islanders to catch fish. Pieces of the wood are thrown into the water, and in a short time the fishes get stupefied, and can then be caught by hand.

Mr. Grant Allen says that the growth of an Apple or a Pear is one of the oddest things in vegetable physiology. The fruit of a Peach, Plum, or Cherry consists of the ovary variously modified; but that of an Apple or Pear consists of a swollen and softened stalk. The true fruit is the core in the centre.

The rascally sparrow again.—At Colnbrook, near Staines, Middlesex, sparrows have become a perfect nuisance, and all the ordinary means of keeping them down have proved a failure. The ripe corn has had to stand upon the ground for a longer period than usual, owing to the long continued rainy weather. The marauding birds have eaten or threshed out a field of Wheat, and are now extending their attentions to Oats and Barley.

Potato Sorters are in common use in Australia and save a great amount of labour by doing away with the necessity for hand picking. They consist of a framework supporting a tray or sieve with openings of a certain width to allow Potatos below a given size to fall upon a tray beneath having smaller openings to allow the soil and sand to fall through leaving the Potatos relatively clean. Both sieves are on the slope so that they serve as a shoot as well as to sift the Potatos into sizes. Bags or baskets can be placed to catch the two sizes of Potatos as they fall from the machine. The sieves should be made of wooden laths with rounded edges, instead of iron so as to avoid bruising the Potatos. Any handy man could soon make one of these sorting machines.

Selling Vegetables without a License.—Mr. Thomas Howard, a Lancashire farmer, was summoned at St. Helens, recently, for selling vegetables without a market permit. The evidence brought forward by the police officer, was that the defendant went round the town with a cart containing buttermilk, eggs, Potatos, and other commodities, without a market permit. The defence was that the defendant had been carrying on this sort of business for the last twenty years without molestation, supplying his regular customers. Such articles as fish, fruit, vegetables, and coal, were exempted by the Hawkers' Act, of 1888, and the Legislature, it was submitted, while protecting the rights of a corporation to its market tolls, never contemplated interference with farmers delivering agricultural produce to their regular customers. The farmer and fruit grower's friends have been advising them to do this sort of thing for years past, so as to come into immediate contact with the consumers. It is almost incredible that any corporation or its officers should attempt to stifle this highly desirable form of trading, which must be highly advantageous to the community at large. The magistrates who heard the case, showed their common sense by dismissing the summons.

The tramp nuisance is being abated in the town of Madeline, Minnesota, by the wood-sawing test.

The Cycling Craze.—I learn that even the antherozoids of a Fern take to bicycles in order to visit their stay-at-home sweethearts. For more than one obvious reason would it not be more correct to say that they take to their "polycycles?"—*Snaggs.*

Lily Disease has been making its ravages felt in Canada and the United States. It commenced with Lilium candidum, but spread thence to L. superbum, L. japonicum, L. elegans and L. speciosum. The three latter suffer only to a slight extent, but L. superbum soon succumbs to the malady.

Oscillatoria rubescens has the peculiarity of developing to such an extent, two or three times in every ten years, on Lake Morat, Switzerland, that the water becomes of a strange red hue. The species of Oscillatoria are very lowly organised vegetable matter, that is, plants, and increase with amazing rapidity during certain periods of the year.

Behaviour of Crops.—I think it would be very interesting if you, Mr. Editor, would allow a short space in your valuable paper and invite gardeners in the different counties to send you a report of their crops for the past season. With your permission I should be very pleased to send you a report stating how crops have behaved in this part.—*Thos. Cockerill, Wirksworth.* [Please do.—Ed.]

Plate-Glass Houses.—One of the horticultural curiosities to be seen at Ghent, is a range of glass-houses, each 150 ft. long. The walls are very substantially built of bricks with massive buttresses of the same material. The glass used is even of a more uncommon character for this class of work, for the roof consists of plates of glass 9 ft. by 5 ft. The plants grown beneath have not been improved in health, and the design is not likely to be copied. Durability of material has been secured at the expense of utility. The framework of the roof consists of iron and is very heavy.

Canadian Apples.—The Apple crop in this country is generally estimated at half an average one, the more is the pity. There will be no dearth of that valuable article of food in our markets, if report speaks the truth; for the Canadian crop of Apples is said to be so great as to beat all previous records. The farmers are speculating as to what they shall do with this superabundance of which they find themselves the perplexed possessors. What really troubles them is whether the prices realised will be sufficiently remunerative to pay for the labour and cost of putting them on the market. Early varieties of Apples have already been sold in London and Liverpool, but being soft and generally unattractive in appearance they have only been fetching 7s. to 9s. a barrel. There is an idea that the sending of early kinds should be discountenanced, on account of their bad effect on the market. The surplus of Apples for exportation from Canada is estimated at 3,500,000 barrels, and the quality is said to be superb.

Alimentary Value of White and Brown Bread.—At the Paris Academy's meeting of June 8th and 15th, M. A. Girard contended that white bread, made from pure flour, is quite as nourishing as brown bread containing all the bran of the wheat. "I have already pointed out," he observed, "that an identical proportion of gluten is present in white bread made from flour that has been bolted, so as to leave 40 per cent. behind, and in brown bread made from flour, from which only 25 per cent. has been rejected." Another objection made to white bread is, that it does not furnish the human organism with sufficient phosphoric acid; but M. Girard contends that the difference is unimportant in favour of brown bread, while, not even in the poorest countries, does bread now constitute the exclusive diet, eggs, milk, cheese, chestnuts, potatos, and other vegetables supplying a far more important contingent of phosphoric acid than the difference between the quantities contained in white and brown bread. While physiologists assert that the human organism requires 3.19 grains of phosphoric acid daily, M. Girard has weighed and analysed the daily food of labourers in the poorest districts, and found that it amounted to double the above quantity. He considers the normal bread to be that made from flour that has given up 30 per cent. of corticle, to serve as food for cattle, to be given back to men in the form of meat.—*Journal of the Society of Arts.*

Ixias and Sparaxis should now be potted, and about five bulbs placed in each 5 in. pot. Use a compost of two parts of good fibrous loam, and one part of leaf mould, with a quantity of sand to render the soil porous and open. A little well decayed cow manure mixed with the soil would prove beneficial.

Sweet Pea, Cupid.—A writer in one of our contemporaries, says he recently saw some plants of this Sweet Pea, but then he described the flowers as pinky-white. We have seen the variety in question almost every day for weeks past, but failed to see any pink in the flowers. A pink variety is reported, but that is quite another thing from Cupid.

Big Leeks.—At the Peebles Leek Club show the leading honours were secured by a man who showed six heads weighing in the aggregate 16 lb. 6 oz. He also had the best Leek in the show, and this weighed 3 lb. 12½ oz. To grow Leeks like this it is necessary to plant them in deep trenches and otherwise treat them like Celery, from the time they are reared till fit for use.

Tea-scented and Noisette Roses may be inserted as cuttings in pots of sandy soil during the present month, and the pots stood in a cold frame. Make the s il firm and give it a good watering after inserting the cuttings. If the frame faces the north, little or no watering will be required till spring, by which time they will be more or less perfectly rooted. Do not allow them to get dry, however, during open weather in winter.

Hollyhocks in Regent's Park —A row of Hollyhocks forming practically a hedge, has been an attractive feature to visitors for some time, in the garden portion of Regent's Park The plants have evidently been raised from seed, and present a showy and picturesque mixture of tall and short plants, with single and double flowers in a great variety of colours. In short, they form a hedge of brilliant and sober colours, admirably set off with other flowers and shrubs.

Syndical Chamber of Belgian Horticulturists.—The monthly meeting of the above society was held in the Casino, Ghent, on the 6th inst., when Certificates of Merit were awarded to Pteris biaurita argentea, presented by M. Pynaert-Van Geert; to Calamus lewisianus and Alocasia gandavensis, exhibited by L. De Smet-Duvivier; to Epipendrum prismatocarpum and Laeliocattleya Proserpine, staged by M. Jules Hye; to Adiantum Schneideri shown by M. A. Vanden Heed; and to a double Cactus Dahlia, exhibited by MM. Duriez Brothers. Several other subjects were the recipients of Honourable Mentions.

Dutch and Cape Bulbs.—Besides the ordinary run of Dutch bulbs which are in universal request during the autumn months, Messrs. Ant. Roozen & Son, Overveen, Haarlem, Holland, publish a catalogue containing Cape and other bulbs as well. The catalogue in question runs to 104 pages, exclusive of the index, and, according to the numbers under which the various subjects are registered, 4,858 species and varieties of plants are offered for sale. Here we find bulbs from all countries and many other things having tubers, rhizomes, corms, or similar rootstocks. The new and rare bulbs and plants form a list by themselves, and amongst them we note some things that are not at all strangers in this country, while many are little known or perfect strangers. For instance, Sternbergia fischeriana flowers in spring instead of autumn; and S. macrantha produces its leaves in spring instead of with the flowers in autumn. Amongst the Anemones we notice the rare A. Fannini, with white flowers, from Natal. A large number of the recently introduced Irises of beautiful types are all recorded and described here, together with the Kniphofias (Tritomas) coming into the same category. Stove, greenhouse and open garden are provided for. Moraea robinsoniana in request at Australian marriages finds a place here. When well established and in a flowering condition it is a stately plant. In the main body of the catalogue lengthy lists of all the more important bulbous plants and their allies are given and described. The list of Irises includes many rare and beautiful ones, all arranged in their respective sections. Each page being closely printed, the preparation of the catalogue must have taken a considerable amount of time and patience.

A Small Variety of Wheat was cultivated by the lake-dwellers of Western Switzerland. The first lake-dwellers of Robenhausen were contemporary with the Trojan war if not earlier, and their Wheat was cultivated till the Roman conquest.

Mulberries in the opinion of some good housewives, improve the flavour of almost all other fruits when made into pies. The dwarf varieties of Rosa multiflora that can be raised from seed and flowered in four to six months are more often single than double, when they come into bloom.

Cynodon Dactylon or Dog's-tooth Grass is a rare plant in this country, but is very important in the far east and the far west. In India and several other tropical countries it is used for the making of lawns of which it is the principal constituent. There it is known as the Doob or Doab Grass. In America it is known as Scutchgrass or Bermuda Grass, and proves the worst weed that infests the lawns. Pulling it up is not the best means of getting rid of it. Heavy manuring and frequent mowing, running the machine in various directions proves the best remedy for getting rid of it.

Gardeners at Osborne.—About fifty members and friends of the Isle of Wight Horticultural Improvement Association met at Newport on the 16th inst., and a greater portion of them journeyed in three brakes to the Queen's island home at Osborne. The remainder of the party joined the main body at the gates of Osborne. Members attended from nearly all parts of the island; and about two and a half hours were spent looking over the grounds, well kept gardens and conservatories under the escort of Mr. Nobbs, the gardener together with several of his staff. The weather kept fine during the whole time. The visitors were much interested in the collection of Chrysanthemums which they greatly admired. The plants were grandly developed, and several of the gardeners remarked that they had never seen better plants. Many of the shrubs came in for a considerable amount of attention. Dr. Groves, J.P. (president) and Mr. S. Heaton, the secretary, were amongst the party, and a large number of other influential gentlemen. Before the party departed, Dr. Groves thanked Mr. Nobbs and his assistants for their kindness and courteous manner in which he had received and attended to the visitors. The latter now drove back to Newport after having spent an enjoyable and profitable afternoon.

"Grape Culture."—This is the title of the second of a series of handbooks of garden produce issued by George Tucker, 1, 2, & 3, Salisbury Court, Fleet Street. It is a pamphlet of some thirty-two pages, but is designated as a complete guide to the propagation and culture of grapes, either for pleasure or profit. Concise details are given concerning the making of vine borders, the soil, vine fertilisers, drainage, planting vines, after cultural treatment, young vines, thinning grapes, temperature, etc. Each of these subjects forms a short chapter. In the chapter on market varieties we notice that Black Hamburgh is placed first on the list on account of its popularity with buyers. Of the grapes grown for market it forms 75 per cent. of the whole. In our opinion this is the case by reason of its commonness, easy culture, and earliness, rather than its actual popularity with consumers. It is one of the best flavoured grapes in cultivation, but except very late and very early in the year, it fetches the lowest price. Next in order of merit, according to the handbook, come Gros Colman, Muscat of Alexandria, Madresfield Court, and Sweetwater, the latter being very much neglected within recent years. This the writer considers a great mistake, as it is a luscious and wholesome Grape containing much sugar and juice. If grown by the ton in order to supply the cheap fruit shops, it would create a huge demand and prove altogether a finer thing than the Spanish Sweetwater, which reaches this country packed in sawdust and meets with an enormous sale notwithstanding its poor quality. The qualities of the leading varieties are recounted, and the method of disposing of them dealt with. Separate chapters on the packing of Grapes for market, packing in cross handle baskets, stringing and labelling, and punneted Grapes are also given. The author finishes up by saying that in all things, quality should be the end and aim of cultivation.

Mr. Robert Anderson, formerly in partnership with a Glasgow firm of seedsmen, has commenced business as a seedsman at High Street, Paisley. Mr. Anderson has our sincere wishes for his success. Like all good men of his profession he is a constant reader of THE GARDENING WORLD.

Land for a public garden.—The Metropolitan Public Gardens Association is still active, and through its energy the London County Council opened negotiations with the vendors of a vacant piece of land in East Street, Walworth. The council offered £4,500 for the site ultimately increasing it to £5,000, and this the vestry has agreed to accept, though £6,000 was the sum originally asked.

An excursion by the Scottish Arboricultural Society was made on Saturday last to Armiston, an account of which will be found in next week's issue of this paper. At the monthly meeting of the Scottish Horticultural Society, a paper from Mr. A. Stubbs, of Ipswich, was read by the assistant secretary, Mr. J. H. Murray, on the subject of "manures and their relationship to the soil and plant life." A vote of thanks was accorded the author for his interesting paper.

Poisoned with weed-killer.—Quite recently, two children, named Walsh and Cottier, entered the Quartermaster's store in Newry Barracks and drank something out of a barrel which was proved to be a patent poisonous weed-killer. Martha Walsh, daughter of the sergeant of the barracks died, but the other child is recovering. At the inquest the jury censured the military authorities for carelessness in not having the poisonous liquid secured in some safe position out of the reach of children.

Channel Islands Revisited.—Owing to unusual pressure on our space this week the second chapter of this interesting series is unavoidably held over until next issue. The Ichthemic Guano Company were last week the recipients of the Royal Caledonian Society's Silver Medal for their exhibit. At the Edinburgh show this was the highest award obtainable, and is the more significant when it is remembered that above 2,000 exhibits were staged, and the list of special awards included only two medals, of which the famous Ipswich firm secured one.

Brentwood Flower Show.—The autumn exhibition of the Brentwood Horticultural Society was held in the grounds of Middleton Hall by kind permission of Mr. J. C Tasker, on September 10th. With the exception of cut flowers, which were rather sparsely represented, the show was up to the average of previous years. Messrs. James Douglas, Ilford; Richard Dean, Ealing; and A. F. Barron, Chiswick, officiated as judges. In the competitive classes Mr. J. T. West, gardener to Mr. Keith, Brentwood, led the way for twenty-four show and fancy Dahlias, distinct; and also for twelve Cactus varieties. Mr. W. Green, Harold Wood, obtained the first award for a collection of fruit comprising six dishes, Mr. T. Tullett, gardener to Mr. G. Alexander, Warley Lodge, taking a similar prize for a collection of vegetables including nine kinds. Mrs. W. Green contributed a remarkably pretty floral table that brought her a first in its class. Several non-competitive exhibits were also forthcoming amongst which Mr. J. T. West's magnificent exhibit of Dahlias occupied a foremost place. Messrs. D. Prior & Son, Colchester, staged a lot of Roses in fine condition for the season.

IPOMOEA VERSICOLOR.

THIS beautiful annual climber, perhaps better known as Mina lobata, although by no means new, seems to be either forgotten or not as well known as it ought to be amongst gardeners and amateurs or otherwise. One seldom or never sees it, while it is one of the prettiest, and most easily grown creepers we have. For arches, trellises, fences, or walls it is invaluable, making as it does, when established, rapid growth, and continuing to flower till autumn frost appears. Its foliage is distinct and handsome, somewhat cordate at the base and deeply three-lobed; and its flowers produced on forked racemes standing well out from the foliage, are, when first opening, bright rosy-crimson, changing to orange, then to pale yellow.

Its culture is very simple. Seeds sown in gentle heat about the middle of April, readily germinate, and if potted on and grown in a warm greenhouse or vinery, and supported with a slender twig as growth progresses, and hardened off, plants from 2 ft. to 3 ft. high, may be had fit for planting out at the end of

May. A native of Mexico, it was introduced to this country in 1841, under the name of Mina lobata, under which name, also, it is noticed and described in vol. vi of the "Floricultural Magazine," 1841-2, as a convolvulaceous plant of great beauty and more singularity. It was introduced by G. F. Dickson, Esq., who presented its seeds to the Earl of Burlington, whose gardener, Mr. Wilson, succeeded in raising one specimen plant and flowered it on November, 1841. On the same authority the Mexicans are said to cultivate it for the beauty of its flowers.—*A. Pentney.*

POTATOS.

In The Gardening World the other week (p. 24), I see that the editor is inviting people to send particulars of any heavy crop of Potatos they may have lifted this season. I lifted a root the other day that turned the scale at 14 lbs.; the variety being Holborn Abundance. It is one of the best all-round Potatos grown, being a heavy cropper, disease-resisting, and a splendid Potato when cooked. There are two varieties of Holborn Abundance, quite different from each other; but the one that I am writing about, I bought direct from Jas. Carter & Co., High Holborn, London, five years ago, and I have never found a diseased tuber yet.—*Thos. Cockerill, Gate House, Wirksworth, Derbyshire.*

SEED FARM AT ORPINGTON.

The other week we paid a visit to the seed farm of Messrs. Dobbie & Co., Orpington, Kent, when it rained more or less all day, so that we had to pick our way about between showers. The early part of the season had been altogether too dry for this part of Kent; but nevertheless a good harvest of the earlier kinds of seed had been made.

Work out of doors being impossible and useless, the workmen were mostly busy in the seed-drying houses, threshing and cleaning the seeds which were laid about everywhere in canvas, bags, trays, boxes, papers, etc. Something like seventy to seventy five varieties of Sweet Peas are grown here, including the best of the new sorts. A good harvest of Cupid has been made, but here, as elsewhere, it has the fault of producing too short flower stalks. Here, too, were Candytuft in quantity, Gaillardias in variety, Geum coccineum atrosanguineum, Clarkias, and Antirrhinums, including Yellow Queen with large and prepossessing yellow flowers. Coreopsis grandiflora is an excellent hardy perennial for beds, cut flowers, etc., produces seeds freely and germinates readily. In the way of vegetables we noted Dobbie's Selected Parsnip and Intermediate Carrot, the roots of which are graded and sorted according to quality before planting.

Several things are being grown in the houses, pits and frames for seed, including a very good strain of single tuberous Begonias. Celosia pyramidalis Thompsoni is a fine strain with rich crimson plumes now ripening their seed. In another part of the same house are some mixed strains of Celosias with crimson, yellow, orange, straw-coloured, and golden yellow plumes. There is a fine dwarf strain of Cockscombs in frames over shallow beds of manure. Here one may see crimson, scarlet, rose, bronze, orange, yellow, straw-yellow, and white varieties, many of them being very beautiful indeed.

Florists' Flowers.

A considerable quantity of Dahlias of the leading sections finds a place at Orpington, including new varieties being tried. Yellow Globe is a wonderfully floriferous show variety of relatively dwarf habit. Florence Blundell is a fancy variety, striped with purple and rose on a white ground. Mrs. Stephen Walker is a blush-white, show variety of fine form. The new Cactus Dahlia Miss Webster is a vigorous growing, free-flowering white variety which has been honoured with twelve certificates as a Cactus Dahlia and one as a decorative sort. Mrs. Peart, creamy-white with a yellow centre, and Mrs. Francis Fell, a purer variety, together with Miss Webster constitute a trio of Cactus Dahlias with white flowers. Fabio, orange with bright crimson edge; Purity, white; and Nerissa, rich rose, and the best of its type, are excellent pompons we noted. Not far from the same place was a much larger collection of Dahlias, including many of the choicest varieties of the show, Cactus, decorative and single types. In another plantation we noted Glow-worm, scarlet; Yellow Globe, and Cherub, a buff-yellow variety, all flowering more profusely than the rest. The earwigs do not seem to molest them, although thousands have proved very destructive to the other old varieties. Some 3,000 seedlings of single varieties were planted and include some fine varieties.

Carnations are grown in quantity and comprise all the best of the border varieties. The new yellow Miss Audry Campbell does well here. As is well known, Messrs. Dobbie & Co. possess a very large collection of Phloxes, many of which are undoubtedly fine. The modern improvements are noted for their dwarf habit. Lemoine's new varieties may also be seen here. Choice and showy are Lawrence, white; Laniborre, carmine with a paler eye; and B. Comte, crimson-purple; all having flowers of great size.

China Asters.

A considerable industry has sprung up in the cultivation of China Asters for seed in this country. They are well represented on the Orpington seed farm of the firm. Something like 70,000 seedlings were planted out, including 18,000 of the Victoria Aster of all colours, and which have done splendidly notwithstanding the dry summer. The white, crimson, and blue are useful for exhibition and bedding purposes. There are yellow, blue, and light rose varieties which are very early. After picking out the best of some twenty-six varieties of the dwarf German Asters, the list was reduced to eighteen good sorts. About 12,000 Quilled Asters, in twenty-six varieties, were planted, and most of the sorts are really very fine. They include Jubilee, lilac with a white centre; Lord Salisbury, blue and white; Oxonian, blue-purple with a white centre; Grace Darling, pink, most floriferous and true to character; Duke of Buccleuch, a large, deeply built, pink flower; Red Globe, a showy large dark red variety, quite new; Princess of Wales, soft red; and Duchess of Albany, a late white variety. The Yellow Aster is decidedly distinct and worthy of all encouragement. The quilled Asters stand the wet weather quite as well or better than any other type. The Comet strain, like the last, is very handsome, and is comparable to the long-petalled Japanese Chrysanthemums. The Bride is white tinted with blush, and deepens with age. Altogether there are twelve of the dwarf and eight of the tall varieties, the latter being the newest. The dwarf Chrysanthemum Asters run to seven varieties, and are notable for their large blooms. There will be a heavy harvest of seed provided the weather is favourable to its ripening. Very pretty is the Aster named Mignon, with white flowers. It is one of the earliest and suitable for bedding or for pot culture.

Pansies and Violas.

A large quantity of different strains of decorative Pansies are grown for seed. Two of the best strains are Bronze and Peacock; the former fills eight large beds, and the flowers are bronze, red, crimson, and iron-brown, like a shade often seen in the Wallflower. All the finer varieties are very handsome. The same good qualities may be attributed to Peacock, of which there are nine large beds exhibiting a great variety of showy types, including light and dark blue shaded with crimson or purple.

Fiery Faces form a strain with dark flowers, and appear to be a selection from that named Bronze. All are useful for garden decoration.

Violas constitute one of the specialities of the firm, and are grown in large numbers. We noted a very few of them only, and they were the varieties which stood the test of the dry weather better than the rest, and were still flowering profusely when we saw them. Artificial watering was entirely out of the question, so that the varieties under notice may be regarded as suitable for cultivation even in the sunny south. Wm. Niel is still the best of the rose-coloured varieties. Yellow sorts were well represented by Ardwell Gem and Lord Elcho; while White Duchess and Duchess of Fife—the former a sport from the latter—stood the edged varieties in good stead. Max Kolb, very dark, and Archibald Grant, even darker, upheld the reputation of the violet-blue varieties. True Blue was in equally fine form. Lady Dundonald was the freest of the white varieties. J. B. Riding is a dark rosy-purple of considerable beauty for those who like this colour. Dawn of Day was flowering as freely as ever we have seen it. Indeed the whole of the above were flowering profusely on the 10th inst.

Miscellaneous Flowers.

Near the Pansies was a fine lot of Verbenas raised from seed, and showing a grand mixture of white, rose, blue, purple, and violet colours, many of the varieties having white eyes. From a packet of seed a fine display can therefore be secured without the trouble of taking cuttings. Golden Gem is a very dwarf and bushy variety of Mignonette. Marigolds in quantity and variety were producing a heavy harvest of seed, and flowering at the same time. Here a fine strain of striped French Marigold may be seen, one which has been carefully selected for many years. The Dwarf French Orange was both dwarf, floriferous, and of a deep orange. Tall French Marigolds were to be seen in quantity. Orange and lemon African Marigolds are grown to great perfection. The Scotch Marigolds, a term applied to the selected forms of Calendula officinalis, were in grand form, and we could not but admire Orange King, of a rich orange, almost orange-scarlet, and a very conspicuous feature even at a distance. Sulphur Crown is of huge size, but rather flat. Here we noted some very perfect samples of Hen-and-Chicken Marigolds. Orange Globe and Lemon Scotch are the neatest and most perfect forms of Calendula officinalis we have seen; they are of the colours indicated by the name, but the florets are tipped with black, and all beautifully and closely imbricated.

Antirrhinums are well represented by dwarf or Tom Thumb and tall strains both mixed. Firefly is crimson with a white tube and Beauty is crimson with a yellow tube; both are handsome for bedding purposes. Some yellow varieties and the dwarf Yellow Queen, with large and finely built flowers, had been two years in the ground and were most floriferous. They might be more freely utilised than they are. Scabiosa atropurpurea and the common Balsam, the latter being double, were largely grown for the production of seed. The Sweet Peas had not all been harvested; something like two and three-quarter acres of them are grown. The large-flowered Helianthus Miss Mellish, was very conspicuous with its black centre. The brilliant scarlet flowers of Lobelia Firefly were choice and beautiful. Eucomis punctata was still flowering and very pretty with its violet centre. Hardy perennials are very extensively grown at Orpington, there being about six acres of them, including the fine named varieties of Delphiniums, Phloxes, and Pyrethrums. Of the latter, something like 11,000 are planted.

Vegetables.

In the course of our ramble over the ground we noted large plantations of Onions and Leeks, grown for seed. The exhibition bulbs of the former had been pulled up but were still lying upon the ground. They had been sown under glass in January last and planted out in the usual way. Dobbie's Golden Globe was of great size, and the same might be said of all the usual exhibition varieties. A cross had been made with Dobbie's Selected Blood Red and Cranston's Excelsior, and the progeny was intermediate in colour, and very much larger than the old Blood red. Of sixteen varieties of Tomatos tried, The Conference had proved the best for outdoor culture, for it was heavily laden with fruit Cabbages and Kales are largely grown for seed on widely separated parts of the ground. Dobbie's Victoria Kale is of medium height, rich green and finely curled. Dobbie's Selected Parsley is grown to the extent of one and a half acres, which should indicate the demand for this finely curled variety.

DERIVATION OF SCUTELLARIA.

Concerning the lively discussion that was carried on in our pages till quite recently, a correspondent writes as follows:—"With regard to the Scutellaria controversy, I wish the Editor would tell his unlearned readers who is right. I pass my Gardening World on to my under men, and one of them is quite excited over the discussion and looks for each disputant's argument almost as eagerly as for the result of a cricket match at Lords, in his "Star." Paradoxical as it may seem we feel inclined to give the palm to both, for as far as we can make out, the main issue (leaving aside minor outgrowths from the question and its bearings) was argued from two different points of view. One contended that the best Latin authority should be followed, and in this we would give due consideration to the authority of the best classical scholar. New dictionaries, even upon such an ancient language as Latin, if compiled by our best authorities, are of more weight than old ones, simply because discovery and research has enabled the scholar to arrive at a better understanding of the dead language. If a good Latin

dictionary had been written or compiled by a Roman author, it would have materially altered the case.

On the other hand one of the controversialists contended that if such and such dictionaries and authorities gave certain meanings to or translations of the term "Scutellaria," he (the disputant) would be justified in using it. We feel inclined to grant the truth of his argument; otherwise, nine-tenths of the books in circulation must be considered as unreliable and dangerous to follow. After all, however, learning is only a thing of degree, and many of the points put forward are open to dispute, and while such is the case, even the most learned authorities and their books cannot in all cases be regarded as absolutely correct. Nevertheless, the dictionaries have had a good dusting, which could not but have been beneficial to them. In the meantime let us quietly continue the cultivation of our gardens.

THE FLOWER GARDEN.

Owing to the wet weather that has so generally prevailed of late the grass is now in a much better condition than it has been at any time during the whole of the year. It appears anxious, indeed, to make up for lost time, and is growing with exceptional freedom and rapidity. Consequently the scythe and the mowing machine must be kept hard at work for the time being. The damp dewy mornings afford a very favourable opportunity for using the scythe to the best advantage.

Turf Laying.—The present is an admirable time to carry out operations where the laying of turf is required. The grass soon takes root into its new quarters, fostered by the prevailing dampness, and is enabled to get a good hold before winter sets in. Bearing this in mind it will be well to get such matters well forward as soon as possible.

Herbaceous Border.—If the lawns are looking fresh and green the same can scarcely be claimed for the herbaceous border, and indeed the flower beds generally. The heavy rains have worked sad havoc, and even the best kept garden can scarcely fail to present a somewhat battered and woe begone appearance. Dahlias are far from having come up to their usual form this year. A couple of weeks of sunny September weather is what they really needed, and this is just what has been denied them, with the result that the blooms lack the charm and brilliancy of colouring which would have been theirs had a more favourable season visited us. A good deal of work must be gone through if the border is to be kept tidy and presentable, which it should be as long as sharp frost does not make its appearance. Perennial Asters are a host in themselves, and if but the weather brightens up will give an excellent account of themselves. Where they have not been properly staked hitherto it will be well if this matter receives attention at once, provided the plants are not spoilt by frost beforehand.

Stakes for which there is no further use should be taken out, tied neatly up in bundles, and removed to a dry shed as soon as possible. They look very unsightly objects if left standing in the borders as mute evidence of a glory that has departed.

Propagation of Bedding Plants.—This will now have been completed for the season, and the earliest batches of the cuttings should be nicely rooted by this time. Most gardeners like to keep the cuttings out of doors as long as they can, both from a dislike to block up the houses sooner than they are absolutely obliged, as well as from the knowledge that the cuttings are really better off out of doors than they would be under glass.

Frost.—At this period of the year this one word conveys volumes of meaning, for the advent of the vanguard of the ice king's legions may be now expected at any time. Consequently both the barometer and the thermometer are anxiously watched for the slightest signs of the expected visitation. Harvest festivals mean to the gardener that vast quantities of flowers and other decorative material have to be provided, and how is he to do this when a smart frost has blackened his Dahlias and cut down the greater part of the summer-flowering plants? Then, again, sub-tropical bedding has come greatly into fashion of late years, and hosts of Palms, Grevilleas, Eucalypti, Fuchsias, etc., are utilised with first-class results. Where much of this class of material is planted out, or plunged in their pots for the season, as the case may be, a sudden frost means a rush of hard work if the plants are to be saved a severe nipping, which, if it did not kill outright would at least cripple them for some time. Wherever it is possible to make preparations to expediate matters presently when the inevitable rush comes it will be wise to make them.

Border Carnations.—Towards the end of this month or the beginning of October, the layers, which by this time should be well rooted, may be lifted and potted off singly. Two and a half inch pots will be roomy enough for the majority of the layers, although a size larger should be given the strongest plants. A quantity of crushed bricks or crocks finely broken up may be added to the soil. After potting, the plants must be plunged to the rims of the pots in ashes in a cold frame. They will thus be kept near the glass, and provided plenty of air is given, and the watering-can used very sparingly, they will pass through the winter safely.

HARDY FRUIT GARDEN.

The harvesting of Apples and Pears as they become fit for gathering is still the all absorbing operation in this department, and in cases where the fruit crop is a heavy one the strength of the establishment is taxed to the utmost. Every possible care must be taken to avoid bruising the fruit, whilst it will be of no use to attempt to keep fruits that have been pecked by birds, Our feathered friends have been especially hard upon Pears this year, many of the finest fruits having been utterly spoiled by them. These should be straightway sent into the kitchen where they may be made use of for cooking purposes.

In order to obtain many of the finest dessert Pears in their best possible condition a day or two on a shelf in a warm dry room is of the greatest value, as this develops the flavour wonderfully. Advantage may be taken of this to hurry a few dishes of fruit on when it is required for any special dinner party or other social function.

Late Peaches and Nectarines.—These have made but very little progress of late, owing to the lack of fine weather. If they are to ripen properly all the sun possible should be given them. Any leaves, therefore, that are observed to be shading the fruit should be pushed aside. If the fruit is not ripened after it has been left on the trees until the latest possible moment it must be plucked, taken indoors and laid on a shelf in a warm room to finish.

Gooseberries and Red Currants on north walls that have been covered up in order to keep them as long as possible may as well be cleared off now. They will not hang on the trees much longer, and besides, the flavour is of a very inferior order.—*A. S. G.*

VEGETABLE CALENDAR.

Root Crops.—The lifting, sorting, and storing of various root crops will now need attention, commencing with the Onion crop. The recent wet and sunless weather has been unfavourable to ripening the bulbs, and any still exposed on the beds should be got under cover without delay. An empty frame where a little extra warmth can be generated will ripen the bulbs perfectly; or an airy loft or shed will answer the purpose well. The bulbs should be carefully handled to prevent bruises, and the outer coatings should not be removed. The bulbs should be turned over occasionally until they are quite dry. All the thick-necked ones should be kept separate for present use.

The latest kinds of Potatos will now be ripe enough for digging, and will be better out of the ground. Advantage should be taken of dry weather to lift the crop; and the tubers should be allowed to be become quite dry before being stored away. The best place for preserving them is a dry cellar or shed where frost can be excluded, covering them with old mats or other material to exclude the light. Where dry sheds are not available, and the crop has to be pitted, a dry position must be selected. Place plenty of clean straw under and around the tubers, and a layer of earth 10 in. thick, and formed into a cone over them, and cut an open drain round the pit to carry off heavy rains quickly. Tubers intended for seed may remain exposed with advantage until they are green.

Nothing will be gained by allowing crops of Carrots that are full grown to remain in the ground after this date. Once stored they are then free from the attacks of slugs and other pests. When dried they can be stored in bins in a cool shed with a little sand scattered through them, or they may be pitted in the way advised for Potatos. Turnips that have grown into serviceable size may also be taken up and stored, rather than allow them to grow too large and coarse for use.

Cabbage.—An early bed should be planted in a very warm sheltered position facing south. The ground should be deeply worked and plenty of half-rotted manure dug in to keep the ground from running together too close during winter. This will have a great effect in keeping up a good root action during the winter and early spring months. The plants selected for this early bed should be the strongest from the plants previously pricked out. Take them up with a nice ball and plant them about eighteen inches apart both in the rows, and from plant to plant. A dusting of lime and soot round the collars will help protect them from slugs. One of the best Cabbages for this early planting is Wheeler's Imperial. It is moderate in size, of fine colour and flavour, and rarely runs to seed.

Tomatos.—The fine crop of outdoor Tomatos, has been much reduced by the late wet weather and much fine fruit has been spoiled in consequence. The clusters of fruit should be examined frequently, and all fruit showing a tinge of ripeness gathered and placed in a warm house. Cracked and decaying fruits must be removed at once to prevent the sound fruit from becoming affected. Should sharp frosts appear likely to occur, it may be advisable to gather all the most forward fruit, but with the present temperature, the late fruit will swell and increase in weight perceptibly.—*J. R.*

THE ORCHID HOUSES.

Light.—Although it is necessary during the summer months to shade most Orchids under glass to prevent their drying up too soon under the scorching rays of the mid-day sun, it is nevertheless most essential that during the autumn and winter they should have all the light possible. With this end in view we shall take advantage of all wet days (which are pretty prevalent just now) to have all the glass washed down inside, also the stages and the pots that have become green, and the plants sponged where required.

The shifting about of the plants while the work proceeds I believe has a beneficial effect on them. The fact is the air gets changed by the opening of the lights when washing down which of itself must do good to say nothing of the better position perhaps afforded them when rearranging the plants by elevating them a little more than is advisable during hot weather.

Change of quarters.—Plants such as Epidendrum vitellinum majus, Odontoglossum harryanum, Masdevallia tovarensis, Miltonia vexillaria, &c, that do well during the summer months with Odontoglossum crispum, do very much better during the winter, if afforded the higher temperature of the intermediate house. Here they should be accommodated with a place on the side stage near the glass at the coolest end and where they do not feel the drying heat from the hot-water pipes.

Cattleya House.—C. aurea, which is a geographical form of C. dowiana, and a free bloomer to boot, is just now making a show; some there are, however, with us that have made up well but have missed flowering, and as these non-flowering are pushing out fine healthy roots from the base of the newly-made up growths, we shall at once repot them believing as we do that to be successful with all pot plants, whether Orchids or not, you should, if possible, repot them so that they know nothing about it. This, then, can only be done when the plants are in the stage indicated above. There are several advantages in potting the plants now besides those enumerated. They will be resting for one thing, consequently will require very little or no water other than just enough to keep them from shrivelling. It is really surprising what a lot of roots they make when kept like this; and they will, of course, establish themselves well, and when the time comes, will break away with renewed vigour.

Temperatures.—In the warm division the minimum should be 70°: Cattleya House should not fall much below 60°; cool house: we do not care to let this house go down much below 50°, but with frosty nights such as we had on the 19th and 20th, it will do so unless the fire is set going a little, which it should be.—*C.*

HINTS FOR AMATEURS.

PROPAGATION OF TENDER BEDDING PLANTS.

LAST week we took into consideration the propagation of what may be termed the hardier section of common bedding plants, *i.e.*, those that find a place in almost every garden large or small, and that may be increased from cuttings without the expenditure of any artificial heat.

In addition to these there are other plants which enjoy a considerable popularity as bedding subjects that are not quite so easily dealt with, and a few words upon these may be of service to some of our readers who either for the sake of variety, or from a special love for these plants, have given them a place in their flower garden, and now wish to obtain a stock of plants for use next year.

For all the undermentioned subjects artificial heat will be necessary in order to get the cuttings to strike. The great difficulty, of course, will be, how to get the artificial heat. If the amateur counts a propagation case heated with hot water, among his possessions, well and good, for it will be all plain sailing for him. A layer of cocoa-nut fibre refuse, some 5 in. or 6 in. in depth, may be laid upon the bottom of this, and here the cutting pots may be plunged to the rims. We have known enthusiastic amateur gardeners who have rigged up a fairly good propagator out of an iron cistern. This was divided into two halves by an iron plate. The lower half was filled with water and an ordinary oil lamp set burning beneath it. The top half of the cistern was covered over with glass, and contained the cuttings, which under the influence of the genial heat of the hot water soon rooted. Those of our amateur gardeners who possess engineering tastes may profit by the hint, and go and do likewise.

The Hotbed.—Here we have an excellent method of obtaining the requisite heat. If fermenting material, such as leaves and stable manure, can be obtained in fair quantities with little trouble we should strongly advise would-be propagators to build a hotbed. Grass from the lawns may be used in conjunction with the stable manure, when it will be of service, but it is of little use if employed by itself, as the heat it generates, although very fierce soon exhausts itself. What is really needed is a gentle uniform bottom heat lasting at the least for a period of a month or six weeks, which time will be sufficient for the cuttings to root. The bothed should not be less than 4 ft. in height, for if made smaller the heat will not last long enough. An ordinary frame may be stood on the top of the heap, which to be neat should have been put up in the form of a rectangle. If coconut fibre refuse can be obtained, a layer some 6 in. in depth should be placed upon the area covered by the frame. This will be needed to plunge the cutting pots in. If nothing else offers leaf mould will make an excellent plunging material. The hotbed should be built several days before it is required for use in order that the rank gases generated by the fermenting material at the first may be dissipated.

Alternantheras usually furnish plenty of cuttings. No matter if they are rather short they will answer. Trim the bottom leaves off the cuttings as previously recommended and cut the stem cleanly across just below a node, as previously advised.

Nasturtiums. — The dwarf Tom Thumb Nasturtiums may be propagated very readily from Cuttings which root well if placed in a gentle heat. This is the best method of increasing the small yellow varieties which are thought so much of now. Insert the cuttings deeply enough in the soil to give them a firm hold, and press the soil well about them.

Ageratums.—Many people prefer to raise these from seed sown in the spring. Cuttings, however, do very satisfactorily. They should consist of the side growths, some 3 in. or 4 in. in length which have not flowered.

Mesembryanthemum cordifolium variegatum.—These are rather more difficult to root than the foregoing. We have succeeded best with them when the cutting pots have been placed on a shelf near to the glass in a heated pit, where they have been kept rather on the dry side. In a hot-bed, however, at least 50 per cent. of the cuttings will strike, and so by allowing a good margin for deaths a stock may be worked up.

Lobelia pumila.—Here again many gardeners stick to the method of sowing seed in heat at the beginning of March. This answers very well if the seed is obtained from a reliable source. If this precaution is not taken, however, the results are somewhat mixed, light blue, dark blue, lilac, and white flowers showing in the same batch. If it is decided to put in cuttings and save all this worry, now is the time to see about putting it into practice. If the flowering growths of the old plants are pushed to one side, numerous little shoots will be observed springing up from the base. These make admirable cuttings and in a hotbed such as we have been describing nearly everyone may be depended upon to root. Make the soil very sandy, and spread a substantial layer of sand upon the soil.

Ventilation.—The frame should be kept fairly close, but as the vapours may be rather injurious if kept too closely pent up the light should be kept slightly tilted up by inserting a thin label or strip of wood between it and the frame upon which it rests. This may be left in day and night for the first ten or fourteen days, after the expiration of which it may be left out if desired.

SOME MORE HARDY PLANTS.

Lobelia cardinalis.—This is a very different plant in appearance to the Lobelia pumila which we have been considering, and it will be necessary to go about increasing it in a very different manner. After the flower stems have died away they should be cut down close to the ground. The roots may then be lifted and potted off in any old soil that may chance to be handy. Give the plants a place in a cold frame, where they will need no water through the winter. In spring they will commence to grow by throwing up small shoots right from the base. When these are about 1 in. in length then is the time to operate. The roots may be split up into as many divisions as there are shoots, potted off singly into small pots, and placed in a gentle heat when they will start off vigorously and soon make good plants. It will be seen, therefore, that there need be no fear about taking cuttings now.

Echeverias.—With these we must bring to a close our list of common bedding subjects. These pretty little succulent plants are very easy to grow, and almost as hard to kill. Each plant usually sends out two or three offsets during the season. These may be removed and dibbled into a bed of soil in a cold frame. The old plants also may be preserved. They will pass through the winter very well if planted close together beneath the shelter of a wall and protected from the rain. A long wet season is more injurious to them than frost. During frosty weather a little bracken may be lightly shaken over them, to be removed when the frost has gone. Echeverias are thoroughly good tempered plants.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Winter-flowering Carnations.—A greenhouse such as yours, *L. Young*, in which the temperature is so low during the winter, is of very little use for Carnations which are expected to flower during the dull months. If the plants are placed under such conditions you will find that the flowers will not open properly. In order to obtain good results a light airy house is necessary, with a temperature of from 55° to 58° Fahr. by night, rising to over 60° by day. Watering, too, calls for very careful performance, or the plants, like good children, will not be long for this world.

Onion Seed.—We would not advise you to trust absolutely to old Onion seed, *B. Grant*, It may germinate freely, and it may not, and if the latter should take place, you would be sadly handicapped, if after waiting a few weeks for plants that did not appear, you had to sow a fresh bed. As you say, however, it seems a pity to waste the old seed if it can possibly be turned to any use. Your best plan will be to make a small sowing in pots under glass early next spring—say some time in February—and if the result of the trial is satisfactory you may save the cost of new seed.

Early Chrysanthemums.—As soon as the flowers are cut, or have lost their beauty, you may cut the plants back, *Y.* This will facilitate the early production of cuttings, which are usually eagerly sought after. If sharp frost comes, place the pots in a cold frame, but they will take no harm out of doors for a few weeks yet.

A new enemy for Tomatos.—As if the popular Love Apple had not enough of enemies, *W., Reading*, sends an account of what he considers a new, or at least an uncommon one. He has planted a number of Tomato plants against a low wall facing west. These have fruited very heavily, but lately he noticed that some of the ripest and finest fruits have been pecked about and half eaten, evidently by birds of some kind. By carefully watching he has at last discovered that it is not the birds of the air, proper, but rather the birds of the water in the shape of moorhens that are to blame. These pretty little creatures, continues our correspondent, are after all but following the popular taste in preferring their Tomatos raw instead of cooked.

Embellishing Rhododendron Beds.—*Artus* makes the complaint concerning Rhododendrons that, although they are very beautiful during their flowering period, that period is all too brief, the flowers soon drop, and for by far the greater part of the year the beds look dull and ugly. He asks if there is no way of improving matters somewhat? If the plants have been put in very close together and have attained a good size there is nothing to be done but grumble—or root them out; but if the plants are comparatively small and have been given plenty of room, it will be an excellent plan to plant Liliums in between them. The peaty soil will suit them to a nicety, and they will bloom when the Rhododendrons, like the Fig tree of old, are nothing but leaves. Lilium auratum is one of the most suitable members of the whole genus for the purpose. L. pardalinum, L. Martagon, L. M. album, and L. Hansoni, are all excellent, as they all do well if the conditions are anything near the mark.

Heating a Greenhouse.—As the house is only a small one, a flow and return of 3 in. piping running the length of the house will be quite sufficient, *J. B.* You should lose no time in getting it in, for summer cannot always last, and we may expect to get frost at any time now.

Beans Frosted.—Eight or ten degrees of frost would be quite sufficient to spoil the look of your Runner Beans and Tomatos, *T., St. Margaret's.* Let us hope that we may escape such an experience for a little longer.

Peach-tree Gumming.—The only remedy we can suggest in your case, *W. Ellason*, is to pull the tree out of it and plant another one. When gumming reaches such a pitch as it has in your case other remedies are of no avail. If only a solitary branch or so had been affected a judicious use of the knife would have put matters straight.

Finishing Peaches.—If the weather keeps dull and wet and you think the fruit will not have a fair chance of ripening off properly, your best plan, *G. T. Soames*, will be to give a little fireheat. This will also assist in maturing the wood, which, seeing that the fruit is backward, will be almost sure to be soft and green.

Earthing up Celery.—As a fortnight has elapsed since the time when the last earthing up was given, *Enquirer*, the plants should be able to stand another lot of soil. Press the soil gently round the plants with the hands, and finish off by giving a gentle pat or two with the spade.

Plums Cracking.—Alas for those who reckoned on having a fine crop of dessert Plums, your wail, *Oxonian*, is but far too common this year. It is the rain that is the cause of the fruit cracking and spoiling in the way you mention. Late Plums, we fear, will be at a premium this year. We have noticed numbers of trees of that fine late variety, Coe's Golden Drop, in different parts of the country, and in every case the same disastrous results of the rain were apparent.

Weight of Potatos.—*G. M. P.*, in reply to a query (p. 24) writes as follows:—"I am pleased to see you would like to know the name of my Potato, and thought you would like also to know the weight of the old tubers. When taken up they were almost sound, except one which I could not find. The other three weighed 3 lb. 1 oz. in the aggregate, when turned out with the others. I can average seven Potatos out of every root weighing from ¾ lb. to 1 lb, the weight of the heaviest Potato being 1 lb. 5½ oz. The name of the variety was 'Fidler's Reading Giant.'"

BAYHAM ABBEY.

Bayham Abbey, the seat of the Marquis of Camden, is pleasantly situated in a beautifully wooded valley between, but at some distance on either hand from the villages of Frant and Lamberhurst, in Sussex. The extensive estate of Bayham lies both in Sussex and Kent. A stream runs through the valley and forms the boundary line between the two counties, the stream itself being a tributary of the Medway. One of the approaches to Bayham Abbey from the Frant Railway Station, is by a long drive which runs along the east slope of the valley and through more or less wooded ground. Here we may state that there are 18,000 acres of wood on the estate, so the scenery is varied with wood, water, and much undulated ground. During the month of August, patches of purple heather (Calluna vulgaris) greet the eye of the visitor and enliven the wayside.

After a journey of two or three miles, along a winding and undulated drive, and passing the new mansion on the right, the road begins to descend; and presently the trees that line the way give place to open pasture on sloping ground, where a magnificent and enchanting view opens on the eye of the visitor. A valley trending eastwards joins the other on the right at right angles. The slopes on all sides are beautifully wooded, and rise to a considerable height. In front is Bayham Old Abbey, of which we give an illustration. Its beautiful moulded and carved pillars and broken arches of doors and windows, still defying the elements to crumble them down, are silent witnesses of the pious rage (we say pious because it sounds polite) of King Henry VIII., who destroyed the Abbey. It was built by the White Friars, 1200 to 1220 A.D. Much of the splendid ruins is covered with Ivy, and tall trees of considerable age surround the place, which occupies a considerable area of ground. Neatly kept walks meander amongst the ruins, and they, with shrubs growing here and there, give the ruins a pleasing appearance amidst their desolation.

A bridge of modern construction takes the visitor across the stream, where a drawbridge used to swing, and the wayfarer is at once in the county of Sussex and in the grounds of the Old Abbey, the ruins of which stand on a piece of level meadow land. A moat surrounded this important place in its palmy days, except on that side which was protected by the stream. The moat is mostly intact yet, and the fish ponds which used to supply the Abbey with fish on fast days, are yet there, but occupied with a rank growth of Reed Mace (Typha latifolia) and other aquatic vegetation which threaten to bring the ponds to a level with the surrounding meadow, by the deposit of mud and decaying vegetation. On the north side of the enclosure is another pond all grown over with Water Lilies presenting a beautiful appearance, even in a state of nature. It would be a pity if any restoration of this ancient moated enclosure were necessary.

A flower show is annually held within the precincts of the old Abbey, by the kind permission of the Marquis of Camden, purely for the benefit of the tenants, employees, and cottagers on the Bayham estate. No more romantic place for a flower show could be imagined than in the meadow surrounding the ruins, with their historic associations. On all sides the ground rises and is covered with a great variety of trees of various ages, and on the eastern slope, a modern church nestles amongst the trees, and brings us in touch with the present time.

The new mansion stands on rising ground a little to the north-east, on the Kent side of the valley, and perpetuates the name Bayham Abbey. It was built in 1870, by the father of the present Marquis, who is quite a young man. The building is a fine and commodious structure, built of Kentish rag, with the corners, and jambs of the doors and windows, of dressed Portland stone. The mansion stands on a terrace as it were overlooking the valley as far down as the Old Abbey. The pleasure grounds and flower gardens surround two sides of the mansion.

Bayham Old Abbey.

The Flower Garden.

The flower gardening is of a mixed character and quite of the modern style. The summer bedding is maintained, but in no way overdone with Pelargoniums, which have done well this year, including the Pink Christine. The dark blue of Salvia patens is not easily matched for bedding purposes. Some of the beds are edged with Lobelia Marquis of Camden, a new variety of a rich carmine-purple hue, and having two white eye-like spots. Two beds filled with Verbena venosa have done well all the season, notwithstanding the drought, for they have been a mass of purple. Several beds of the white Pelargonium Niphetos edged with Lobelias, have been equally conspicuous. Some beds of Kniphofia

aloides with their fiery-red masses of bloom were very imposing during August. Another pretty arrangement was a bed of Lilium Harrisii on a groundwork of Verbena venosa. Mr. A. Methven, the gardener, has raised several new Lobelias of considerable merit, including that already mentioned. Very conspicuous is that named Miss Evelyn Green, with large flowers of a brilliant dark blue, and having a large white blotch in the centre. It is of dwarf, compact habit, very floriferous, and will make a handsome edging plant.

To the north of the mansion is a rustic bed or rootwork in which the night-scented Tobacco has been a prominent object for many weeks past. Other subjects here are the green and variegated forms of the American Aloe, Verbena venosa, shrubby Veronicas, the Ice plant, etc. This bit of rustic work affords pleasing variety. A little farther on in the same direction, is the Rose garden, which Mr. Methven had trenched 2 ft. deep during the past winter. Several of the Roses have flowered well a second time, including Bouquet de Blanche and Baroness de Maynard.

Southward from the mansion runs a broad grass walk, along one side of which is a wide border filled with a great variety of flowering plants, hardy and tender. Nany of them are tall and very conspicuous, including Hollyhocks, single and double Dahlias, and Sweet Peas, all of which have flowered profusely. Here may be seen masses of Papaver somniferum in variety; and there Nicotiana affinis. African Marigolds, the common Tobacco, Dianthus chinensis Heddewigii, Love-lies-bleeding, Eschscholtzias, Godetias, Gladioli, Chrysanthemums, Asters, etc., keep up an ever varying display all through the season. The walk and border were made by Mr. Methven, who is carrying out new improvements year by year.

Kitchen Garden and Glasshouses.

The kitchen garden lies away higher up on the slope amongst the trees, and hidden from the mansion. Within the walls it comprises two and a half acres, but altogether extends to four acres. The walls are 12 ft. high, built of bricks, and give shelter and support to a varied assortment of Peach, Pear and Plum trees, bearing in some cases heavy crops of fruit. Tomatos trained along the low front walls of the glasshouses, and comprising Champion, Challenger, Vick's Criterion and some others, have produced an enormous crop of fruit. The wide borders in front of the vineries and plant houses, are occupied with flowers. One portion is occupied with China Asters of various colours; another is panelled with Pelargoniums, Lobelias, Perilla, Dactylis glomerata elegantissima, &c. The remainder of this long border is occupied with Phlox Drummondi, Intermediate Stocks, Ageratum, Zinnias, Larkspurs, and other showy subjects, which are planted in broad bands of three lines each. In the vegetable department a fine crop of large samples of Red Italian Tripoli and other Onions had been harvested in their season. Late sowings of Dwarf Beans and Peas indicated that late supplies were amply provided for.

The early Peach house has long been cleared of its crop. One vinery is occupied with Muscat of Alexandria, large in bunch and berry; and young vines of Mrs. Pince are being brought on. The back wall is covered with Smilax (Asparagus medeoloides) each stem twisted round a long string. Black Hamburgh and Foster's Seedling occupy another vinery; while a third structure accommodates Gros Maroc, finely finished, Black Hamburgh and Gros Coleman. Figs and Peaches cover the back wall and afford heavy crops of fruit. Melons and Cucumbers are grown in pits. At the back of the hothouses is a useful Mushroom House heated with a flow and return pipe beneath the benches, and by two flow and two return pipes in the pathway. The benches are supported by brick arches. Beneath one of them, the space is enclosed and used for forcing Rhubarb, Seakale, Chicory, &c.

The greenhouse a short time ago was brightened with Celosias, Lilium speciosum, having twelve to twenty-two flowers on a stem, and L. s. Melpomene, in some cases with two stems from a bulh, bearing in the aggregate thirty-six flowers. Crinum Moorei, and C. Powelli, with seven flowers in an umbel, and Bougainvillea sanderiana were also conspicuous features of this house.

Liliums were even more numerous in an intermediate house close by. One bulb of L. speciosum album had given rise to two branching stems, bearing twenty-two and twenty-five flowers respectively. L. auratum Wittei had white flowers with exception of a pale yellow midrib to the segments. Other bulbous plants were Pancratium fragrans and Amaryllis aulica. Asparagus deflexus was grown as a basket plant. Adiantum farleyense and A. gracillimum, as well as Davallia Gortoni, were in fine condition.

The Marquis of Camden is getting together a collection of Orchids of a showy and useful character. Notwithstanding the fact that this class of plants was out of season, some interesting things were yet in flower, including Odontoglossums in variety, Laelia dayana grandiflora, and Cypripedium Lady Clementine Walsh. The dorsal sepal was rich apricot margined with white, and the lip was dark chocolate. The stove also contained a quantity of Orchids, including Cattleya Trianaei Popayan strain, C. labiata, and other species making good growth. The bronzy-red and green, variegated Hibiscus Cooperi was in bright condition. Very fragrant were the leaves of Cinnamomum aromaticum. Dendrobiums in considerable variety are also well done here.

Higher up the slope are some useful span-roofed plant houses containing a variety of plants. On the roof were well-flowered specimens of Stephanotis florihunda, filling the house with its sweet odour; and of Dippladenia brierleyana, whose flowers are pink when they expand, but soon develop to a beautiful rich rose-red. Large bushes of Gardenia were planted out and splendidly set with flower buds, which keep up a succession over a long period of the year. Licuala (Pritchardia) grandis is still a highly interesting Palm and useful for various purposes. Niphobolus argens has leathery fronds of a beautiful silvery hue beneath when young, ultimately changing to fawn. Particularly interesting and pretty was Livistona rotundifolia, which, though only 12 in. high, had a spread of 2 ft.

Trees and Shrubs.

The woods are undoubtedly the dominating feature of the estate, and the beauty of Bayham Abbey in particular. Timber trees of various kinds, hard wood and otherwise make up the woods; but a wealth of ornamental trees and shrubs is planted around, and in the immediate vicinity of the mansion. Many tall and beautiiul Conifers line the approach, and the slopes lying behind the mansion. Worthy of mention are the specimens of Pseudotseuga Douglasii, Sequoia gigantea, Thuja gigantea, Cupressus nutkaensis, Cedrus atlantica, C. Deodora, and C. Libani. Here also are thriving samples of Araucaria imbricata, Thujopsis dolobrata, T. d. variegata, and numerous forms of Cupressus lawsoniana, including the silver and golden variegated varieties, C. l. lutea, C. l. erecta viridis, C. l. gracilis, C. l. prostrata, and several others. Here too are silver and golden Junipers, green and golden Yews, Retinospora pisifera, R. p. aurea, R. plumosa, R. p. aurea, R. p variegata, and others of that class that give interest, beauty, and variety to a place. All the better known of the Thujas with their interesting garden forms are planted about including T. occidentalis, T. orientalis, T. vervaeneana, and others of the same class.

The plumy forms of Cryptomeria japonica compacta, C. elegans compacta may also be noted. Ornamental Pines include the Weymouth, the Austrian and the Swiss Stone Pine (Pinus Cembra). The spiry forms of Abies and Picea, with their various tints of light and dark green, glaucous and blue lend a charm and wealth of greenery summer and winter, which the planter cannot well resist. The Silver Firs include Abies nobilis, A. concolor (lasiocarpa), A. nordmanniana, A. numidica, A Pinsapo, with its short peg-like leaves, and the noble A. grandis, which towers up to a great height in a few years. The Spruces are represented by Picea ajanensis, P. pungens glauca (the Blue Spruce), P. nigra, and P. orientalis. The two latter are notahle for their narrowly pyramidal and spiry habit of growth, which gives them a singularly graceful appearance. There is yet one other distinct type of Conifer that must not be overlooked, namely Tsuga canadensis and T. hookeriana, which are classed with the Hemlock Spruces. Amongst this wealth of arboreal subjects with which the estate abounds, the less pretentious shrubs are not overlooked. Andromedas and their allies are grown in variety: and the same may be said of Azalea mollis, A. pontica, and Ghent Azaleas. The evergreen Aucuba, Berberis Aquifolium, B. japonica, B. Darwini, and B. stenophylla are beautiful at all times, both in flower and fruit. Cotoneaster, Daphne, Erica, Cytisus, Laurels, Hollies, Rhododendrons, and evergreen Oaks are all planted in great variety. The single and double Furze are not to be despised with their forbidding spininess and wealth of golden blossom.

Patriarchal Trees.

On an extensive estate like Bayham Abbey, it is not surprising to find some patriarchal trees amongst the 18,000 acres of wood. On the farm of Great Shoesmith in the parish of Wadhurst is a gigantic Ash 84 ft. high and containing 356 cubic feet of marketable timber. At a foot from the ground it is 15 ft. 4 in. in circumference, and rises to a height of 38 ft. before branching. On the same farm is a Beech girthing 18 ft. at a foot from the ground. The trunk is clear of branches to a height of 48 ft. Not far from this tree is another Beech, 95 ft. high and girthing 18 ft. 6 in. at a foot from the ground. Measured at the same height a tree on the farm of Wickhurst girths 24 ft. 4 in. This is an Oak standing 65 ft. high and containing 548 ft. of marketable timber. On the same farm is a Beech, girthing 15ft. 10 in. at a foot from the ground, and 80 ft. high. On Little Shoesmith farm is an Oak girthing 22 ft. near the ground and standing 85 ft, high. On the Home Park near the Old Abbey are several large Oaks nearly of equal size, and one measures 18 ft. 6 in. in circumference near the ground. A huge pollarded Ash is supposed to be 800 years old, but it is now a mere shell, girthing 38 ft. near the base. Another Oak in the Home Park girths 19 ft. 7 in. near the ground; it is 70 ft. high, with a spread of branches of 84 ft. In the Home Park also another Oak girths 22 ft. 4 in. near the ground; and at a height of 5 ft. it throws out immense limbs, some of them 7 ft. 8in. in girth. All of the above patriarchs are in the county of Sussex.

On the Kent side of the tributary of the Medway are a few remarkable trees, including an Oak on the banks of the stream itself. This measures 16 ft. 7 in. in girth near the base, and stands 80 ft. high. The trunk is a perfect picture and the tree is still growing vigorously. In Rear Wood is an Oak 14 ft. 5 in. in circumference, near the ground, and standing 83 ft. high. It also is vigorous and healthy. The well known Pembury Beech grows in sandy soil near the village of Pembury. It girths 22 ft. 5 in. at a foot from the ground. The trunk at 36 ft. from the ground is 8 ft. 11 in. in circumference, where it sends out huge limbs girthing 7 ft. The branches are crooked, gnarled, and twisted in all directions and forms; and artists may frequently be seen sketching this venerable old Beech.

HERBACEOUS FLOWERS FOR COMPETITION.

I quite admit what "Coila" says on p. 43 that there would be a danger of exhibitors staging flowers of Lilium auratum and L. speciosum, grown under glass, if Lilies were admitted in stands of hardy herbaceous plants. Deception, however, is possible in various other classes which are annually scheduled by horticultural societies throughout the country. The argument for the exclusion of Lilies from stands of hardy herbaceous flowers, therefore falls through, otherwise, numerous others, even of the leading classes would have to be excluded. The above two Lilies are, perhaps, more frequently grown under glasss than out of doors; and that is certainly the case with L. Harrisii. I cannot, however, quite reconcile the statements of "Coila" when he says, "who can tell whether they have been treated as pot plants or cut from the open border?" A little further on he says it is annoying to find L. auratum, L. Harrisii, &c., in stands of hardy flowers, "when it is perfectly well known they have been flowered under glass."

If such was perfectly well known to be the case, then the prizes should be withheld and the exhibitors disqualified, to put it mildly. Possibly "Coila" meant that other exhibitors strongly suspected that the flowers had been grown under glass, but could not prove it. The matter could be exposed and righted after the day of the show, if any dishonesty on the part of the exhibitor could be proved. A few exposures of this kind would put a check on the tendency to palm off plants from the glasshouses as border grown plants. The wording of the schedule should distinctly state that the plants must be grown

without the protection of glass, then there would be no excuse for the backslider.

Some gardeners of my acquaintance are of opinion that competitors occasionally buy their Apples and Pears in the market in order to make good the deficiencies of their own fruit-rooms for exhibition purposes. Moreover, nothing is easier then for one exhibitor to get flowers, fruit, or vegetables from some other garden in order to win prizes. I do not suppose that any one would think of excluding such classes from flower show schedules. All that societies can do is simply to uphold the right as far as is in their power, and to make for righteousness generally.—*Plantsman.*

PORTLAND ROAD NURSERIES, READING.

CALLING at this branch of the establishment of Messrs. Sutton & Sons, Reading, recently, we made a hurried inspection of the houses, and noted some interesting things, including a large and floriferous batch of Saintpaulia ionantha, a pretty dwarf plant with blue flowers, not unlike a Violet. The Gloxinias of Messrs. Suttons' grand strain have been flowering all the summer, commencing with last year's tubers in spring. Empress of India, or Sutton's Purple, has very large, dark violet-purple flowers. Sutton's Crimson was also one of those still flowering freely. Being late in the season, most of the varieties had given over flowering. As we proceeded through the houses, the family to which the above belong, seems to be very popular at Reading, for several other genera were represented. Among the pretty and unassuming subjects we cannot omit mention of Koellickeria argyrostigma, the olive and spotted leaves of which are hinted at by the specific name. The short scapes bear numerous small, white, tubular flowers having the upper segments and the upper side of the tube red. The aspect of the plant reminds one of some member of the Saxifragaceae rather than the Gesneraceae.

All the above are stove subjects, but quite a number of the others can be successfully grown in an intermediate house, or even a greenhouse. Amongst the former we may mention the dwarf and showy Gesnera cardinalis with light green, woolly leaves and large bright scarlet flowers. A large batch of this was in prime condition, and only about 6 in. high. The species was recently reintroduced from South America by Messrs. Sutton & Sons. On the other hand, G. fulgens reaches a height of 12 in. to 15 in., forming a pyramidal panicle of orange or scarlet beautifully spotted flowers. A yellow variety here is very choice and distinct. There was a houseful of Achimenes in numerous and beautiful varieties just passing out of season. This class of plants is always well done here. Streptocarpus Wendlandii commenced flowering in January and has continued in that condition ever since. The blue flowers, with a white eye, are very pretty, while the huge, solitary leaf is very striking. S. Wendlandii had been crossed with the varieties of S. Rexii or hybrids of that type, and the result was an intermediate race with more numerous leaves, and still more numerous flowers, on scapes that are developed in succession all through the spring and summer, from March to September, and are very gay all the time. In colour, the flowers are of various shades of blue. All of the above subjects show how popular the members of this order are at Reading.

How beautiful are the Torenias, yet how neglected they are in private establishments. Here we noted T. grandiflora alba, with white flowers beautifully tinted with pink. T. Fournieri is characterised by three large, velvety, violet blotches on the three lower segments. T. Bailloni, one of the prettiest, has golden flowers with a blackish-purple throat, and is so decidedly pendant as to make a charming basket plant. Browallia speciosa major is notable for the great size of its blue flowers, and is useful for conservatory work. The small pale blue flowers of Exacum affine are pretty though not showy, and are decidedly fragrant.

In the open ground a large number of seedling and hybrid Begonias was flowering very freely. Crimson Gem was crossed with Princess Beatrice, both belonging to the B. semperflorens type, and the result was very satisfactory, the progeny having bronzy-crimson leaves of much smaller size than those of the first-named, and therefore not liable to hold water, so that they are less liable to get damaged during a rainy time, as in the case of Crimson Gem. There are other crosses, and indeed the Messrs. Sutton are always making experiments in order to improve upon existing varieties.

The outdoor trials of Tomatos were ripening a heavy crop of fruit. Numerous other experiments of a novel and interesting character are being conducted, the meaning, aim, and purport of which will be disclosed in due time. Meanwhile we may state that numerous experiments in the grafting of various members of the Solanaceae have been made during the past spring and summer. Usually the graft is cut to a tapering or wedge-shaped point at the base, and the stock is split down the centre to receive it. Occasionally a splice graft is effected. Physalis Franchetti has been grafted on the Potato; the former bore seven fruits on a stem, while the Potato was furnished with tubers in the pot. In like manner the Egg Plant grafted on the Potato was likewise fruiting. The Tomato was grafted on the Tree Tomato (Cyphomandra betacea), and the former was fruiting, while the foster parent carried its own leaves. The Tree Tomato was also grafted on the Egg Plant, and the latter upon the former, making a good union in both cases. Solanum nigrum and S. Dulcamara were each grafted on stems of the Potato and were fruiting and flowering abundantly. Tomato Earliest of All grafted on Potato Woodstock Kidney, and on Windsor Castle, behaved very differently in the two cases. Some seedling Potatos raised this year and finally planted out of doors had produced a haulm that was 4 ft. to 5 ft. high. It is to be hoped that something advantageous will, at no distant date, arise out of these experiments.

USE AND ABUSE OF THE PRUNING KNIFE.

I HAVE been interested in reading the article by "A. P." in your issue of last week, on the use and abuse of the pruning knife. It certainly is surprising that there is so much ignorance and thoughtlessness in pruning fruit trees. My experience has been very similar to "A P's." I came to my present situation seven years ago. There were two dozen bush Apple trees that had been planted twenty years. They were a mass of thick growth, and not more than a bushel of Apples on all the trees. There were scores of young shoots 3 ft. and 4 ft. long, and as thick as a man's finger. There had been four gardeners here during the 20 years, and they had all pruned them in close every year, just as they would a Cherry Laurel.

My employer told me I had better grub them up for he had been told that Apples would not grow on that soil. I persuaded him to let me try what I could do for a year or so. My treatment of them was the same as "A. P's." I thinned out the centres (being obliged to use the saw pretty freely), and left the leading shoot from each branch, some all their length, and others were shortened a little. In two years some of the trees began to bear well, especially four trees of Warner's King. Last year we picked seventeen bushels from these four trees; and last week nineteen bushels, besides two or three bushels that had fallen.

Some of the branches were almost touching the ground, and, of course, the trees are four times the size they were; but the last two years they have required scarcely any pruning. The other sorts have not borne quite so freely, but there are about six bushels of Blenheim Orange on trees that had no fruit on them until three years ago. Altogether we have about thirty-five bushels of good fruit, where, if the old system of pruning had been continued, there would have been nothing but a lot of flower sticks.—*Thomas Wm. Herbert.*

BOTANICAL DRAWINGS.

AN interesting series of coloured drawings of plants is on view at South Kensington, in the Botanical Department of the British Museum. The largest amount of space is justly devoted to the beautiful and yet botanically accurate sketches of the brothers. Bauer. The elder, Francis, was born at Feldsberg, in Austria in 1758. In 1783 he came to England, and was induced by Sir Joseph Banks to remain as draughtsman to the Royal Gardens at Kew, Sir Joseph himself defraying the salary during his own life, and providing in his will for its continuance. Bauer spent the rest of his days at Kew, and died there in 1841, in the eighty-third year of his age. His numerous drawings of the plants of the Gardens are now preserved in the British Museum. A selection was published in 1796, under the title "Delineations of Exotick Plants cultivated in the Royal Gardens at Kew," but three parts only, consisting entirely of Heaths, were published. He also prepared an elaborate series illustrating the structure of the grain, the germination and growth of the wheat-plant; these are well described by this biographer in the *Proceedings* of the Linnean Society (i. [1841] p. 102) as "perhaps the most splendid and important monument of Mr. Bauer's extraordinary talents as an artist and skill in microscopic investigation." Within the last few years Mr. Carruthers has, under the auspices of the Royal Agricultural Society, reproduced a selection of these in sheet form, illustrating the life-history of the wheat-plant from seed to seed. Another beautiful and detailed series of drawings of Orchids supplied material for Lindley's "Illustrations of Orchidaceous Plants."

Ferdinand Bauer was born at Feldsberg two years after his brother. It is of interest to note that the father held the appointment of painter to Prince Lichtenstein. When only fifteen years old Ferdinand was employed in making miniature drawings of plants from nature. In 1784 he accompanied Dr. Sibthorp to Greece, and the completion of the numerous drawings made on the journey occupied several years after his return; he was, in fact, thus engaged in England at the time of his brother's arrival. In 1801 we find him selected by Sir Joseph Banks to go with Captain Flinders as natural history painter to Australia, Robert Brown being the naturalist. When Captain Flinders went back to Europe, Brown and Bauer remained behind in New South Wales. Before returning home, in 1805, Bauer also spent eight months in Norfolk Island, collecting and making drawings of the plants, and from these materials Endlicher compiled the "Prodromus Florae Norfolkicae." In 1813 he began his "Illustrationes Florae Novae Hollandiae," a magnificent undertaking, which, however, met with so little encouragement that only three parts were published, the artist in the meantime retiring in disgust to Hitzing, near Vienna, and the large botanic gardens of Schönbrunn. Except for a visit to England in 1819, and occasional botanical excursions into the Austrian and Styrian Alps, the remainder of his life was spent near the Austrian capital, his chief occupation being the drawing of the more remarkable plants which flowered in the Imperial Gardens. He died in March, 1826. His paintings of Australian plants passed into Robert Brown's hands, and subsequently became the property of the British Museum.

The only artist, who, for the beauty and accuracy of his work can be compared with the Bauers, was was George Dionysius Ehret, several of whose drawings are shown. Ehret was born in Saxony, in 1708, but, like Francis Bauer, found a home in England, where he worked at his art, and died in 1770. We have already referred to his life and career in a recent number of "Natural Science" (vol. viii., p. 367).

Of the other last century artists whose work is represented, Sydenham Teak Edwards was born at Abergavenny (1769?), and died at Chelsea in 1819. He was a protégé of William Curtis, the founder of the "Botanical Magazine," and for many years during the life and after the death of his patron drew the plates for that journal. He also drew for the "Botanical Register" for several years, from its start in 1815. James Sowerby (1757-1822) who was born and died in London, is known chiefly for his connection with the "English Botany," all the original drawings and proofs of plates for which are in the Botanical Department. One of the most conspicuous objects in the Public Gallery of this section of the museum is his collection of models of British fungi. Of John Frederick Miller (fl. 1776-1794), Frederick Polydore Nodder (fl. 1777-1794), and Sydney Parkinson (died 1771), we know but little. From Britten and Boulger (British and Irish botanists) we learn that Nodder was botanic painter to Queen Caroline, and also drew and engraved the plates for Martyn's "Flora Rustica," while Parkinson was another protégé of Sir Joseph Banks, with whom he went to the South Seas in the "Endeavour," in 1768, as draughtsman; he died on the Indian Ocean in January, 1771. The sketch of a White Lily on a black ground, by John Christoph

Dietzsch (1710-1769), represents an old and striking style of plant-portraiture.

Of nineteenth century artists, specimens of whose work is shown, Walter Hood Fitch was born in Glasgow in 1817, and died at Kew in 1892. His most important botanical work was in connection with the "Botanical Magazine" and Hooker's "Icones Plantarum," both of which he illustrated for more than forty years. Of Mrs. Withers, to whom is due the beautiful sketch of a Columbine, we know nothing, and the same applies to the Chinese artist who produced the two elegant drawings of Chrysanthemums. Worthington Smith is still with us, and much in evidence in the Botanical Gallery, of which his illustrations of British Basidiomycetes form a conspicuous ornament, besides affording valuable help to students of a group of plants which it is impossible to keep in anything approaching to a natural condition.

In our remarks we have had to refer again and again to Sir Joseph Banks, to whom botany, and especially the Botanical Department of the British Museum, owe an unmeasurable debt of gratitude. It is appropriate to find him, represented by the beautiful statue by Chantrey, as sitting between the two cases in which the drawings are shown, his head inclined towards the one containing the work of the two Bauers.—*Natural Science.*

THE SWANLEY NURSERIES.

If a bird's eye view of the county of Kent were taken, certainly one of the spots that would be the most conspicuous by reason of its brilliancy of colouring would be the Swanley Nurseries, which may be designated as the headquarters of the world-renowned firm of Messrs. H. Cannell & Sons. True, it is, they have other establishments of much larger size, but it is at Swanley that by far the greater portion of the glass is located. Within an area of some seventeen acres is enclosed a store of floral beauty from which supplies are drawn by ardent cultivators in all parts of the known world. Not only is the home trade of the firm of huge dimensions, but the export business carried on with British dependencies, as well as foreign countries is immense.

Naturally enough a visit to such an establishment to anyone who possesses a knowledge of horticulture is at all times interesting and instructive. None know better than the Messrs. Cannell of the craze of the public for novelties and improvements upon existing forms of favourite plants, and none are more conspicuously in the vanguard of progress.

Well for us was it that the degree of physical tire largely depends upon the state of the mind, for at Swanley there is so much to see, and in our own case such little time to see it in, that we could not stay to dwell upon their glories of one phase of floriculture before another claimed our attention.

The glass-houses are some thirty-eight in number. They are with two or three exceptions, homogeneous in character, being of span-roofed construction, about a 100 ft. in length, and fitted with the latest ventilating and heating apparatus. *Apropos* of heating we may remark here that the Messrs. Cannell were the first to practice that admirable method of running a row of pipes round the eaves of the house, instead of having all the piping, as is usually the case, close to the ground. The result of this is that the houses so treated are as free from drip as it is possible to get them, and those gardeners who are plagued with houses in which drip is prevalent will be well aware what a great boon this is.

Tuberous Begonias are a great feature at Swanley. Many thousands of seedlings are raised each year, the best of them selected and saved, and the remainder weeded out and thrown away. We were too late in the season to see the pot plants in all their beauty. Something else besides mere show has to be thought about, for seed saving is after all the real business of the season. We found the plants arranged in batches according to their colour. We noticed twenty-four distinct lots varying from pure white to rich yellow and deepest crimson, with many intermediate shades. Even although thus far advanced in their career the plants did not exhibit that great "legginess," to use a gardeners' phrase, that one might have expected. We learnt from our courteous guide that quite as much attention is paid to dwarfness and sturdiness of habit as to the size and form of the flower. This is as it should be.

Passing through house after house of seedling Begonias, we came to a fine batch of Balsams in 6-in. pots. For conservatory decoration these easily grown plants are well nigh indispensible, and some of the Swanley shades of yellow, purple, and rose, together with the not less lovely pure white form, are among the best we have ever seen.

Achimenes receive a full share of attention, as indeed their undoubted merits entitle them to. If several batches are grown they may be had in flower all through July, August, and September. Mauve Queen, which exhibits a lovely shade of mauve is a truly magnificent variety. The flowers are large, and produced in great profusion and the plants are dwarfer and sturdier in habit than the majority of varieties. Firefly, with its fiery crimson flowers is another first class form.

Those of our readers who have seen the various exhibits of Cannas made from time to time by the Messrs. Cannell at the Westminster Drill Hall, and other places, know to what state of perfection the culture at Swanley has attained, when such huge trusses of flowers are produced by plants growing in comparatively small pots. At the time of our visit one of the houses literally blazed with the colour produced by a fine batch of plants in small 32-size pots. Of the numerous fine varieties here displayed we have only space to mention one or two of the *creme de la creme*. Paul Bruant is a deep crimson; Souvenir de Ant. Crozy exhibits a rich shade of orange scarlet, banded with gold, the segments being of unsual size and substance; Aurora is a deep orange scarlet; and Chas. Henderson a charming buff-yellow, flushed towards the centre of the segments with rose.

The collection of Cockscombs is certainly one of the most notable features of the establishment, and is probably unique in the whole of the United Kingdom. In addition to the old crimson purple form some wondrous novelties have been introduced. Numerous shades of yellow, buff, orange, rose, rose-purple, and magenta were displayed, many of the combs which were of large size being crossed and recrossed with zigzag lines of bright gold in addition to the blaze of the ground colour. The plants were accommodated in six inch pots and were charactised throughout by extreme dwarfness in habit.

Cactaceous plants have a long span-roofed house fully 150 feet in length devoted to their peculiar requirements, and a fine representative collection is gathered together, although very few of the specimens are as yet of any great size. Still, the plants throughout are clean and healthy, and doing well. A little group of Stapelias, several of which were in flower, attracted our attention including the curiously blotched S. bufonis. The foetid and unpleasant odour exhaled by these flowers has caused the name of "Stinkpots" to be applied to them, and not inaptly. S. tsomoensis bears dull purple flowers not unlike the appearance of meat in the first stages of putrefaction. So close indeed is the resemblance that even the flies are deceived, for Mr. H. Cannell, sen., assured us that he had seen them laying their eggs upon it.

Passing from the Cactus house into a large roomy structure we were greeted with the sight of a superb batch of Vallota purpurea bearing numerous large fine flowers, the fiery scarlet of which seemed strangely at variance with the specific title of purpurea.

Leaving the houses Mr. Cannell led us round the outdoor domain, in which there was not a corner but what had its occupant. First of all, however, we must make mention of a charming little rockery in which numbers of Alpine subjects, including some of the more suitable succulent plants, have been established. By the side of this is a series of water tanks devoted to the accommodation of various Nymphaeas and other aquatics. This little corner Mr. Cannell whimsically calls his "Norfolk Broads." Although of small extent they certainly make up in interest what they lack in their size. Hard by is a pretty little summer house with creepers bowered o'er. Here it is that Mr. Cannell dispenses hospitality to occasional visitors, and we can assure our readers that on a hot summer's day the cool breeze and the drowsy hum of the bees gathering their fill of honey from the flowers that surround us on all sides have a soothing, nay, an almost soporific effect.

But to pass on; Chrysanthemums are largely grown, some 6,000 plants being flowered in pots each year. All the best and leading varieties are included. By all accounts the art of educating Chrysanthemums to stand the malign influences of long sea voyages unhurt is carried to a high state of perfection at Swanley. In the season vast quantities of plants are despatched over the sea, the last consignment of 400 varieties in thumb pots that had been sent to New Zealand, having arrived in the pink of condition. The plants which are to do duty in the Old Country are also looking well and healthy, particularly the bush specimens.

As most of our readers are aware Dahlias are a speciality, a large area being devoted to them. With regard to number of varieties the collection is one of the richest, all sections of this showy autumn flower being well represented, whilst the Cactus division is particularly strong. By an elaborate system of checking, as the plants are shifted from one quarter to another, wrong naming is almost impossible, and purchasers may depend in getting each variety sent for true to name and character. The plants this year have not done so well as usual, owing to the difficulties they have had to labour under in the shape of the almost total absence of rainfall, although thorough cultivation has done much to mitigate the ill effects of this. We were too early to see these extensive plantations of Dahlias in full bloom. That is a pleasure which we have in store for some future season, when we hope to accept for ourselves the cordial invitation offered to all by the Kent firm to "Come and see."

VEGETABLES FOR EXHIBITION.

(*Concluded from Vol. xii. p. 798*).

Carrots, Beet, and Parsnips.

We now come to Carrots, and under the same heading I will include Beet and Parsnips, as their culture in many details are similar. To be able to produce these roots in their best form, special culture must be adopted, and that is by growing them in holes made with a strong stake or crowbar. In few gardens does sowing in the orthodox manner produce these as we see them in collections of vegetables of the greatest merit. Therefore, trenching should be done in good time before seedtime to a depth of 2½ ft.; then the soil should be forked over and holes made for Carrots 15 in. deep; for Beet 12 in.; and Parsnips 2 ft. 6 in. or 3 ft. The width of the same should be in proportion to the thickness of the roots expected. These holes should be filled with a mixture of woodashes and burnt soil with a little lime added and sifted through a fine sieve, with the addition for Carrots of a little bone meal. This last ingredient seems to be necessary not only as an assistance to growth, but as a means of the roots becoming better coloured, which, of course, is very important. The seeds should be sown on the top of these holes thinly, and as soon as it can be distinguished which is the strongest plant, thinning should take place and the plant left as near the centre of the hole as it is possible to discern. By having this preparation done, there is nothing to hinder the young and tender root from going straight down, and perfect specimens in good numbers may be expected.

Insects, of course, have to be guarded against, and the Carrot fly will likely be the most troublesome. The remedy recommended for the Onion fly equally applies to that of the Carrot; and if vigorously carried out, may be the means of entirely preventing it; but, of course, circumstances alter cases, and very often no amount of attention, however great, will absolutely be successful. Supposing, for instance, we had a thunderstorm suddenly bursting over us, as is often the case, and every particle of whatever preventive we had applied was washed off the plants and lost, then if the sun in a few minutes time were to shine brilliantly, the fly, of course, would speedily make its appearance, as if by magic, and deposit her eggs on the leaves; and the rudiments of the damage would be done before the gardener had even time to reach his plants. It will be seen then how futile may be our efforts even with all the science of the present day applied.

The best time to sow Parsnips is as soon as the weather will permit in February, and the ground in workable order; Carrots the first week in April; and Beet not before the end of that month. Continuous hoeing between the lines is necessary not only to keep the ground free from weeds, but to enable the air and the action of the weather to reach the roots. Of varieties of Carrots nothing seems to equal the

selected type of Intermediate, of which Sutton's and Veitch's are reliable. Pragnell's Exhibition and Sutton's Blood Red are two of the best varieties of Beet, while the Student and Dobbie's Model Parsnips are unequalled. It is advisable that these roots should not be lifted any length of time before the show or else they will assume a rusty appearance, and lose that fresh look so desirable in all vegetables.

CAULIFLOWERS.

Few are the collections of vegetables shown without Cauliflowers, which form a strong point when in good condition. The seed should be sown either in boxes, frames, or the open border, according to the time they are wanted, and the variety that is grown. If to be raised outside, the best method is to sow broadcast on a bed, very thinly, and as soon as ready for pricking off, this should be done. It the ground has been prepared with some old hot-bed manure or half decayed leaves, the plants should be pricked off 6 in. apart each way, and a good watering given them. After due time they will lift with the trowel with good balls, and may be transplanted to their permanent quarters. The soil cannot well be too rich, and if deeply trenched and heavily manured the Cauliflowers will grow very quickly, as they should do, and form heads of a suitable character for exhibition.

The distance they should be planted apart will much depend on the variety, but it is always safe to give them plenty of room, otherwise the lower leaves soon assume a yellow tinge and rot, and the plants are deprived of their natural support. Two feet each way will be sufficient for medium or small varieties, such as the Early London, but 3 ft. is a good distance for the Autumn Giant type. The Cauliflowers, like most of the Cabbage family, are moisture-loving plants, and are benefited by copious supplies of liquid manure and water; but it must not be assumed that they will thrive in badly drained soil where stagnant water is evident. Should the season be a wet one a sprinkling of any safe fertiliser will be an advantage, but in dry ones water or manure in a liquid form is preferable.

Should the heads seem too early for the desired purpose, they should be pulled up with the roots adhering to them and placed in a dark cool shed or cellar and the leaves and roots merely sprinkled with water. It is astonishing how long they will keep in this manner in a perfectly fresh condition. The best Cauliflowers ever I exhibited were kept in this way for a fortnight. If these had been left in the ground till the date of the show they would have been useless. It is necessary to tie the leaves over the curd as soon as it begins to form, otherwise the sun and weather soon renders them useless for exhibiting. The great points to be observed are medium size, perfectly white and spotless curds, and solid heads. The caterpillars of the Cabbage moth will undoubtedly give trouble, but persistent hand picking is the surest remedy. There are numerous other insects and diseases that are less or more troublesome, and the club or finger-and-toe amongst these is in many places beyond the control of the gardener, but I cannot here touch on them all. Cabbages, Sprouts, and Broccoli may be similarly treated as the Cauliflower, with this difference in the case of Sprouts, that the ground where they are to be grown, if rich, should be solid, otherwise the growth becomes too soft to stand the winter and the Sprouts lose and are not sufficiently solid for exhibiting. This remark also applies to the Broccoli, but it is seldom they are required for show work. Of varieties of Cauliflowers, Veitch's Pearl is excellent for early shows, and for those later nothing can equal Sutton's Autumn Mammoth and Veitch's Autumn Giant. Brussels Sprouts are valuable as a green vegetable in collections from October onwards, and the Wroxton and Sutton's Exhibition are excellent sorts for producing solid buttons.

BROAD, RUNNER, AND DWARF BEANS.

Under one heading I shall next take the Broad Runner, and Dwarf Beans, as their culture is in many particulars the same as the Peas, I need not go over the same ground again, but merely touch on a few points of detail. The Broad Bean may be sown from January onwards, and as soon as it has formed three or four trusses it should be topped with the double object of securing larger pots, and in preventing black fly attacking them. Two or three pods will be sufficient to grow on each stalk, and the rest should be thinned off. Care must be taken to stake or in some manner prevent the wind damaging the stalks by twisting them about. Sutton's Exhibition Longpod, and Carter's, are invaluable for producing even and long pods. The Runner Bean must not be sown before the third week in April, out of doors, but may be started in pots and planted out about the end of that month. By this means the grower is enabled to get an earlier return. The great point is to plant thinly. Like most other seeds, we are apt to sow too many of them in too small a space, and the results are not so satisfactory. Thinning the pods and stopping should be practised, and of course, the reward is soon attained.

Sutton's Prizewinner still heads the list of Runner Beans, but I would here mention that Tender and True is working its way to the front, and is a Bean I think highly of. The pods are of the Canadian Wonder type. For Dwarf Beans Canadian Wonder is one of the very best, and hard to beat when well shown. I might mention that these crops, such as Peas, Beans, and Onions are much benefited by being top-dressed, as this conserves the moisture and, of course, benefits the plants, and has the additional advantage with the Peas and Beans, of allowing the gatherer better footing when the ground is wet instead of wading through the soil.

LEEKS AND CELERY.

We now come to Leeks and Celery and their culture is much the same for show-work. Sowing should be done thinly in pans about the middle of February, in a temperature of 60°, and as soon as fit to handle, the seedlings should be transplanted into other pans or boxes about 2in. apart, and grown on in the same temperature till the middle of March, where if necessary these may be further transferred into other boxes, using a rich compost of loam and rotton cow manure. As soon as they are again growing freely they should be removed to a cold frame, and after a time duly hardened off. In the meantime, the trenches should be prepared to grow them in, and these may be 18 in. wide and the same in depth, then filled in with any rich material in the shape of cow manure, pigeon or chicken dung, or in fact a mixture of all, adding of course wood ashes. Part of the soil should be taken out to form the trench, and the whole filled up to the level. The Leeks and Celery should then be planted in single file about 12 in, apart, and given a thorough soaking of water. After they have begun to grow the Leeks should be carefully looked after, and strict notice taken that no soil reaches the heart of them.

Strips of paper should be put round the Leeks in the form of a collar, and every fortnight this should be pulled up slightly and the soil added till the blanched part reaches 12 in. or 14 in., when plenty of water and liquid manure should be given. The Celery should have all side and useless growths removed as soon as possible, and strips of brown paper also placed round them, but not too tightly. About four weeks before the show, the paper should be increased to the full height that it is desired to have the blanched part, and no soil at all added. By this means few if any worm-marks are visible, and a purer blanched head is the result. The best Leek to grow is undoubtedly the Lyon if you can secure it true. Dobbie's Champion may be said to be the most reliable as it is a well selected strain and easily blanched. Of white Celery, Sutton's Solid, and of Red, Standard Bearer, are two of the best.

I should have liked to have touched on Tomatos and Cucumbers, but as these would lengthen my paper too much, I shall draw to a close with a few remarks on staging. It must not be assumed that when the vegetables are grown that everything is completed; for here one grower may have as good and even better vegetables and yet lose the honours by lack of taste in their arrangement, on the show table. This, of course, may seem a small matter, and no doubt to some it is, but to the majority it is often the perishing rock. I have no hesitation in saying that to those who are not proficient in this point, that it can easily be acquired by a little timely forethought and study. If he would picture to himself even with the help of a slate and pencil for an hour or two on a leisure evening, the difficulties would soon vanish, and his method of arrangement improved. Parsley I might say is quite indispensible, and a select strain should be grown for the purpose.

The whole thing may be summed up in a few words. Each dish should be arranged separately and placed so as to appear to the greatest advantage when first looked upon There should always be a back ground to each collection and this can easily be formed by such vegetables as Cauliflowers, Celery, Leeks or anything else suitable. The dishes should not be divided otherwise the weight of each seems lost and a scattered appearance given. As a closing point I might say that after a whole season's toil and care, it may seem somewhat hard to get defeated; but if so, no effort should be spared to achieve a higher position; and if these efforts are put together in a proper manner, success and that which the grower deserves, assuredly lies before him. —*James Gibson, Devonhurst, Chiswich.*

PRODUCTS OF ORANGE BLOSSOMS.

IN their natural state the products of the blossoms of the Orange tree serve to flavour drinks, sweetmeats, &c. When distilled they yield two very much esteemed products in Italy, the orange flower water. or *acqua nanfa*, and an essential oil, called *meroli*, Moreover, when candied, they form a very delicious sweet, much in vogue in some regions in Sicily. The orange flower water is made of equal portions in weight of blossom and water, which yield, on an average, about one-fifth of the combined weight of water and flowers, and *acqua nanfa*, plusabout six or seven decigrammes per 100 kilogrammes of essential oil, that is, from ·0006 or ·0007 per cent. Notwithstanding the abundance and excellent quality of the raw material, the best manufacturers of orange flower water are to be found outside Italy. In France great quantities of this water are manufactured, as well as a spirit called *petit grain*, which is produced by a distillation of the leaves As to candied sweets, made out of the blossom, these are said to be more wholesome, as well as more palatable, than many other productions of the confectioners' art. The flowers are, in the first place, selected with care, weighed, and immersed in cold water for twenty-four hours, after which they are dipped simply in cold water, re-washed in cold, and finally spread out on a linen cloth or sheet to dry. When completely dry, they are laid out in low, wide dishes, each flower separate from its fellow, and are then sprinkled with double their weight in sugar, administered at intervals during a period of eight days. During this same period the flowers are frequently moved and kept in the shade, and, at the expiration of the term, they are once more placed in the sun, whose rays dry them completely.—*Journal of the Society of Arts.*

GARDENING MISCELLANY.

VIOLET PRINCESS OF WALES.

Is Christmas at hand? If not, the Princess of Wales Violet seems making an effort to antedate that time. Nor do the flowers seem at all timid, whatever the season may be, for they are rising up boldly on stalks 6 in. to 7 in. long, so that the bouquet maker should have no difficulty in making them into posies even of considerable size. These long stalks should also be very convenient for those who wish to place a bunch of the sweet-smelling flowers in glasses of water to be stood about on the tables in dwelling rooms. The flowers themselves are large and of a light, bright blue, and therefore more attractive than those that are of a dull, dark violet. The outer face of the flowers is a shade or two darker than the inner one, and therefore as attractive unless we wish to admire the dark blotch at the base of the lip, and the dark lines on the lateral petals, as if the Violet intended in the near future to become a rival of the Pansy in that respect. These early flowers seem to be reversing the seasons. Already the Primroses seem to be waking up from their summer sleep. These thoughts have been wakened in us by the receipt of a bunch of flowers of Violet Princess of Wales from Messrs. H. Cannell & Sons, Swanley.

MARIE LOUISE VIOLET.

A FINE bunch of this useful and popular old Violet comes to us from Mr. A. Pentney, gardener to A. J. Howard, Esq., Worton Hall, Isleworth. The clear light blue flowers, with a white centre only partly concealed by the numerous small petals, were sweetly scented and well developed for this early part of the year. The stalks were 4 in. to 5 in. long. In the letter accompanying them Mr. Pentney says, "I have been repeatedly told, since living in the neighbourhood of London that Violets cannot be

grown successfully near the Metropolis; but the fact that I could have picked a dozen similar bunches this morning proves the contrary, at any rate, in Isleworth, within nine miles of London. I think one great mistake frequently made is giving insufficient air after the Violets are planted in frames. I find plenty of air whenever possible is the best preventative of the dreaded damping off, coupled, of course, with carefully and frequently picking off any decayed leaves."—*A. Pentney.*

WOODWARDIA RADICANS.

This fine Fern so well adapted for window cultivation is, at least, so far as our own observation goes, seldom met with as a room plant. The fronds are broad and gracefully arched, producing when grown in a basket, a most pleasing effect, it being one of those Ferns which produce young plants on the ends of the fronds. When once procured there is no difficulty in keeping up a succession of young plants. Fronds furnished with these plants in embryo, may be laid on the surface of a seed pan, filled with a mixture of loam and peat, made sandy; fasten the frond down, flat on the surface, keeping the upper surface upwards, and sprinkle a little silver sand over the whole, not so as to bury the frond, but that it and the young plantlets may nestle on the soil Keep moderately moist and the young plants will soon emit roots into the soil. Planted out in a cool fernery, the fronds reach rather large dimensions, not unfrequently being found from 8 ft. to 10 ft. in length. Loamy soil suits it best, and when grown in small pots a watering with liquid manure occasionally, or a top dressing of blood manure, when growing, is highly beneficial.—*W. B. G.*

THE ALPINE POPPY.

This is a near ally of the Iceland Poppy (Papaver nudicaule); in fact, it is often considered that the latter is a mere variety, namely, P. alpinum nudicaule. Be that as it may, both are equally pretty in their respective ways, and the Iceland Poppy is the stronger grower, being generally about a foot high, while the Alpine Poppy is only half that height or less. It has deeply glaucous, finely divided leaves from amongst which the flower scapes, bearing a solitary, white bloom, rise to a height of 3 in. to 6 in. A salmony-pink variety (P. a. roseum) has been flowering all the summer in the rockery at Kew, and as the seeds get scattered about, the seedlings come up, often reverting to the parent form with white flowers just in the same way as the garden varieties of the Iceland Poppy vary. The flowers are pretty, but fragile and ephemeral in their duration like all the rest of their race.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Agarics in a Mushroom Bed.—*Fungoid*: The Agaric which you gathered from your Mushroom bed and sent us is Agaricus (Tricholoma) melaleucus. In France it is considered esculent, though amongst English authorities, there is no statement as to its qualities, good or bad. If it is harmless in France, it might be so here; but the qualities of the same species on the Continent and in Britain, sometimes vary, or at least are believed to do so. There would be little harm in putting them to the test therefore, but we should advise you to do so cautiously at first to enable you to prove the qualities of the Agaric in question, and discover whether it may be partaken of in quantity without injurious effect.

Fungus on Grass.—*C. Freeman:* The specimen you sent us was one of the Myxomycetes, and in that respect allied to "flowers of tan." It is figured by Massee, and by Cooke and Massee who give the place where it is found as Lyndhurst in the New Forest. Your find adds therefore a new locality to that given by the above-named authorities. It would appear to be a rare or little known species, and chiefly if not solely of scientific interest.

Diseased Tulip Bulbs.—*James Thurstan*: Some of the Tulip bulbs you were kind enough to send us for inspection were sent to our leading modern authority on fungi, and he writes to say that the specimens submitted to him "were attacked by the well-known bacterial disease caused by Bacillus Hyacinthi, of Wakker. It is impossible to save bulbs, if even only, apparently, slightly attacked, so that all such should be destroyed. It is advisable not to grow Tulips on the same ground, from which the diseased bulbs were taken, as the disease remains in the soil for some time." This has reference to an article which appeared on p. 27, describing the mysterious loss of a large proportion of a collection of florists' Tulips since the lifting of the bulbs from the beds.

Seedling Lapageria.—*Robt. W. Saunders*: We consider the soft pink Lapageria, spotted with white, a very pretty one. Its beauty would be best seen and appreciated, however, in juxtaposition to dark varieties and the white one. The dark rose and crimson varieties as well as the pure white one are generally the most admired by the general public. Why this should be so we cannot say beyond the fact that growers have taken the greatest liking to them. If you like the light variety, by all means cultivate it, we say, whatever other people may think. By-and-bye, however, the fashion may change to some extent, and the light varieties may after all get the chance which is justly their due. The flower you sent was of good substance, and we liked it, though at present it may possess very little horticultural value. The flower might have been larger, but it will, no doubt, improve in this respect, as the plant increases in strength.

Window Boxes.—*J. Thom*: A cold frame would be the best place to keep the boxes until the bulbs begin to make a display in spring. Of course they could be kept in the windows they are intended to decorate, but there are several reasons for otherwise disposing of them. The soil would be exposed to the battering influence of rain when it blows from certain quarters. At other times the soil might tend to get dry, owing to exposure to wind in such an elevated position. To put them into a dark shed or cellar would hardly be the right place, because the bulbs would grow and the leaves get blanched, possibly at a time when it would be inconvenient to expose the boxes to unfavourable climatic conditions. On the contrary, if placed in a cold frame, even of a temporary construction, the bulbs would come on slowly and naturally.

Raising Seedlings of Rosa rugosa—*R. J.*: The seeds may be rubbed out and sown at once in boxes and placed in cold frames where they may remain till March. Then by putting them into a pit or vinery at work, and as near the glass as possible, the germinating process will be hastened. The seedlings may be potted off separately and kept in growing condition as soon as they have made the first rough leaf. Do not empty the boxes of the soil, but water it down to settle what has been disturbed by the picking out of the seedlings. Others will continue to make their appearance for some time, and may be treated in the same way. Ultimately harden off the seedlings and plant them in the open.

Names of Plants.—*John Cameron*: 1, Polygonum cuspidatum, or if only 2 ft. to 3 ft. high, it is the variety P. c. compactum; 2, Daboecia (Menziesia) polifolia alba or the White St. Dabeoc's Heath.—*J. H. O.*: The hothouse shrub is Duranta Baumgartii variegata.—*T. M.*; Miltonia Clowesii; 2, Miltonia spectabilis; 3, Odontoglossum crispum, a good variety; 4, Odontoglossum harryanum.—*A. S.*: 1, Spiraea japonica rubra; 2, Spiraea salicifolia; 3, Veronica Andersoni imperalis; 4, Veronica parviflora angustifolia; 5, Veronica pinquifolia; 6, Pyrus Maulei.—*H. B.*: 1, Sternbergia lutea; 2, Cyclamen neapolitanum album; 3, Arbutus Unedo; 4, Ptelia trifoliata; 5, Aspidium angulare.—*A. Ward*: 1, Scilla autumnalis; 2, Scabiosa Columbaria; 3, Bryonia dioica,; 4, Salvia Verbenaca.—*W. G.*: 1, Salvia splendens; 2, Symphoricarpus racemosus; 3, Taxus adpressa.—*W. Sharpe*: 1, Polygonum cuspidatum; 2, Euonymus europaeus; 3, Pellionia daveauana; 4, Nepeta Glechoma variegata. It is British and perfectly hardy.—*Omega*: Sternbergia lutea.

Fumigating Tomatos.—*Reader*: You may fumigate your Chrysanthemums with the XL. All Vaporiser without any danger to your Tomatos. We take it for granted that you will fumigate in moderation, that is, according to directions given with the insecticide. We never heard of any poisonous properties being attributed to it, and reckon that the vapour will mostly find its way outside after a time without leaving a deposit of any consequence.

Communications Received.—W. B. G.—Omega.—James Ross.—D. A. D.—Thos. Bate.—A. E. Stubbs.—Exeter.—S. Arlott.—Nemo.—B. A.—F. D. R. Denton.—Meg.—G. Trehearne.—T. L.—Frank.—Reader.—Y., Acton.—W. H,, next week.

TRADE CATALOGUES RECEIVED.

H. Cannell & Sons, Swanley, Kent.—A valuable Book of Reference in Horticulture; Descriptive Catalogue.

W. Atlee Burpee & Co, Philadelphia, U.S.A.—New Sweet Peas for 1897. Special offer to the trade.

Cunningham & Wyllie, 98, Mitchell Street, Glasgow.—Autumn Catalogue.

Laing & Mather, Kelso-on-Tweed, N.B.—Carnations.

LONDON SEED TRADE.

September 22th, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 39. Seed Market, Mark Lane, report a small demand for Agricultural seeds for present sowing owing to continued wet weather. Red Clover and Cowgrass are dearer, as the growing crop is said to be damaged. Alsike is also held for an advance. Trefoil and White Clover steady, Tares dull. Rye grasses neglected. Rye firm. Mustard and Rape unchanged.

COVENT GARDEN MARKET

September 23rd, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs.	30 0	
Grapes, per lb.	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....	2 9	3 6
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	0 0
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips ..... per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	1 6	2 0
Asters, doz. bches	3 0	6 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Carnations, doz. bchs.	4 0	6 0
Eucharis ...per doz	1 6	3 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	2 0	4 0
Gladiolii, doz. spikes	1 0	1 6
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	3 0	6 0
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	2 0	6 0
Pink Roses, doz.	1 0	1 6
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays	1 6	2 6
Tuberoses, doz. blooms	0 3	0 4
Primula, double, doz. sprays	0 6	0 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, In var. doz	6 0	24 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope. per doz.	4 0	6 0
Liliums, various doz.	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Mignonette	4 0	6 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet,	2 0	4 0

Agricultural Economist.

An Illustrated Monthly Magazine of 52 pages and cover; ponent of scientific and high-farming; advocate of co-operation in agriculture, in the supply of farm requisites and the sale of produce; organ of the Agricultural and Horticultural Association, the pioneer society for mutual supply of pure oilcakes, complete manures, reliable seeds and implements on wholesale terms. Specimen copy free. Subscription per annum, 5s. inclusive of postage. Single Copies 6d. each, through all Newsagents.—3, Agar Street, Strand, London, W.C.

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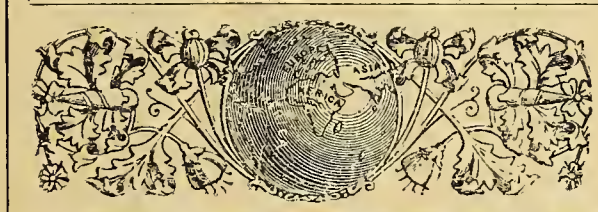

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, OCTOBER 3rd, 1896.

NEXT WEEK'S ENGAGEMENTS.

Monday, October 5th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens,
Tuesday, October 6th.—Opening day of the N.C.S. show at the Royal Aquarium (3 days)
Sales of Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.
Wednesday, October 7th.—Sales of Bulbs by Messrs. Protheroe & Morris. & Mr. J. C. Stevens.
Thursday, October 8th.—Sales of Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.
Friday, October 9th.—Sales of Bulbs and Orchids by Messrs. Protheroe & Morris, and of Bulbs by Mr. J. C. Stevens.

Experiments with Potatos.—On first thought one might readily take it for granted that experiments with Potatos had been carried on so long that nothing remained to be discovered concerning them. Nothing could be more erroneous, for a vast number of the experiments that have been conducted by farmers and gardeners alike, have been carried on altogether without any reference to the bearings of science upon them; and just as often, the means taken to insure a crop and the results obtained from year to year have been left unrecorded. Scientific men in this and in other countries have conducted numerous, and no doubt careful experiments, by means of water cultures in the laboratory, in order to determine what constituents of plant food play the most important part in their growth and increase, as well as the actual functions they perform. The facts have been tabulated and carefully recorded, with the results under certain sets of circumstances; but the fact that certain chemical changes take place in the living plant cell, which cannot be accomplished outside of it, supplies a hint that what takes place in the laboratory under carefully conducted water cultures may not take place in the garden and field, where a very complicated assemblage of elements of plant food and otherwise is present, to modify the results. The soil in different parts of the garden or field may and often does vary, so that absolute uniformity must be well nigh impossible. The weather, according to certain good authorities, does more to make or mar the results of any given crop, than tillage or manure. From that point of view the scientific experimenters in their laboratories can only draw general conclusions concerning plant life. Moreover, with the present limited facilities for acquiring a knowledge of plant physiology, as far as the average gardener or farmer is concerned, the conclusion that might be drawn, is that the value of laboratory experiments is greatly discounted by the results being buried in the obscurity of a learned language. Then experiments must be put to a practical test in field and garden, where the conditions of plant life are very complicated indeed.

These facts have been brought to mind by "Supplement III., to the Journal of the University Extension College, Reading," recording the experiments carried out in the trial grounds of Messrs. Sutton and Sons, by Professor D. A. Gilchrist, B.Sc,, in collaboration with Arthur W. Sutton, F.L.S. Having on a recent occasion given many of the results obtained by the use of various manures in the cultivation of Potatos under different sets of conditions, we shall here confine our remarks to a few of the points at issue. Experiments on the manuring of Potatos have been conducted elsewhere, but it was impossible to deduce from their results the most economical and efficacious method of doing so in Berkshire and surrounding counties. The soil is of a light and gravelly nature and the rainfall is also light, so that we are not at all surprised that experiments should have been instituted at Reading. On the other hand we think the area suggested above is too extensive. We have known many a farm on which the soil varied immensely from field to field and even on different parts of the same piece of ground. Sandy, gravelly, peaty and loamy fields cannot in the nature of things give the same results by the uniform use of given kinds and quantities of manures; hence if the cultivator means to be economical and exact in his methods of cultivation, he must first of all make himself acquainted with the requirements of each field at least where differences exist.

The excellent results obtained from some of the unmanured plots at Reading raises a number of questions. Those who conducted the experiments infer that high cultivation and the keeping of the land clean were factors in the case. The results also show that the direct manuring of 1896 was less effective than the indirect manuring of 1895. The early part of 1895 was very dry and September was equally so. The reason for this is no doubt that the dry weather prevented the manures from becoming soluble; for, so long as they lay in the soil in a practically inert condition, the Potatos would fail to be benefited by them. The past summer was again unusually dry, so that plots which were manured this year might give similarly good results next, even in the absence of manuring in 1897. Notwithstanding repeated proofs of this nature in two successive years it would obviously be fallacious to establish a theory that applications of any given manure would always be more effective the second, than the first season. The experimenters suggest, however, that with a dry soil and climate,

the residues of previous manurings may be more effective than direct applications for the crop under cultivation. This we can take for granted; but though a light soil can always be set down as an established fact, no cultivator, unfortunately, can predict whether any given season will be wet or dry, even though the rainfall for the district may be relatively dry on the average. On the other hand, in rotation cropping the value of the previous year's manuring is taken into account by good gardeners, and as often depended upon to give the desired results. This relates more particularly to farmyard and similarly long lasting manures. It may also apply to phosphates and potash to a smaller extent, otherwise the compensation demanded by outgoing tenants for unexhausted manures would be unjust, and the rights for such a claim imaginary. Under the circumstances we feel inclined to grant the postulates of the experimenters when they speak of getting the soil into a high condition. But while the land may be manured every second year with excellent results, in the case of rotation cropping, yet we do not think that this would answer the purpose if Potatos were to be grown for a number of consecutive years upon the same ground. There is the question of maintaining the fertility of the latter by supplying those ingredients which have been removed by the crop harvested and carried off the land.

Taking the unmanured plots alone, of the first four sets of experiments conducted at Reading, there are several points that require solution or explanation. Set 1 of the ten plots had received no manure since 1895; and Plot 1, we understand, got none even then, yet it gave a return equivalent to 6 tons 10 cwt. 20 lb. per acre. Set 2 had been manured in 1895 and 1896, except in the case of Plot 1 which gave a return of 8 tons 6 cwt. 88 lb. Why so great a difference? The unmanured plot of Set 3 fell back to 5 tons 1 cwt. 48 lb.; and that of the fourth set rose to 7 tons 14 cwt. 72 lb. The third and fourth sets were only instituted in 1896. They raise the question as to the kind or nature of the crop which occupied the ground in 1895. If either or both plots supported any leguminous crop such as garden Peas, Sweet Peas or Beans, the ground would have been left richer in soil nitrogen than it was previously. A record stating the facts of the case would have been of great importance in establishing an explanation of the outcome, for nitrogen is an important element in the production of a crop of Potatos. The absence of nitrogen from Plot 10 of the third set is a proof of this, for the result was only 5 tons 13 cwt. 104 lb. On the contrary, where heavy dressings of nitrogen were given, the growth of the haulm was very great, giving rise to hopes that were not realised, however. Well, the explanation we offer is that potash and phosphates favour early maturity, but that nitrogen stimulates the vegetative growth of Potatos and other plants, and even retards their ripening. Moreover, we think that the three most important elements of plant food—nitrogen, phosphorus and potash—are mutually dependent upon one another in securing the best results, so no one kind should be given in excess of the other. Phosphorus and phosphates promote the metabolism of nitrogenous ingredients; and potassium fosters the production and storage of starch and similar carbohydrates, so that the excess of any one of these ingredients implies waste of manure and a lack of the desired results.

With regard to the results of the experiments just completed, there is no necessity to imply inaccuracy in any one case, even if no one can give a satisfactory explanation of findings that appear to contradict what have been regarded as established facts. Future experiments may make the matter more clear, and may even upset some favourite theories of long standing. "Science commits suicide when she adopts a creed," so that it is well to maintain an open mind and unbiassed opinion upon questions that perplex us pending their solution.

The Almeria Grape.—About 4,549 barrels containing 163,764 lb. of grapes of this variety were landed at Liverpool from one boat lately.

There is a rumour that a British gardener is to fill the post of head gardener, at the Royal Conservatories, Laeken, recently vacated by the death of Mr. Henry Knight.

Vegetables are wanted for the mining towns up in the Rocky Mountains, and there is no soil more suitable or convenient for the purpose than that around Vancouver, Canada.

Cuttings of Pentstemons and Antirrhinums inserted now in pots of sandy soil will root in cold frames and be ready for transplanting into beds and borders in spring. By such means all the choice varieties can be preserved and perpetuated.

Mr. Owen Thomas, of the Royal Gardens, Frogmore, was recently asked to select one of his young men to go to the Imperial Palace, at Berlin, to develop the vineries there. The selection has been made, and the young man will shortly leave Windsor for his new appointment.

Great Fruit Show.—Our next issue will contain a full report of the great fruit show opened last Thursday at the Crystal Palace, under the auspices of the Royal Horticultural Society. Hardy fruit in many cases was in excellent condition, and the samples of large size, notwithstanding the past dry season.

An Acre of Demon Flowers is a description given to some wonderful Orchid or other in Brazil by one of our contemporaries. Collectors who went in quest of it were prevented from reaching it by the "wall of awful, sickening, overpowering odour," which rose between them and their prize. Trees, undergrowth, and everything were loaded down with the weight of the plants of this unsociable colony of Orchids.

Refreshing Candour.—The following proclamation comes from an ingenuous cultivator at Wynberb Villa, Aberbeeg, Monmouthshire:—"I hav'nt grown the biggest Goosebery, or the most gigantic Mushroom, but I have a fine array of Sunflowers, many of which are nearly 9 ft. in height. Some plants have forty fine blooms, some measuring 17 in. across, and leaves 19 in. across. That'll take some beating, won't it." It will indeed:—next please.

The New Postal Convention between Great Britain and Italy that was signed at Rome in July last will most likely have very far reaching results. There is a brisk demand in Italy for English flowers, flower roots, and small shrubs, but hitherto the difficulty of getting them across the frontier has sadly handicapped the trade. According to the new regulations there is a maximum parcel post of eleven pounds for three francs, so that small plants or shrubs which up to the present have almost invariably succumbed, *en route*, in consequence of the delay may be obtained with ease by English residents in Italy.

Midlothian Gardens.—The Hessle Pear is a great favourite in Midlothian, and the trees generally are carrying a fair crop this season. The weather seems to have especially suited it, although the high winds have undoubtedly done a lot of damage. At the present time the Hessle Pear is fetching about 1s. 6d. per gallon. Vegetables are in great abundance. Cabbages are only fetching the modest sum of 8d. per dozen. Savoys are beginning to make their appearance in the market, although the public generally prefers to wait a little longer until a touch of frost has visited us. At present, however, the price is 1s. 2d. per dozen. Leeks are getting better every day, and there is even now a good demand for them at 1s. 6d. per dozen bunches. Cauliflower has had a fine time of it of late. Only a few weeks ago they commanded 4s. per dozen, but now they are down to 1s. per dozen, the supply being ample, and, indeed, in excess of the demand.

The London Fog is doomed, if we are to believe the gentleman at Greenwich, who claims to have an appliance which will effectually check it.

A Consignment of Russian plants has been sent to the Queen's gardens at Osborne, where Her Majesty is about to construct an extensive range of glasshouses for the production of flowers and fruit. A kitchen garden of some extent is also to be laid out.

The North British Railway Company have been offering great encouragement to fruit growers by forwarding small quantities of fruit at half rates by passenger trains. Senders should be careful to label their packages "Fruit," otherwise they are liable to be charged in full.

Single Hollyhocks have been all the rage in Pittsburg during the past season for garden as well as house decoration. They are grown in beds, belts, and borders, as well as in the neglected corners of gardens. The crowns are protected with a light straw mulching in winter.

The Publication of a list of Farmers, market gardeners, and others desirous of availing themselves of the facilities offered by the Great Northern Railway Company for sending their produce direct to the consumers at greatly reduced rates, will materially help the cause.

Holiday Traffic at Hampton Court.—The number of visitors to Hampton Court and the gardens has increased to such an extent of late years, that the Urban District Council has decided to ask the First Commissioner of Her Majesty's Works to widen the gates of Bushey Park, both at the Hampton Court and the Teddington entrances.

Vagaries of Nomenclature.—*Bulletin* 112, of the Cornell Experiment Station, N.Y., in an article on Nomenclature, Classification, and Variation says, "The disseminators of new horticultural varieties take advantage of waves of popular enthusiasm. They name flowers after actors, baseball players, barons, saints, and society leaders. Almost is realised one of Dean Swift's dissonant combinations, 'lords, fiddlers, judges, and dancing masters.' The only consistent course is to abolish the whole system of naming varieties after living persons. So long as this system continues, the element of disappointment and bad taste will persist. It is a consant reproach to horticulture that the art lacks dignity. Need it also be pointed out that we seem to be deficient in imagination?"

The Yorkshire College, Leeds.—The fifth annual report of the Agricultural Department of this College is before us, and shows that interest in the Agricultural and Horticultural classes held in the three Ridings under the auspices of the Yorkshire College, is not only maintained but evidently on the increase, The average attendance at present at different places in the county varies from year to year, owing to various causes, including in some cases the sub-division of the centres where the lectures are given, in order to meet the local convenience. The expenses of conducting lectures to farmers, instruction in dairying and horticulture, and classes for elementary teachers, have been met by the grants obtained from the County Council of the three Ridings, so that the income from all centres and the expenditure are almost identical. The attendance at the various centres to hear the lectures on Horticulture has averaged from 12 to 164 at different places. The latter audience was brought together at Thorare, to hear Dr. James Clark lecturing on "Fruit Culture." From four to ten lectures were delivered at each centre. The lectures on Poultry-keeping, drew larger audiences, for there was an average of 250 at each of the four lectures delivered at Wakefield. Other courses on this subject drew smaller, yet good attendances. These facts serve to show that the students are of a practical and economical turn of mind, and will attend classes where some subject that can be turned to profitable account is being taught. Many of the students had come long distances. During last winter's session eighteen courses of lectures were delivered in the North Riding; thirty-four in the East Riding; and 37 in the West Riding. Examinations were held at eighteen centres; eighty-four students presented themselves; and sixty-seven passed, thirty-five with distinction.

Tobacco is grown in Germany on an extensive scale, supplying more than half of what is annually consumed in that country.

A Plum stone, swallowed by the infant child of John Kirk, Maxwelltown, Dumfries, was the cause of its death. The child had picked it up from the floor, and was choked by the stone lodging at the opening of the larynx.

Sweet Pea Extra Early Blanche Ferry.—This is said to be a fortnight earlier than the old variety. When Sweet Peas have become weeded out, this one is predicted to take the place of Blanche Ferry, Empress of India and Painted Lady.

A Talipot Palm in bloom.—The Talipot is one of the most remarkable of Palms, flowering only once, after which it dies. The huge spathe, enclosing the panicle of flowers, bursts with a loud report. One of these Palms has just flowered in a village near Nagoda on the banks of the Gintota River, in the Southern Province of Ceylon. The "Sarasavisandaresa" says this is quite a unique occurrence in the district.

The Yellow China Aster, if not a startling novelty, is, at least, an interesting one, and on that account welcome. The quilled heads of flowers are distinctly yellow, though pale, and the plant is only of moderate vigour, yet we hope that both these shortcomings will be surmounted in the near future. Most, if not all, gardeners would welcome a golden China Aster. He will be fortunate who first secures it.

The late William Henry Knight, gardener to the King of the Belgians, was born and bred at Kelso, in Scotland. When the King built his octagonal church within the grounds at Laeken after the destruction of his palace by fire, on the 1st January, 1890, the massive columns of the arcading were ordered at Aberdeen. They consisted of polished red granite, and were procured as a compliment to the King's favourite head-gardener, just recently deceased.

Successor to Dr. Trimen in Ceylon.—Mr. Willis, of Cambridge, left London on August 21st last, to take the place of the well-known Dr. Trimen, as director of the Royal Botanic Gardens, Peradeniya, Ceylon. Mr. Willis is well-known and much esteemed at Cambridge, and his practical and scientific botanical attainments all tell in his favour as one well-fitted to do justice to the responsible post he is called upon to fill for the Ceylon Government and public. Mr. Willis, after a distinguished career at the University, went to Glasgow as botanical assistant in the University there, where he greatly extended his knowledge and experience. Mr. Shipley, Science Lecturer, at Christ's College, Cambridge, is editing a series of books, and Mr. Willis is mainly responsible for the compilation of that entitled the "Pocket Cyclopaedia of Botany." Professor Marshall Ward knows from personal experience, the kind of man wanted at Peradeniya, and considers Mr. Willis the right sort of man to follow Dr. Trimen. He also thinks that Mr. Willis' Encyclopaedia will prove a very useful little work. Possibly its usefulness had something to do with this appointment.

The New Zealand Godwit.—Those who take delight in natural history will find an interesting article on this sea-shore bird by James Buckland in the English Illustrated Magazine. The bird is a native of New Zealand, simply because it lives there from the end of October to the first days of April, for that is the summer season at the Antipodes. During the rest of the year this migratory bird leaves New Zealand with the regularity of the calendar, and flies over an expansion of ocean equal to one-third of the earth's circumference to its breeding regions in the arctic regions of the Northern Hemisphere. It might be a good nut for the naturalist to crack as to whether the southern godwit is not a native of the north of Asia, seeing that it breeds there. The Maori name for the bird is the "kuaka," and near the northern end of New Zealand is a bay to the eastward of the headland Te Reinga. Here the "kuaka" assembles in a vast flock covering the sands of the seashore, and hardly leaving room for the individuals to rest, preparatory to the start for the long journey to the northern regions. The sight of this vast assemblage of the birds from the various parts of New Zealand preparatory to their departure, is a phenomenon which few naturalists have the pleasure to behold.

The Boy in the Garden, where novices in cycling are allowed to practise, finds that the notice boards to keep off the grass are ineffective, because those who sit between two wheels are liable to kiss the ground. —*Wagg.*

Some New Freesias of a clear white, clear yellow, reddish and purplish tints have been raised in the United States by a woman, or as we should say, a lady gardener. Some fine new forms of Cosmos were also raised by a woman.

Flowers of the Sweet Pea (Lathyrus odoratus), and also of L. maritimus, are said to be useful for keeping in sick rooms and otherwise, because the sweet odour has the effect of driving away the house fly.

Distribution of Bedding Plants. — The Commissioners of Her Majesty's Works and Public Buildings intend to distribute, this autumn, amongst the working classes and poor inhabitants of London, the surplus bedding plants in Hyde Park, Regent's Park, and in the gardens at Hampton Court. If the clergy, school committees and others interested in this distribution would apply to the superintendents of those respective places, which lie nearest to their parishes, they will receive early intimation of the number of plants each applicant is likely to receive.

Holland House, Kensington, the town residence of the Earl of Ilchester, was once the residence of Fox, the great statesman, who lived and died here. Samuel Rogers, the poet, used to wander where the quaint Dutch garden is now situated. Addison also lived here, as well as William Penn, the founder of Pennsylvania. Tradition points to the lawn opposite the south front, as the spot where Cromwell laid his plans in conjunction with Fairfax, who, with his troops, was quartered here. Amidst the vast changes that have taken place since then, the estate still maintains its quaint rusticity, tree-planting, sheep-pasturing, and haymaking within sound of the bustle and stir of the greatest city on earth; yet it is almost completely secluded and shut out from the gaze of the outer world.

"Peaches grow here like Weeds," Mr. T. Rhodes, of Griqualand East, South Africa, writes to tell us, and continues, "They are now in full bloom (August 31st.)—A beautiful sight, all blossom and no leaves, but I am afraid they will not be beautiful long, as I am told that the locusts are only six miles away; and if they come here as they did last year, in *half an hour* everything will be eaten up, as there are millions of them. What with rinderpest and locusts the outlook for the farmers is very bad indeed; however, we must trust in Providence." Mr. Rhodes says nothing of the Argemone mexicana pest, misnamed the Scotch Thistle, and which the Govenor of Cape Colony marked out for extermination in his recent proclamation.

Shirley Gardeners' Mutual Improvement Association. —The monthly meeting of the above was held at the Parish Room, Shirley, Southampton, on the 21st ult., Mr. B. Ladhams, F.R.H.S., presiding over a thin attendance, very bad weather prevailing at the time. Mr. T. Lowns, Hon. Sec., Winchester G. M. I. Association gave an excellent lecture on "Root Crops for Gardens," and a very useful discussion followed. A report was read of experiments with Potato sets, showing that tubers of a good size planted whole were better than small or cut sets, the latter being the worst. The foreign Onion vendor was also discussed, and the question, "Cannot we grow these Onions?" did not receive a very satisfactory reply. It is bad enough to import the Onions, but worse still to import the retailer. There was a good exhibition of produce. Mr. C. G. Stuart Menteth, J.P., Rownhams Mount (gardener, Mr. W. Risbridger) had a splendid collection of six sorts, for which a certificate was awarded; also another collection of six sorts, received a V.H.C.. Mrs. Keats, Rownhams House, (gardener, Mr. G. W. Bushell) showed six sorts of vegetables, receiving V.H.C.; Messrs. Cozens Bros., Rownhams, received V.H.C. for Dahlias, Cactus and show; Mr. B. Ladhams, Shirley Nurseries, had a certificate for seedling Heliopsis scrabra "B. Ladhams"—a good thing. M. W. Perkins, J.P., Portswood (gardener Mr. J. Miles) received a V.H.C. for a bunch or cluster of Walnuts, thirteen in number, making a remarkable specimen; Mr. G. W. Othen had a V.H.C. for three dishes of Pears. Hearty votes of thanks to the lecturer, and the exhibitors closed the meeting.

The latest thing in Centenaries is the Potato celebration, which is to take place in Ireland.

Work is always in Order, and he is a lucky individual who finds time for anything else.—"*Florists' Exchange.*"

A Deputation of Scots to the Jubilee Show.—It is rumoured that a deputation of the principal horticulturists of the north will visit the series of shows to be held at the Royal Aquarium in November in connection with the Jubilee of the National Chrysanthemum Society. Our northern friends, we are sure, will be certain of a hearty welcome, and certainly the occasion will be one well worthy of a special trip from Northern Britain, or, indeed, from anywhere else, inasmuch as these shows will probably be the biggest that this century has seen. We also understand that a similar deputation is a-foot from the Royal Aberdeen Society somewhere about next May in connection with the Temple Show, and a tour amongst the principal establishments on the east coast.

National Chrysanthemum Society.—The meeting of the Floral Committee of the National Chrysanthemum Society at the Royal Aquarium, on September 23rd, did not call forth very much worth mentioning. Only one Chrysanthemum was submitted, for particulars of which see another column. Mr. John Green, Dereham, sent a few very nice forms of Cactus Dahlias, including samples of the early decorative variety known as Aurora. This sort is of dwarf habit, is very floriferous, and commences to bloom early. A vote of thanks was returned by the committee. Mr. Green also sent some cut shoots of a new seedling winter flowering Begonia with a request that the Committee would express their opinion upon it and inform him as to whether there was anything like it in cultivation. Opinions, however, were divided, and it was ultimately decided to ask Mr. Green to send a plant. From all appearances the seedling in question is not far removed from B. martiana.

ROYAL SCOTTISH ABORICULTURAL SOCIETY.

As mentioned last week a party of members of the Royal Scottish Aboricultural Society on Saturday afternoon, made an excursion to the woods and policies of Armiston, Midlothian, kindly thrown open to their inspection by Mr. R. Dundas. The visit proved a most interesting one.

The Armiston estate extends to over 10,000 acres, of which about 1,000 acres are covered with plantations and woodlands; and lying at a considerable altitude on the northern slope of the Moorfoots, the situation is naturally cool and exposed; but great improvements skilfully carried out have converted it into one of the most fertile and highly cultivated estates in the upper districts of the Lothians. On arrival at Gorebridge Station the party were met by Mr. James Cook, factor on the estate, who ably discharged the duties during the visit.

Early in their walk through the policies, the party had their attention directed to a grove of Oaks said to have been raised from acorns obtained from the Duke of Portland's estates in Sherwood Forest. After encountering some notable Sycamores—one of the largest of which had a height of over 100 ft. and a girth of 16 ft. 3 in. at a height of 5 ft. from the ground—the party spent a considerable time in the "wilderness," the avenues of which were laid out towards the end of the seventeenth century, and which yet bear testimony to the taste and attention to detail of the school of landscape gardening founded by Le Notre. A stately old Silver Fir, supposed to have been one of the first introduced into Scotland, attracted considerable notice, as did also some remarkably fine specimens of Scots Fir, Beech, Larch, Lime, Norway Spruce, and Cedar. The avenues of Beeches and Limes were much admired. The company had also an opportunity of being shown over the flower gardens, lawns, and shrubberies. Before taking their departure the party were received in the mansion-house by Mr. Dundas, and served with tea.

At the close cordial votes of thanks were accorded to Mr. Dundas, and also to Mr. Cook for his services as leader. Similar thanks are also due to the secretary, Mr. Galloway, who carefully attends to all the arrangements necessary upon the occasion of these excursions, and we are quite sure that these

departures are not the least interesting or the least instructive items in the society's annual programme. We are indebted to Mr. Malcolm Dunn for our report.—*Gyp.*

PATENT COIL STAKES.

Mr. Porter, of Maidstone, who some few years ago brought out his patent invincible crock for plant pots, and which is too well known among plant growers to require any explanation from us, now sends us another of his inventions. This time it is a stake for Carnations and other flowers requiring support. Where many Carnations are grown, a great deal of time is taken up in tying the stems to the stakes; the latter also want constantly renewing. This new patent coil stake does away with both these objections. No tying is required, and the stakes are practically everlasting. They are made of stiff wire in the shape of a coil; the flower stems have simply to be placed in the coils, when they are at once secured from bottom to top. They also add greatly to the appearance of the plants. The coil stakes are also made for bulbous plants, the stem of the stake being bent so as not to touch the bulb. The stakes are not in commerce yet, but we strongly recommend all on the look out for a good thing to secure a supply when they are sent out.

PEPPERMINT-OIL INDUSTRY IN JAPAN.

"Kuhlow's German Trade Review" says that Mr. G. Marx has communicated to the German Society in Tokio (a society which undertakes the study of the natural history, and of the inhabitants of the East) a paper dealing with the distillation of Peppermint-oil in Japan. From this it appears that the industry has not yet benefited by the introduction of European methods, although it is one of considerable importance. It is the opinion of many that the substitution of an improved method for that now followed would benefit both the quantity and quality of the oil produced. The apparatus universally adopted in Japan consists of cast iron broad-edged boilers, wooden vats, and a condenser. Generally there are three sets of stills, etc., combined in one battery, with a common furnace. They are arranged in steps so that the lowest is built into the ground. The process is begun by filling the boilers with water, then the vats, which have perforated bottoms, are placed on the broad edges, and surrounded with straw bands and soft clay. It is in these vats that Peppermint is placed. Next the inverted condenser is put on, and filled with water: the heat passes from below and disappears through the chimney, on which the distilling begins. The boilers are properly heated by the fumes as they pass, and sufficiently so, as one is smaller than the others. The steam penetrating the herbs, carries with it the essential oil, and condenses on the outer side of the condenser, being collected in the vessel hanging upon it, from which the condensed water, containing the oil, passes through a bamboo reed inserted in a flask. Each of these consists of a little wooden container, in which a glass cylinder (an old bottle without bottom or neck) is inserted. In this, the water separated from the oil runs through a little pipe again into the boilers. As soon as the water in the condenser becomes hot, the workman replaces it with cold water. The emptying is effected by a bamboo syphon. The workman inserts the short arm in the inverted cooler, closes the lower opening, and sucks the syphon until the water flows into it.—*Journal Society of Arts.*

COLEUS FROM STEVENAGE.

From Messrs. Young and Dobinson, Holmesdale Nurseries, Stevenage, Herts, comes a boxful of leaves of seedlings of Coleus, showing a remarkable variety of colouration, and measuring from 3 in to 9½ in. in length; leaves of the latter size were 6½ in. across. There were over five dozen of them, and all named, but space forbids mention of half of them. We are most pleased with Young's Gem, a velvety-crimson variety, with a carmine centre, and yellow, deeply-cut goffered edges. Princess Alice, Bride of Essex, and B. Wynne, were rich maroon-crimson sorts with a broad carmine centre of the same outline as the leaf. Duke of Wellington and Balmoral were somewhat paler bicolor varieties of the same type, and of good substance. The latter remark applies very forcibly to Prince Consort, a dark variety with maroon mixed in about equal proportions with brilliant red or crimson. Even more bizarre was Essex Rival, most intricately marked with blackish-maroon, carmine, yellow, green, and other shades. Smaller, but prettier in their way, were Duchess of Northumberland, with a pink centre; Trafalgar Square, with a mottled carmine centre; and Battersea Park, yellow, blotched with maroon and carmine, and having a broad green margin. Many of the varieties were of different colours on the two surfaces. The varieties are to be sent out next spring.

THE MOUNTAIN ASH,

Pyrus Aucuparia.

Though of no special value as a timber-producing tree, yet the Mountain Ash, Rowan, or Wild Service, under all of which names it is commonly known, whether in leafage, flower, or fruit must be considered as amongst the most valuable of small growing trees.

It rarely attains to a greater height than 50 ft., the average size, however, being much smaller, with a well-rounded head of rich, green foliage somewhat after that of the common Ash. The leaves are pinnate, and the divisions or leaflets serrated at the edges and quite smooth. When laden with its large bunches of coral-red berries it forms a most conspicuous object in the landscape. It is a native of Europe generally, from Iceland and Norway to the Mediterranean, North-west Asia, and North America. Throughout Britain it is widely dispersed, occurring in all situations, from sea level to almost the highest mountain top. The soil best suited for the Mountain Ash is that of a strong and damp nature, but it will also thrive luxuriantly on gravel or rock, while it can withstand the coldest and most exposed situation. Usually the finest specimens will be found in rather dampish, sheltered situations, such as in a mountain valley, or the margin of the woodland.

The timber of the Mountain Ash is hard, fine grained, and easily polished. It is of a reddish-brown colour, and when obtainable of sufficient size is used in the making of carts, agricultural implements, framing for machinery, lining for carts, shafts, and similar purposes. When small it is used largely in crate and basket making.

The berries are made into a kind of flour in Northern Europe, while in Scotland a preserve is made from them.—*A. D. Webster.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Odontoglossum rubiginosum.—There seems no end to the beautiful forms of Odontoglossum, both varieties, and natural hybrids that may turn up in collections. That under notice is a supposed natural hybrid between O. crispum and O. sceptrum, which M. Lucien Linden considers a good species. In any case the flowers of the form under notice are exceedingly handsome, having one very large and a few smaller crimson purple blotches on the sepals and petals. The ground colour is yellow, fading almost to white at the base. The lip has a large brownish-purple blotch in front of the crest, and a few smaller ones around the sides of the latter. In general contour, the flowers resemble those of O. wilckeanum, but the segments are much broader, and the colours darker and richer. This Odontoglot turned up in the collection of L'Horticulture Internationale, and the *Lindenia, Pl.* 517 gives a beautifully executed plate of it.

Odontoglossum crispum calos.—This name has been Englished as Odontoglossum crispum, fine variety, but we should have translated the varietal name as "beautiful." In any case that is the epithet we should apply to it. The ground colour of the flower is pure white. On each of the sepals and petals is one large, roundish, lobed, blood-red blotch which shows itself off to great advantage. Sometimes a smaller lobe or two accompany the large one. There are several blotches of moderate size upon the lip, while the central portion or disk is orange-yellow. This fine form came in for a considerable amount of attention at the meeting of the Orchidéenne, on the 19th of April last. It is well represented in the *Lindenia, Pl.* 518.

Vanda coerulea Lord Rothschild's var.—Numerous very fine varieties of V. caerula turned up at the meetings of the Royal Horticultural Society during last autumn and winter. Still a finer thing turned up in the collection of Lord Rothschild (gardener, Mr. E. Hill), Tring Park, Tring. The sepals and petals are much broader than in the typical form and of greater substance. The flowers are of a rich cobalt-blue, netted along the course of the principal veins with ultramarine blue. The outer surface of the petals is even darker than the face, almost if not quite rivalling that of the lip in intensity. There is usually the greatest concentration of colour on the lip of this species, and the sepals and petals of the type are very pale indeed. Such fine varieties as that under notice may well earn the title of "Queen of the East Indian Orchids" sometimes applied to the species. The variety flowered in Lord Rothschild's collection and *The Orchid Album, Pl.* 517 gives a beautiful illustration of a plant and a spike bearing five flowers.

Laeliocattleya hlessensis.—The parents of this bigeneric hybrid were Laelia pumila, and Cattleya Loddigesii, the latter being the pollen bearer. In habit the progency is intermediate, but the form of the flowers takes largely after the mother plant. The sepals and petals are of a soft rosy-purple. The obreniform lamina is of a dark crimson-purple, the colour running down into the throat and separating two large yellow blotches on the side lobes. The hybrid was raised by Mr. Charles Maron while in charge of the gardens of M. Darblay, at Corbeil, near Paris. It is named after the French town of Blois, the native place of the raiser. The seeds were sown in February, 1887, and the first flowers opened in October, 1890. A flowering plant is figured in *The Orchid Album Pl.* 519.

CHRYSANTHEMUMS FOR EXHIBITION.

The weather recently has warned us that the time has arrived for a change of quarters for the "mums." The weather generally has been very detrimental to success; wind and wet appear to be the prevailing atmospheric conditions throughout the country. The wet sunless September will check the ripening of the wood, and feeding of the plants; the latter to some extent can be overcome by sprinkling artificial manures on the surface. It will be requisite now to turn our attention to

Housing

the plants; possibly in some exposed positions, that may already have been done; but if the plants are somewhat screened from cold biting winds, they may be allowed out a few days longer; the time must be judged by the frosts in the district; if the locality is low lying and liable to early frosts, the plants are better and safer under cover; but if the position is high, and well sheltered, and the weather promises to be fine, they can be left out until the 8th inst., in the north, and a day or two later in the south. The selection and preparation of the position should receive immediate attention, if the roof of the house is thickly studded with climbers, the latter should be thinned, so as to afford the maximum of air and light to the plants. If necessary, this clearing out will afford an opportunity for a thorough cleansing of the house and its contents, which will be better for the general health of the plants. If more than one structure can be allotted to the plants so much the better, as they can then be divided for the better security of timing the flowers. The plants carrying the forwardest buds should be staged in the darkest and coolest house. The later varieties should be given the lightest quarters and, if possible, a position where the temperature can be raised somewhat if necessary. Of course the time of the exhibition is an important factor; if early, and the buds are somewhat late, a gentle rise in the temperature will be needful; if the reverse is the position, then the house must be kept cool, and strong sunlight subdued. Many growers now place under the roofs of their houses light tiffany, to counteract the powerful rays of the sun, which they aver is the cause of damping, the rays of the sun being intensified by the glass, means scalding the petals on which particles of moisture are resting, especially early in the day. This appears feasible, for it is only in warm muggy weather that damping becomes serious. As soon as the temperature gives indication of frost, fire heat can be turned on, which quickly dries up the excess of moisture, and reduces damping. If tiffany or shading is not at command, sheets of thin light paper can be placed over the more important flowers with the same advantage as shading the whole house.

Autumn Pests.

Earwigs have been unusually prevalent this season, and must be watched closely. Hollow stems or hiding places of moss in small pots should be placed amongst the plants, and should be gone through every morning and the pests destroyed. Mildew up to the present should not have made much headway, but prevention being better than cure, the plants, before housing, should have a syringing of sulphur and water, with a little soft soap added; turn the plants on their side and give the underside of the foliage a good drenching. This generally will suffice to keep the plants free until the blooming period, when it is nearly sure to show itself to some extent, being encouraged by want of air and light, when the plants are placed closely together. After housing, as soon as the atmosphere has got fairly dry, the plants should be fumigated for the same reason as the syringing with sulphur water, "preventing" or exterminating greenfly. This also should be done thoroughly, which will insure the flowers freedom from this pest during their blooming season. After the plants are settled in their inside quarters, the atmosphere must be kept dry, never fully closing the ventilators; whilst during the day an abundance of air should be admitted. Water the plants carefully, giving on all occasions some concoction of manure of fair strength, but not over proof. If from any reason the plants are found suffering from dryness, water with clear water, to recover them from flagging.—*W.*

THE PLANT HOUSES.

The Stove.

With the advent of October, all need of the blinds for shading purposes will have disappeared; therefore, unless it is intended to leave them out of doors all the winter for covering during frosty weather, they may as well be taken in at once. Where there is a number of houses furnished with blinds, the latter, on being taken down and rolled up neatly, should be all labelled, otherwise there may be a good deal of confusion presently. All permanent shading should be washed off without delay. The recent heavy rains will doubtless have removed the greater part, and the rest may soon be got rid of by means of the application of a mop or a hair broom dipped in warm water, followed up by a good syringing.

With the decline in sun heat and the increasing dampness of the air, the plants will need less water at the root, and the greatest care must be exercised in the giving of manurial stimulants. If the weather keeps bright, syringing overhead may be practised daily until about the middle of the month, after which time it should only be done on bright days. It may be that after the wet September, we shall be greeted with a bright October, although even this will have the disadvantage that bright days are almost sure to be followed by frosty nights. The fires will now require to be kept going briskly through the night.

Caladiums, as they go off, should be removed to a pit where they can be allowed to finish off. With very few exceptions all the plants are showing signs of having had enough of it for the season.

Nymphaeas —Where the temperature of the water, in which these charming aquatics are growing, can be regulated at will, it will be advisable to lower it a few degrees in a few weeks' time. The time is now not far distant when the plants will be claiming their annual rest, and they should, therefore, be excited as little as possible now.

Euphorbia pulcherrima.—As the flower heads of the earliest batch are now beginning to unfold, a welcome touch of colour will be obtainable in the stove. Anything more brilliant than the appearance of a small batch of these handsome plants can scarce be imagined, the large scarlet bracts coming out all the more conspicuously by reason of the prevailing gloom. Those plants that are developing their flower-heads may be treated pretty liberally with manure water just now.

Alocasias, Anthuriums, and other aroids will need particular care from this time forward. During the autumn and winter months, excess of water, combined with the low temperatures, causes the death of many of the thick, fleshy roots. In cases where the large plant stove cannot be maintained at a sufficiently high temperature, it will be well to remove the tender aroids to the shelter of a close pit before the dull weather sets in in earnest.

Pits and Frames.

The housing of all the tender subjects that have passed the summer out of doors, will now be the all-engrossing task, as it will not be safe to leave them out any longer. Room, naturally, will be of the utmost value, for no matter how much of it there is, it will scarcely be possible to avoid crowding in certain parts.

Carnations.—These ought to have been got in by this time, as the rains will do the plants nearly as much harm as a frost, but if they have not been seen to, then they must be taken in at once. First of all the securing of all loose shoots must be seen to, then the dead leaves must come off and the pots be washed. A light house must be chosen, where a night temperature of not less 58° Fahr. can be given with a rise of about 5° by day. In this the flowers will open freely.

Winter flowering Pelargoniums.—If no other position offers, the shelves in the pits may be turned to good service by devoting them to these subjects. If the shelves are already occupied, then a cold frame will do for the present, although the plants must of necessity be shifted to warmer quarters before severe frost sets in. The earliest batch, upon which the flowers are just opening, will soon be in fine condition, and provided they are well fed, should keep on flowering for some time to come.

Chrysanthemums.—The gardener is oftentimes compelled to leave these out later than prudence dictates owing to the fact that the houses are not in fit condition to receive them. A few hundreds or thousands of Chrysanthemums severely tax the resources of an establishment to find room for them, and Peach houses and vineries have all to be made the most of. If the Peach trees are full of leaves, the light obtained by the Chrysanthemums below, is rather meagre in quantity, and the plants are apt to get drawn, and in a measure spoiled. A good deal of care will be needed in moving the plants to their new quarters, more especially the large flowering ones. If no other convenience exists, the tallest plants may be stood close to the wall of a lean-to house, and supported by ties attached to the wires. The later varieties may be left out of doors a little longer if desired, but if this is to be done with safety, preparations must be made so that protection can be given easily, and at any time that may be necessary. The best plan is to erect a light framework of wood, over which tarpaulin or mats may be thrown when required.

Cyclamen.—Of late years the superiority of young plants over old ones has been well demonstrated by many growers in different parts of the country, and it has been unmistakably proved, that in order to get fine flowers and plenty of them, seed should be sown each year with the same regularity with which cuttings of Chrysanthemums are inserted. The present is a capital time to make the first sowing. Sow thinly in shallow pots or pans in a mixture of mellow loam, leaf soil, and sand, and cover with pieces of glass cut to fit them. Place the seed pans for the first fortnight, on a shelf in a pit, having a temperature of about 45° Fahr. by night. At the end of this time they may be transferred to a warm pit with a temperature of about 10° higher. As Cyclamen seed is oft-times capricious in the way in which it germinates, it will not do to get impatient should the seedlings not make their appearance so soon as expected.

Cinerarias.—Attend to the spacing out of the plants as growth calls for it, so as to avoid having drawn and weakly specimens. The final potting of the later batches must not be deferred for too long. It is not wise to allow the roots to become matted before the shift is given, and besides, the rapid passage of the fine weather has seriously to be reckoned with. Slugs have been doing a lot of damage of late, and some trouble may have to be gone through before the marauders are captured. Lettuce leaves form admirable traps, and if these are visited after dark, and looked over under the rays of a lantern, the leaves of the Cinerarias may be saved from injury.—*A S. G.*

Gleanings from the World of Science.

Struggle between Wheat and Native Plants.—On the estate of Sir John Lawes, Rothamsted, Hertfordshire, is an interesting portion of an old wheat field, where a severe competition went on for a few years between wheat and British plants. The portion now left to a state of nature was cultivated for forty years, wheat alternating with fallow. After 1882, it was allowed to lie bare, the wheat crop being unharvested and left to its own resources. The previous year the crop was reckoned at twenty-seven bushels per acre. The first after that was only half a crop. In the second year there was only a bushel to the acre; and this kept dwindling till in the fifth year, when the wheat plants were scarcely distinguishable from the other grasses. The wheat being altogether unable to hold its own, practically became extinct in five years, thus proving that it was not a British plant.

The British flora had gained the complete mastery, and the relatively small piece of ground now supports something like seventy species. On the 6th of July last we made a rapid survey of the ground and identified fifty species. One or two inspections earlier in the year, namely, in spring, and again about the end of May, would have enabled us to pick up the early flowering plants, and possibly to add even to the seventy species recorded. The most rampant and predominant members of the vegetation are Couchgrass (Triticum repens) Cock's-foot (Dactylis glomerata), Cow Parsnip (Heracleum Sphondylium), and Bent (Agrostis vulgaris).

Woody plants.—Trees and shrubs would undoubtedly in a few years monopolise the ground if allowed to do so; but it is evidently the intention of the proprietor and his assistants, to retrict the woody vegetation within prescribed limits so as to allow free scope for the herbaceous species. A hedge of trees and shrubs surrounds the field, and these have been scattering their seeds broadcast over the ground since 1882. The trees that came up had become bulky, and were beheaded some months before our visit. The Hawthorn, the Oak and the Ash were the most common intruders, taking the order given for their frequency. Next to these the Dog-rose (Rosa canina), the field Rose (R. arvensis), the Bramble (Rubus fruticosus discolor), the Goat Willow (Salix Caprea), and the Hazel (Corylus Colurna) might be placed. Their powers of aggression are now held in obeyance, so that their power to exterminate other vegetation cannot be observed, though there could be no manner of doubt about the ultimate result. Altogether we noted eight woody plants.

Natural Orders represented.—Of the fifty species of plants we identified, eight were woody, thirty-six herbaceous perennials, and six annuals. Moreover, the fifty species represented forty-seven genera and twenty natural orders. Compositae took the lead with ten species, namely, Centaurea nigra, Crepis virens, Carduus arvensis, Taraxacum officinale, Senecis Jacobaea, S. erucaefolius, Leontodon hispidum, Achillea Millefolium, Tussilago Farfara, and Sonchus arvensis. The Gramineae took the second place with eight species, to wit, Phleum pratense, Lolium perenne, Avena elatior, Dactylis glomerata, Agrostis vulgaris, Holcus mollis, Festuca ovina rubra, and Triticum repens. The Rosaceae followed with Crataegus Oxyacantha, Geum urbanum, Rosa arvensis, R. canina, Rubus fruticosus discolor, and Potentilla reptans. Then came the Leguminosae, including Trifolium repens, T. pratense, Lathyrus pratensis, Vicia tetrasperma, and Medicago lupulina. The above four were most largely represented. The Labiatae mustered Prunella vulgaris, Stachys sylvatica, and Calamintha Clinopodium. Three orders, each contained two species; the Umbelliferae included Heracleum Sphondylium, and Pimpinella Saxifraga; Cupuliferae contained Quercus pedunculata, and Corylus Avellana; and Scrophularineae were represented by Veronica Chamaedrys, and Bartsia Odontites. Twelve natural orders had only a single representative each. Epilobium montanum represented Onagrarieae; Myosotis arvensis, the Boragineae; Convolvulus, the Convolvulaceae; Plantago lanceolata, the Plantagineae; Scabiosa arvensis, the Dipsaceae; Valerianella olitoria, the Valerianeae; Fraxinus excelsior, the Oleaceae; Galium Mollugo, the Rubiacae; Rumex acetosa, the Polygoneae; Salix Caprea, the Salicineae; Ranunculus repens, the Ranunculaceae; and Equisetum arvense, the Equisetaceae. All were flowering plants except the Equisetum.

It will be seen from the above that a fair proportion of the plants were useful or ornamental; and those which came under that category were woody plants, five pasture grasses, the Dandelion, Lamb's Lettuce (Valerianella), two Clovers and the Meadow Vetch (Lathyrus pratensis), in all about seventeen out of fifty species, or 34 per cent.

HINTS FOR AMATEURS.

BORDER CARNATIONS.

THE time has now arrived when it will be well to make preparations for lifting the rooted layers. The recent rains have helped them along finely, and have, to a great extent, made up for the trying experience of the drought, which lasted for some time after the shoots were pegged down. It is not advisable to defer the lifting and potting up of the layers too late in the month. From the beginning to the middle of October is the best time for the operation, although it often happens that there is a press of work just at this season, with the result that the Carnations are pushed off for as long as possible.

In lifting the layers it will first of all be necessary to sever the connection with the parent plant. Only a sharp knife must be used, so as not to disturb the layer, the roots of which are very tender, and will most probably not have obtained a good hold of the ground as yet. For the same reason a trowel should be used for lifting, in order that that portion of the soil in which the roots are running may be preserved intact.

Layers not rooted.—It often happens that some of the layers, when lifted, are found to be entirely destitute of roots, and this often causes the amateur to doubt as to whether he is right in lifting them at all. In such cases if the base of the cutting is found to be hardened (callused) over, it may be taken for granted that it will not hurt to lift it. Such cuttings often do as well as those which are furnished with roots, a condition they will have emulated by next spring.

Soil.—This is not a very important consideration, as almost any ordinary material may be made to do duty. We have often had recourse to the old soil heap, whither all the old pot plants have been thrown. This generally furnishes good enough stuff, although it will be necessary to pass it through a half-inch meshed sieve in order to free it from rubbish. Such soil usually contains enough of sand, but a further addition of crushed bricks, or crocks broken up finely, is recommended.

Pots.—Either 2½ in. or 3 in. pots will do—the latter size being the more suitable for the layers of stronger growth and habit. One point, however, is of moment, and that is cleanliness. One crock in the bottom of the pot, with a few smaller pieces placed on the top, and covered with a little of the rougher part of the compost will be sufficient, as the plants will require but very little water all through the winter.

One layer should be placed in each pot, and the soil should be made fairly firm by means of pressure with the fingers, and two or three smart taps upon the bench. If the soil is rather dry, a watering may be given immediately after potting, but in most cases the moisture in the soil will be sufficient for the time being.

Labelling.—Wrong naming is a most fruitful cause of vexation, as well with professional as with amateur cultivators. It is highly provoking, to say the least of it, to find two or three different varieties bearing the same name, or other plants which have managed to change their names in some way or other during the passage of the period between one flowering season and another. Where numbers of varieties are grown, the best plan is to lift the layers of one sort only at a time, and to pot these off before another lot is operated on. Most of the mixing and wrong naming is caused by lifting the layers all at once, and not taking sufficient care to keep them separate. It will also be time well spent to put a label to each pot, for labelling will only have to be done once, and if seen to now will not require to be attended to next March, when the plants are consigned to their flowering quarters.

Plunging.—Decidedly the best method of keeping the plants through the winter is to plunge the pots up to the rims in ashes in a cold frame. The plants may be stood quite close to each other, and it is astonishing how many can thus be stored away in a small space.

All through the dull weather the plants should never be coddled, for to do so would be to injure their constitution, and instead of a batch of sturdy plants the result would be a lot of weaklings, with empty pots here and there speaking of numerous deaths. Whenever the themometer is above 32° Fahr. air should be given, and even during rainy weather the lights should be tilted up at the back so as to allow of the admission of air, whilst at the same time excluding the rain. During frosty weather a few Russian mats, or if these are not to hand, a little dry straw, hay, or bracken may be thrown over the lights. We have known the soil in the pots to be frozen as hard as frost could make it, and yet the plants came up smiling after all. Carnations will put up with a deal of cold through the autumn and winter months, but undue dampness at the root is a condition that must be avoided at all costs.

GATHERING FRUIT

THE very phrase "gathering fruit" has a sort of satisfactory ring about it, and happy is the amateur who is able to boast of the still more satisfactory feeling that comes when one is able to regard, with the pride of ownership, numbers of trees with branches weighted with rosy Apples or luscious Pears. We hope all our readers are able to do this.

With the exception of very late varieties, the fruit will now be ready for plucking. This is an operation of the highest importance. The fruit should be allowed to hang on long enough to enable it to perfect its full flavour, otherwise it will not only not eat well, but will not keep properly. On the other hand, it must not be left out too long, even if it is netted to protect it from the birds, otherwise some sudden squall will leave the amateur's hopes as well as the greater part of his fruit dashed to the ground. The right moment for gathering, then, must be seized, and a dry day chosen, for obvious reasons.

It is very easy to tell when Pears are fit to gather, for then the footstalk will part very readily from the branch to which it is attached Of course, it will be of no use to expect the fruit to be soft and toothsome before it is plucked—this will only come when it has lain for a longer or shorter period upon a shelf in a dry room. Apples also must part readily from the tree before they are fit to pick.

Now it must be borne in mind that fruit trees generally do not care for rough handling. To hammer a tree with a ladder, lacerate its boughs, split its branches, and knock or pull off its fruit buds is not exactly the best thing to do to insure a crop for another year. It is true there is an old couplet about "a woman and a Walnut tree, the more you beat them the better they be," but this system must not be put into practice with Apple and Pear trees, or it will be the trees, instead of the grower, that will "strike" next season.

So much with regard to the necessity for care when dealing with the trees; now with regard to the fruit itself. This should be handled as if every Apple were an egg, and every Pear a piece of Sevrés china. Even a slight bruise is fatal to the keeping. Shallow baskets, for preference, should be used, a layer of hay being placed in the bottom of these. The filled baskets should be taken direct to the storeroom, cupboard cellar, or whatever is used, and the fruit straightway transferred to its permanent quarters. Nothing like pouring the fruit from one basket to another, as if it were Potatos, should be attempted. It may also be advisable to remark that all ladders, steps, etc., that are employed for ascending the trees should be safe, otherwise the operator may experience the unpleasant sensation of feeling the ground rise up and hit him, and scatter and shatter the fruit of his labours as well as his senses.

The Storehouse.—Naturally, the best storeroom for the amateur will be the one he has got, as the conveniences are usually of the limited order of things. We may make mention here, however, of a plan of keeping Apples that we know to be adopted year by year in some quarters with conspicuous success. A cupboard under a staircase is utilised, the fruit being placed in shallow boxes, each capable of holding two or three layers. A sheet or two of newspaper is placed between each layer of fruit. Of course, this system scarcely comes up to orthodox ideas, as it is not possible to look the fruit over very often, but in want of a better plan it may certainly be practised.

Whatever place is made a storeroom of, *pro tem*, it must be so constructed that it can be securely locked up, or it is very certain that the fruit will not keep. —*Rex*.

Red pickling Cabbages are sent to our markets from Rotterdam, by the Dutch growers who are able to supply very highly coloured samples. The Dutch have long been noted for Red Cabbages.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Apples in Bad Condition.—The article entitled "The Use and Abuse of the Pruning Knife," by *A. P.*, on p. 59 of the last issue of THE GARDENING WORLD, is "an ower true tale" in far too many instances we are afraid, *Frank*. Have you read it? if not, we should advise you to do so without delay, as it will give you the key to the reason why your Apples have done so badly.

Worms in Pots.—*Y.*, *Acton*, complains of worms in his flower pots. The lime-water recommended to *Thos. Bates* to get rid of the same little pests from lawns is the best remedy. It may be prepared according to the recipe there given.

Nerines.—After the plants have gone out of flower you may remove them to a cold frame, *Meg*, if you think they are too unsightly to remain in the conservatory. Whatever you do, though, don't follow out your suggestion of drying off the plants now. They must be kept growing on now, and an occasional dose of liquid manure will be very helpful.

Soot as a Lawn Dressing.—You will find that soot is at once an inexpensive and effectual dressing for lawns, *G. Trehearne*. Sprinkled upon the grass before a shower its revivifying effects are great.

Covering for Bees.—We should advise you to take out a bar from each end of the hive, *R. Denton*, and to substitute a wooden dummy. This will help to keep the bees warm, as it will drive them into narrower compass. The slides guarding the teahole may also be pushed so close as to admit the passage of only one bee at a time. This will not only assist the bees in resisting the attacks of robbers, but will also exclude a good deal of the cold air. Several thicknesses of coarse flannel should be covered over the frames at the top, and the wooden cover securely placed over all, and weighted down by a couple of bricks or pieces of stone. The last is a very necessary precaution, as if the top is not secured, heavy winds and squalls may blow it off, to the no small detriment of the occupants.

Cyanide of Potassium is the very best specific for taking wasps' nests, *Reader*. A teaspoonful poured into the hole, whether by day or night, means certain death to the whole of the inmates. It is rather a curious sight when the cyanide is applied in the daytime to see the insects flocking home, but none coming out. This is a much better dodge than the old one of burning the holes out with petroleum, or blowing them up with gunpowder. As cyanide of potassium is a deadly poison, it must be kept in a safe place, and out of the way of children.

Worms on a Lawn.—I have a small bit of lawn which is constantly made unsightly by the upheaving of almost countless small heaps of earth by the worms, there being a clean cut round hole at each heap. If I roll the grass one day it becomes quite unsightly in one or two nights, whilst there are scores of spaces in which the grass seems to be destroyed. Will you kindly say if there is a remedy, and oblige.—*Thos. Bates*.

The best plan for you to adopt in order to get rid of these objectionable worms is to make a quantity of lime-water, and water your lawn well with it. The solution may be made by pouring the water on the lime at the rate of two gallons of the former to one pound of the latter. Let this solution stand for forty-eight hours. Then pour the clear water off, leaving the sediment at the bottom, and use as suggested. The worms will then come to the surface in a nearly helpless state, when they may be swept off by the broom or picked off by hand. If one application fails to remove all the worms, the operation may be repeated after a short interval. Continue to give an occasional rolling, as you have hitherto done.

Heavy Potatos.—In response to the invitation in THE GARDENING WORLD, p. 24, I may say I planted 3 lb. of The Sutton Flourball last April, lifted them

the other day, and on weighing them found them to turn the scale at 10 stones, or at the rate of 28 tons to the acre. A good many of the tubers weighed above a pound each. They are of splendid quality and very dry and floury when cooked. Another variety—"Up to Date"—turned out well. I planted 3½ lb. at the beginning of May, and on lifting the produce found it to weigh 14 stones, or at the rate of 22 tons to the acre. The largest tuber weighed 2 lb. 7 oz., and another tuber 2 lb. This Potato, which was raised by Mr. Findlay, of Markinch, is sure to take a leading place in field culture. I see reports from all parts of the great productiveness of this variety, and I would advise all growers to plant these two kinds largely next season.—*T. C. Steel, Crookham, Northumberland.*

LEIGHTON BUZZARD SANDS.

In horticultural matters we more often deal with the finished product, than with the ways and means of securing that end. The other week, however, we made a journey to see the sand pits or quarries of Mr. Joseph Arnold, of 32, St. Paul's Road, Camden Town, London. The pits are scattered about in the neighbourhood of Leighton Buzzard, Bedfordshire, and thither we journeyed by rail. Arrived upon the scene, we were interested in the geological nature of the deposit, as well as the economical value of the same. We were at once convinced, however, of the value of these pits to Mr. Arnold, who is the fortunate possessor.

Grovebury Pit.

Before leaving the immediate neighbourhood of the thriving, but old-fashioned, market-town of Leighton Buzzard, we paid a visit to the Grovebury Pit, consisting of building sand. This property consists of a low hill with a superficial area of twenty acres. The sand is solid and clean, varying in depth, but averaging about 80 ft. One side of this property abuts on the Grovebury (London and North-Western) railway station, where an extensive siding permits of the loading of about 100 tons a day, and numerous carts ply between the pit and the railway all day long. From this pit, Mr. Arnold supplies building sand to the Manchester, Sheffield, and Lincolnshire Railway Company for their extension works at St. John's Wood, London; also the London and provincial local boards; the East London, the New River, the Grand Junction, and other water companies for filtration purposes. In short, this sand is used for every variety of purpose for which it may be suitable. It is of a light red colour, owing to its being slightly impregnated with iron. The other side of this property abuts on the Grand Junction Canal, by which the sand is conveyed in barges, both northwards and southwards. Mr. Arnold has constructed a bridge over the River Ouzel, and laid down a light railway, connecting the pit with a new wharf on the banks of the canal. This cost him over £1,000, but it affords great facilities for the loading of the barges on the canal.

Stone Lane Hill Sand Pit, Heath.

Mile Tree Road Sand Mine

Returning to Leighton Buzzard, we journeyed in a northerly direction, till we came to the Mile Tree Road Sand Mine, Shenley Hill (see illustration), covering an area of fourteen acres. This pit or quarry is connected by means of a light railway with a "tip" or "shoot" by the side of the Mile Tree Road, thus affording a ready means for carting the sand to the railway stations or elsewhere. Here may be seen heaps of sand of four or five different qualities. The first is white or silver sand of the best quality for horticultural purposes. The second quality is semi-white. The third is gray, and used for the filtration of water and sewage. The fourth is a gray sand used for mixing with cement; and the fifth is useful for brickwork. Down in the bottom is a stratum of very fine argillaceous sand having a silky softness, and suitable for moulding purposes.

This pit is the oldest, and we noted the spot where the existence of silver sand was first discovered. In its earlier days a Birmingham firm used the sand in the manufacture of glass. A considerable area of the ground here has been worked out, and the land is again under cultivation for farm crops.

Mill Tree Road Sand Mine.

Following the line of rails we soon arrived at the present workings, of which we first give a superficial view as it appeared to us. The surface consists of arable land, in some places quite shallow. Beneath this comes a layer of blue clay of variable depth. As seen in the illustration, this bed of clay is 6 ft. deep, and seems to be getting deeper as the pit is being worked into the side of the hill. The overhead line of rails, with iron trollies, is utilised for conveying the clay to that side of the pit which has been worked out. The rails are sloped so that the trollies run down with their own weight, and the clay is tipped into the played-out working. Immediately beneath the clay in some places comes a pan or layer of iron-sandstone, that often requires blasting to break and dislodge it. This is of a dull, dark iron-brown colour, and the grit is often as coarse as bird-shot. Beneath this comes a loose material, of the nature of iron-oxide or ochre, and varying in colour from a bright orange to old gold and yellow. This peculiar sand is also well seen at places in the cutting through which the light railway runs. Beneath this comes silver or silicious sand of the varying qualities above mentioned, but each in separate places, so that it is dug out and kept separate, but requires no other preparation or cleaning whatever. Here and there amongst the sand are thin layers or seams of very fine quartz pebbles, colourless, white, pink, amber, yellow, blue and black all mixed together and very interesting. Veins, seams, or isolated patches of pale or deep yellow, reddish, or other coloured sands occur at various depths, and are generally horizontal, or dip at an angle as laid down by water in very ancient times They serve to give a parti-coloured appearance to the sands where they occur, but may be altogether absent, leaving the sand either gray or pure white.

Geologically this formation belongs to the Lower Greensand, a marine deposit overlying the Weald Clay. The two deposits constitute the Lower Cretaceous. The outcrop of this formation commences or terminates at Devizes (whichever way it may be looked at) and forms a narrow band running diagonally across England in a north-easterly direction, and interruptedly till it comes to Aylesbury. A little to the south of Leighton Buzzard it commences

again and runs to Ely in Cambridgeshire. Commencing again at Fordham, in Norfolk, it continues to Hunstanton on the Wash.

The Lower Greensand is fossiliferous and very interesting, both to the geologist and botanist. The top layer of clay seen in our illustration is Gault, and contains coprolites in greater or less quantity. Coprolites also occur below the sand, and at various depths in it. They consist of wood, mineralised with phosphate, more or less infiltrated with iron and silica; also of casts of mollusca or marine shells, bones, and other matter. Many things occur like fruits enclosed by a crust of iron, and others of these crusts enclose a quantity of loose sand. Bits of wood, often very much like pine in structure, occur at various depths in the loose sand, and we pocketed a fine piece in which the layers of wood were quite evident. Another piece of the trunk of a tree would have girthed 3 ft. and was very heavy, owing to much iron in it. Iron-ore was formerly worked in the neighbourhood of Leighton-Buzzard, and an old-world Cycad was described in 1867, under the name of Cycadites Yatesii, by W. Carruthers, Esq., of the British Museum. Not far off Pinites have been found in the same geological formation. Some of the wood is soft and unctuous like bog peat, and stains the fingers black. How many thousands of years these old trees have been buried the geologist is unable to say.

The ancient sea had worn away or denuded much of the Weald clay, and laid it down again in the Lower Greensand beds, so that the latter contain fossils that do not belong to them of right, but lived at an earlier period of the world's history. These fossils were, until recently, worked for manure, but here they are simply turned into the bottom to be buried with the clay on the top. The nodules in the base of the Gault or blue clay are also phosphatic. The Gault has here been washed away to a thin layer 1 ft. to 6 ft. deep, or thereby. Judging from the quantity of fossil wood, there must have been land at no great distance off. With regard to the sand itself there is a fine mass of it yet in a solid, that is, an undisturbed condition. The tall figure in the foreground of the pit is Mr. Arnold himself.

Nine Acre Pit.

Adjoining the Mile Tree Road Pit is the above. A large proportion of the sand has been taken out, and of late years the pit has been lying idle, but is to be continued again shortly. The pit is of easy access from the main road. On the top are three feet of soil, below which, in many places, is a pan of iron-stone of a dark red or brown colour. There is much iron in this pit, and the sand is used for filtering, for cement, and as bird-sand, the latter being of a coarse red description. Leaving this place, we passed another of Mr. Arnold's farms, on which we noted a 56 acre field of sand which has not yet been opened, but is held in store for a future period and generation. Apparently it would furnish as much silver sand as would keep the horticultural world supplied till doomsday.

Stone Lane Hill Pit.

This is at Heath, otherwise named Heath-and-Reach, about two miles from Leighton Buzzard. It is a hill of no great extent situated on the side of the main road. The hill has been broached on two sides, and though of no great size, it contains sufficient sand to last for the next fifty years at the rate of 100 tons a day. The superficial area is only three acres, but it contains much in little space. There is a depth of 10 ft of stratified soil on the top, below which is a depth of 120 ft. of sand. The lower pit consists of iron-yellow, orange or red sand utilised for brickmaking. Better sand goes down for a depth of 80 ft. below the present level of the working. The other opening is on the other side of the hill, at a higher level, and at no great distance off. The accompanying illustration (p. 73) shows this opening of the Stone Lane Hill pit. It contains the finest silver sand of all. Some of it is very sharp and gritty, like the finest crystallised sugar, but in other spots it is as fine as pounded loaf sugar, and as white after being exposed for a time to rain and wind. It is remarkable that sand of such quality should occur so near the red sand opening. Wood, and other fossils occur in the latter.

Peat and Loam.

Mr. Arnold has purchased peat and loam covering an extent of 1,800 acres, close by Heath and Stone Hill Lane, on the Stock Grove Estate, Heath, Leighton Buzzard. The peat occurs in the woods, and contains much bracken roots. It is a brown peat equal to that of Hampshire, contains much fibre, and is suitable for Azaleas, Heaths, Rhododendrons, &c. It is about a foot in depth. A good, yellow, fibrous loam, also obtained on this estate, is superior to Banstead loam. Like the sand, the peat and loam are unlimited in quantity, and are put on rail for purchasers at a very low price. The estate is much wooded, interesting and beautiful.

DYSON'S LANE NURSERIES

A visit to the Dyson's Lane Nurseries of Mr. H. B. May, is interesting at any period of the year, but more particularly when the Ferns are in their full leafage. Other subjects are grown to some extent in the houses on both sides of Dyson's Lane, but the Ferns largely dominate the establishment, both on account of the number of species and varieties, the quantities in which they are grown, and the high standard to which they are cultivated.

Maidenhair Ferns.

It is quite surprising to find such a large number of species of Adiantum, which Mr. May has gathered together in one establishment. A houseful of A. farleyense is worth while going a long way to see. The light green foliage is as ample and healthy as possible, with the young fronds beautifully tinted with amber and pink. The plants occupy not only the stages but are suspended in pots as well—a method of treatment for which they are well adapted. The central stage of another house is occupied with A. Collisii, a graceful and narrow pinnuled form of A. scutum. Several other houses are more or less occupied with these and other species in various stages of developement. We came across a fine collection which had been made up to supply an order. This included healthy young specimens of A. scutum, A. Collisii, A. Victoriae, A. rhodophyllum, having red tinted young fronds, A. curvatum and Lathomi, with very broad pinnules, A. pubescens, A. Bausei, A. cuneatum grandiceps, and A. Fergusoni with broad, dark, glaucous pinnules. The fronds of many are tinted with some other colour in the young state, and besides those already named, A. rhomboideum is tinted with bronze; A. macrophyllum, with red; A. fulvum, with bronze; A. tinctum, with bright red; A. tenerum, with pale red or pink; and A. hispidulum, with bronze. On the other hand A. cuneatum elegans variegatum, is always marked with silvery blotches. A. c. e. cristata is quite distinct from A. c. grandiceps. The pinnules of the walking Fern (A. ciliatum) are deeply cut. A. Capillus-Veneris imbricatum is of dense habit and handsome. The broad fronds of A. concinnum latum are well known. A. elegantissimum is not so dense in habit as A. gracillimum, and has longer pinnules. A. diaphanum is not forgotten. Much larger growing species are A. Williamsii and A. aethiopicum elatum, the latter having broad, angular pinnules and gracefully arching fronds. Seedlings that have been selected for their distinctness may be seen in quantity.

Gold and Silver Ferns.

There is an idea that these Ferns are difficult to grow, but such is not the case. The fronds must be kept dry, and for that reason they should be stood by themselves where they will not be syringed. We have seen some of them well grown in a vinery. Gymnogramme chrysophylla is one of the best known and very handsome. G. c. Alstoni is of a deeper golden yell w, and the tips of the pinnules are incurved in such a way as to show the golden under surface. G. c. laucheana, is of a lighter green above. G. c. grandiceps superba, bears heavy terminal crests, and the fronds are covered all over with golden dust. G. Mayi is a strong grower, and of a beautiful silvery white hue beneath, tinted with yellow. The finely divided fronds of G. tartarica are also very silvery. A heavily crested and silvery form is G. wetenhalliana. G. peruviana is dwarf in habit and a perfect dusty miller. An old favourite is G. chrysophylla Parsonsi, about 6 in. high, heavily crested at the top and sides and covered with golden dust.

Nephrolepis and Pteris.

Mr. May has a large houseful of first-named Ferns and the excellent culture to which they are subjected, has produced a wealth of greenery which must be seen to be appreciated. Altogether there are twenty species and varieties including all the best in cultivation. The latest acquisition is N. davallioides plumosa with heavily branched and crested fronds, presenting a fine appearance as a basket plant. All the old favourites, great and small are grown here so the names of them are unnecessary. In a cool corridor close by is a fine form of N. exaltata with broad pinnae.

The most important recent addition to Pteris is a garden form named P. Wimsetti, already very popular for market purposes and grown by the thousand, though raised only two years ago and put into commerce for the first time this year. It is of dwarf compact habit, with fronds of leathery texture, and having the pinnae cut a second time into segments of unequal length. The fronds are broadest in the middle and, therefore, very distinct. It will in the near future oust many of the old favourites on account of its robust and beautiful habit and long-lasting qualities. P. sempervirens is another garden form, with dark green fronds and light green crests. In another part of the nursery is a cool house filled with P. Wimsetti in grand condition.

Other Ferns.

The netting formed by the golden sori on the under surface of the fronds of Hemionitis palmata is handsome. The glaucous leaves of Pellaea ternifolia, and its blue stripes and rachis are very pretty. One large house is occupied with one plant each of the entire collection. Here may be seen a very singular and rare Fern from the Indian Archipelago. The stout rhizome is inclined to rise, and a piece of peat was placed against it so that the stem might climb so to speak. The long, finger-like erect fronds are so arranged that they form half of a nest, as it were, and while strange are not unhandsome. The name of this rare Fern is Asplenium amboinense. A. Drueryi is a dark green, leathery and crested form of A. Baptisti, and was raised here. A. Mayi is another uncommon form, and the dark green, arching fronds are 2 ft. long and finely divided. Seedlings vary and look as if this Fern was intermediate between A. pteridioides and A. flaccidum.

A fine collection of seven species of Stag's-horn Ferns may also be seen in this house, including Platycerium Stemmaria, also known as P. aethiopicum. P. Willinckii has very long, drooping, fertile fronds. The barren fronds of P. Hillii are circular and lie very closely against the soil, which they completely cover. All are grown upon pieces of virgin cork or upon rafts suspended from the pillars or roof of the house.

Selaginellas

The best of the many species of Selaginella are grown in this collection. For private establishments the dwarf habited and light green S. emiliana would be difficult to beat. The dark green of S. atroviridis forms a good contrast. The tall growing S. Willdenovii, best known by the garden name of S. caesia arborea, makes an excellent climber for a stove. The spreading leafy and light green of S. erythropus, is quite handsome. The dark green branching stems of S. Lyalli bear leaves of a firm character. S. flagelifera is of spreading habit and free growth.

Fine foliage Plants.

One house is devoted to Aralias and Ficus elastica. Both the green and the variegated sorts of the latter are grown, but the variegated one is grown in quantity, the plants ranging from 1ft. to 3 ft. high. The variegation is clear, and admirably brought out by the plants being grown in a relatively high temperature. Aralia gracillima still remains one of the most popular, and the slender, wavy leaflets are olive-green with pink or silvery midribs and edges, for they vary considerably. The leaves of A. elegantissima are also olive-green in their early stages. A. leptophylla is also popular here, but A. Reginae is less so, as it has longer, narrower, and fewer leaflets, that are less graceful than those of the first-named. The leaflets of A. kerchoveana are broader than any of the others, and dark green. A reticulata is largely grown as a stock on which to graft the others.

The feathery branches and pendent, red flowers of Reidia glaucescens are very graceful. The light green leaves of Dieffenbachia Jenmanni are beautifully striped with white bands. Crotons are grown in quantity and variety, a house being devoted to them. Mr. May keeps a collection of 100 of the best varieties, the broad, narrow, long and short-leaved sorts in all the leading colours being well represented, Dracaenas also constitute a speciality, in broad and narrow-leaved types. Dracaena gracilis has narrow leaves edged with red, and Angustata is

bronzy with red edges. The silvery white edges of D. sanderiana are also very pretty. D. Coulingii is green with white edges, and relatively new and distinct. All the best and well-known kinds are also well grown. Beautifully coloured is Pandanus Veitchii. Another house contains a large collection of the best decorative Caladiums. Dracaena terminalis alba has broader leaves than D. Coulingii, and is an old favourite. Bronzy-leaved varieties are more numerous than the green ones in this house.

PALMS.

Numerous houses are monopolised by Palms of various ages and sizes, and for all sorts of decorative purposes. Two houses are filled with seedlings. The greater portion of the Palms are grown in the nursery on the opposite side of Dyson's Lane from the older establishment. Here one large house accommodates large specimens of Areca lutescens, Kentia belmoreana, K. fosteriana, Latanias, and others of that class which are indispensable for any large establishment. Next to this, another structure is filled with Palms in pots ranging from 48 to 24-size. The side benches of another house are occupied with Cocos weddeliana, nice stuff in 60 and 48-size pots. Large plants of the same with long stems occupy the middle stage; and underneath is a fine batch of Livistona rotundifolia, which has sprung into popularity recently. Kentias, Arecas, and Asparagus plumosus fill a fourth house, and seedling Palms in thumb pots, and a collection of Begonia Rex fill a fifth. Thousands of seedlings fill the side benches of another house, and Cocos weddeliana covers the central stage. The seventh and eighth house we came to were also filled with Palms in various stages.

FLOWERING PLANTS.

In the older part of the nursery we noted a fine batch of healthy rooted cuttings of the huge-flowered Hoya imperialis, which was flowering elsewhere. Allamanda grandiflora was likewise flowering. Carnations are grown here in considerable quantity, including the bright yellow Primrose Day, a border variety. Tree varieties fill a large house, and include Leonidas, brilliant glowing crimson; Henry Gibbons, dark crimson; and Wm. Robinson, with brilliant scarlet flowers in trusses. The berried Solanum Capsicastrum fills a long house; Primula sinensis alba plena and the beautiful rosy-pink Begonia nancieanus fill another; scarlet, yellow, crimson, and spotted Cannas, together with the fragrant Bouvardia Humboldtii corymbiflora, are the glory of another house. A large batch of Smilax in 48-size pots, and trained to a single stake is very pretty and interesting. Erica gracilis and E. hyemalis, plunged in ashes out-of-doors till recently, are in the pink of health, and will, no doubt, flower finely in their season.

HERBACEOUS FLOWERS FOR COMPETITION.

IN these days of precision, of keen criticism, and of scientific research, when, by the aid of the excellent periodicals circulating weekly the results of research and investigation are so widely and quickly spread, it follows, I suppose, that accuracy and clearly defined expressions or statements are amongst the first things looked for amongst readers. It clearly is so amongst the readers of the go-ahead and advancing GARDENING WORLD, or a printer's error would not have been the excuse for a reproach upon the editor, (p. 44), or a missing letter the cause of a wordy but happily bloodless battle.

I was, therefore, surprised that "Coila" (p. 802, August 15th) did not style his contribution "Hardy Herbaceous Flowers for Competition." From the tone of his subsequent notes he evidently meant hardy varieties, or why does he take exception to Liliums and other doubtful subjects mentioned by "Plantsman."

I do not propose to enter here upon the question whether flowers from plants partially sheltered should be excluded from collections of hardy herbaceous flowers, as circumstances of locality, &c., considerably alter cases; but if I competed for a collection of herbaceous flowers, I consider I should be justified in including any herbaceous flowers, whether they had been protected or not.

As "Coila's" list does not err on the side of too great a choice, may I be allowed to add a few, many of which I have much admired in collections? Beginning with spring and early summer, instead of the alphabet, thinking it would more assist intending exhibitors, I would mention amongst our earliest spring flowers, Doronicum plantagineum "Harper Crewe," a bold and handsome flower. Corydalis nobilis makes a pretty bunch, having fern-like foliage; Orobus vernus odoratus, and Omphalodes verna which might be mistaken for Forget-me-not, are also very suitable for a front row. Aquilegia chrysantha, A. Skinneri, Papaver nudicaule, P. orientale, and P. o. bracteatum, if cut before fully expanded are indispensable. I would include Paeonies, also Ranunculus acris fl. pl. and R. aconitifolius fl. pl. Lychnis chalcedonica is of a telling colour; L. Flos-cuculi fl. pl., is very pretty in a bunch; Polemonium Richardsoni might be sometimes used to make up a deficiency. Dielytra spectabilis requires no apology.

These are a few which may be had in flower in early summer, while later amongst composites alone, Inula glandulosa, Telekia speciosa, Rudbeckia nitida Senecio pulcher, Stenactis speciosa, Harpalium rigidum "Miss Mellish," and Helenium autumnale are all of great excellence. I have a very pretty Erigeron I purchased under the name E. salsuginosus. Spiraea Aruncus is a fine back row subject; S. Filipendula, and Eryngium coelestinum are very striking, as are Astrantia major and Sidalcea candida with white malva-like flowers. Thalictrum adiantifolium is very light and graceful. Hemerocallis flava and H. fulva are always showy subjects. Hedysarum multjugum or French Honeysuckle is a crimson galega-like flower. Lathyrus latifolius, either the white or rose variety, is pretty, as is also L. grandiflora. Geranium Endressi was recently noted as very telling. Amongst others are Gypsophila paniculata, Sedum spectabile, Bocconia cordata, Heuchera sanguinea, Tiarella cordifolia, Delphiniums, Potentillas, Antirrhinums, Pentstemons, Phloxes, and Pyrethrums, of which there are many lovely varieties to be obtained from the nurserymen whose specialities they are.

These may nearly all be used from June to September, many of them much later. I do not pretend to give a complete list, but a few I can recall to memory. If my acquaintance with, equalled my admiration for, the Saxifrages I should include several which I think, but am not sure, are hardy.—*A. P.*

ON THE BONNIE BONNIE BANKS OF LOCH LOMOND.

THAT one's lines are sometimes cast in pleasant places was exactly the conviction that forced itself upon the mind of your correspondent when he found himself on Saturday last one of a goodly company who mustered at a fairly early hour at the Queen Street Terminus of the North British Railway in Glasgow.

At the invitation of Col. Menzies I was privileged to form one of a large party on pleasure bent, with the praise-worthy intention of exploring that lovely retreat justly known as the "Queen of Scottish Lakes." Travelling by specially reserved saloons, we reached Balloch in good time for the steamship "Queen," which, so soon as the party had embarked, made all speed for Rowardennan. *En route* one could not fail to be struck with the magnificent beauty and natural grandour of the surrounding scenery. Those of our southern readers who may not be familiar with the Trossachs cannot do better than make a trip to this lovely region of Great Britain, as soon as circumstances and opportunity may permit, for it would be idle to attempt to describe in writing the beauty of the land and water-scape, which, with the quick passage of the steamer, passes in glorious panorama before the eye. The Loch itself is studded with a succession of islands, all of which help to lend beauty to this charming stretch of water. Principal amongst these are Inch Tavannach and Inch Connachan, and there are many other Inches besides, which gave rise to some pleasantries from one of the party, who, strictly for the purpose of information, wanted to know why Loch Lomond was like a 2-ft- rule. To those of my readers who may be curious to know the correct answer, we may mention that there are twenty-four Inches spread over the loch. Certainly nothing nearer Paradise has been reached than this excursion since the wonderful doings of my friend Mr. Sankey, when he ascended to the skies recently in a balloon at Newcastle, and I question which of us had the more magnificent sight.

My readers who are more particularly interested in floricultural pursuits would, I feel sure, find a bountiful fund of interest and research along the lovely Silver Strand of Loch Katrine, or in Ellen's Isle, and amongst the other islets already referred to. After the discussion of an excellent menu provided by host Kean at the Rowardenn Hotel, under the presidency of Col. Menzies, faced in the vice chair by his genial and courteous manager Mr. Richard Wilson, the party devoted themselves to Highland games and dances to the strains of inspiriting music from the pipers, who accompanied the excursion, and, although weather did not permit of a venture to the summit of Ben Lomond, very much that was interesting was investigated, and at a later hour the party returned to the pier head for the home-bound steamer. Tea was served on board under the courteous dispensation of Mr. W. E. Bardsley, who studied the catering excellently well for the creature comforts of the *voyageurs*. The facilities for lunching and dining are splendid, for these well-fitted boats of the North British Company are replete with every comfort, and the staff under the direction of the gentleman referred to, are one and all anxious that the tourist should feel himself thoroughly at home. The party reached Glasgow at a late hour, and a most enjoyable day was brought to a close with three times three for the worthy Colonel, and one cheer more for the firm's speciality in whisky, aptly termed "Auld Scottie," a brand with which some of our floricultural exhibitors are already familiar. At a later period we hope to give a reproduction of a photograph of this typical Highland gathering, through the courtesy of Captain Coats, the secretary to the Glasgow and West of Scotland Horticultural Society.—*Gyp.*

NOTICE OF BOOK.

HAND-LIST OF TREES AND SHRUBS grown in Arboretum, Royal Gardens, Kew. Part II. Gamopetalae to Monocotyledons. London: Sold at the Royal Gardens, Kew. Printed for Her Majesty's Stationery Office, by Eyre and Spottiswoode, Printers to the Queen's Most Excellent Majesty. 1896. Price 1s.

Besides the official guides to the museums at Kew, this is the sixth hand-list of the various classes of plants grown in the gardens. There yet remains to be printed a hand-list of the hothouse plants, which it is hoped the authorities will accomplish in the near future. Already, however, it must be apparent to the most casual observer that the collections of living plants got together at Kew are of vast and far-reaching extent—more so than in any other botanic garden all the world over.

The part just issued is the second on the subject of hardy trees and shrubs. It contains all those woody plants having a corolla in a single piece (Gamopetalae), as well as those natural orders having no corolla, and the Monocotyledons. The hand-list is only of the same size as that containing the Polypetalae, so that an idea may be gleaned of the number and importance of that division of plants to the outdoor garden. The Gymnosperms and the Monocotyledons occupy but little space in the list under notice, but they are more numerous than we expected, having overlooked the fine collection of Bamboos now well established in the Aboretum near the banks of the Thames. The Gymnosperms consisting of seven species of Ephedra might well have been associated with the Conifers, with which, in fact, we looked for them, when that hand-list was issued.

Printer's errors have been sharply looked after in this list, so that the names will constitute an excellent guide to follow, and help those who were unable to distinguish between a printer's error, and what was intended by the compiler and editor in Part I. In the case of old generic names now used to indicate species, a guide like the present is invaluable; but in the matter of proper names with adjectival terminations, the average scholar should be able to determine whether the word should be commenced with a capital letter or not. The rule followed out by these hand-lists, and, in fact, adopted at Kew, is that proper nouns in the genitive case should commence with a capital letter, as, for instance, Veronica Lyalli (Lyall's Veronica) and Olearia Traversii (Travers' Olearia). On the other hand proper names used in the adjectival form should commence with a small letter, as, for instance, Buxus wallichiana (the Wallichian Box) and Veronica guthriana (the Guthrian Veronica). Thymus Serpyllum and T.

Chamaedrys are instances of old generic names used to designate species; hence the use of the capital letter for the specific name. Daphne Genkwa is a case of the use of the native name, adopted for the species.

The accepted names are printed in bold type, while the synonyms are in smaller type and set back from the margin, so that those who peruse the list can see at a glance which is the correct name, or in other words the oldest, which should be retained. For instance Jasminum humile is a well-known species lumbered with half-a-dozen synonyms of which J. revolutum and J. wallichianum are the most common. The American Ash (Fraxinus americana) has eleven synonyms; F. angustifolia has ten; Lonicera glauca has eight; and the Guelder Rose has seven. All these names tossing about in gardens and conflicting with one another to the great annoyance of planters, cultivators and others.

A few gardeners will no doubt be annoyed that the names of some of their old favourites have been dropped or in their own words changed, notwithstanding the fact that they have known them all their lives by such names. They will be more annoyed before being less so, until nomenclature becomes more uniform by the adoption of that proceeding from a leading and reliable source, such as furnished by the hand-list under notice. Part I. and Part II. are evidently not intended to be bound together for they are paged separately and each contains an alphabetical index at the end, which will facilitate the finding of the proper name for the synonyms which are only given under the accepted names in the body of the work, and not alphabetically.

SEVENOAKS GARDENERS' SOCIETY.

The fortnightly meeting of the Sevenoaks Gardeners' and Amateurs' Mutual Improvement Society, was held at the Rose and Crown Hotel, Sevenoaks, on the 15th inst., under the presidency of Mr. J. Buckland. The tables were particularly gay with flowers, fruit and vegetables of exceptional quality. The first prize for twelve Cactus Dahlias was taken by Mr. W. Fox, gardener to—Sowerby, Esq., Solefields. In the amateurs' division, Mr. F. Galloway, Cross Keys, had the best four dishes of Potatos. First-class Certificates were awarded to Mr. H. Heath for a stand of Dahlias and some honey; to Mr. E. Cook, Kirkella Gardens, for excellently finished black Grapes; to Mr. Hughes for a Begonia; to Mr. Hayward for a good collection of vegetables; and to Mr. Wolfe for fine Onions.

Mr. H. Cannell, of Swanley, was then called upon for his lecture on "Plants and Seeds." He said he was in sympathy with all societies working for the advancement of horticultnre. In dealing with the "bolting" of Cabbages Mr. Cannell considered that the primary cause was that sufficient care was not bestowed on the plants that were to produce the seeds, the result being prematurely produced seed. Another error was pulling the plants from the seed beds without first loosening the soil with a fork. This would give the plants a severe check, especially if the weather at the time of planting was dry. In cutting Cabbages, he said it was a common practice with a great many people to cut the heads, then the remaining leaves, and some even went as far as to split the stem into four quarters, which he considered most barbarous. The best plan was to cut out the heart and leave everything else; then in a short time they would get a second crop of small but sweet heads.

Concerning the planting of Potatos he said there was a right and a wrong method of procedure. Most people had no doubt observed that the centre shoot comes away stronger than the rest; this was the crown eye, and that which should be preserved, as it gave the best results. There was no Potato which was absolutely disease-resisting; but by planting the sets in rows wide apart, not too deeply, and by earthing up the plants two or three times, the malady would be greatly lessened. Mr Cannell also dealt with the subject of potting, at considerable length, and stated that the successful man repotted his plants in such a way that the casual observer would not detect the change, so carefully did he handle them.

There was a large attendance of gardeners and amateurs, and at the close of the lecture a number of them took part in the discussion that followed. A hearty vote of thanks to Mr. Cannell was proposed. In replying, Mr. Cannell said he should like to bring before their notice the Gardeners' Royal Benevolent Institution, the Royal Gardeners' Orphan Fund, and the Gardeners' United Horticultural, Provident, and Benefit Society, institutions which he could with confidence recommend. Mr. Cannell had a fine exhibit of large Onions, raised from Kentish-grown seed, at the meeting.

TRIALS AT CHISWICK.

Asters.

Amongst other plants which have been subjected to a cultural trial by the Royal Horticultural Society, at Chiswick this year, China Asters have not been forgotten. An assortment representing all the sections of this popular flower has been grown, the beds in which the Violas were accommodated last year having been devoted to them. A couple of rows of each variety are grown, so that there shall be no mistaking their general character and good points, all of course being placed under precisely the same conditions. Appended is a list of the varieties that have best acquitted themselves. An idea of the severity of the test may be gathered from the rarity with which the examining committee have awarded the "XXX,"—bespeaking the "highly commended." "Commended," represented by "XX" is more frequently employed. The names in most cases signify the colour of the flower, the section to which it belongs immediately following.

Tom Thumb: a dwarf, dark crimson-scarlet Paeony-flowered variety of considerable merit. XX. Mr. F. C. Heinemann, Erfurt, Germany.

Fiery Scarlet: dwarf Chrysanthemum-flowered. The blooms are large, and produced in profusion. XX. Mr. F. C. Heinemann.

Purplish Violet: dwarf Chrysanthemum-flowered. XX. Mr. F. C. Heinemann.

Claret: dwarf Chrysanthemum-flowered. XXX. This is a most promising variety. Mr. F. C. Heinemann.

Rose: dwarf Chrysanthemum-flowered, very large. XX. Mr. F. C. Heinemann.

Light Blue: Comet—very large and good. XX. Mr. F. C. Heinemann.

White: Victoria—one of the best whites in this section. XX. Mr. F. C. Heinemann.

Cinnabar Carmine: Victoria—This sort has large blooms, with exceptionally long stalks; and should be useful for cutting. XXX. Mr. F. C. Heinemann.

Giant White: Comet—This is a very tall and strong growing variety. XXX. Messrs. Dobbie & Co., Rothesay, N.B.

White, turning to azure blue: Victoria. XX. Mr. F. C. Heinemann.

Miscellaneous.

Pentstemons. XXX. These were sent by Sir Trevor Lawrence (gardener, Mr. Bain), Burford Lodge, Dorking, and comprised some remarkably handsome varieties.

Antirrhinum, Yellow-Queen: This is a grand new bedding variety of exceptionally dwarf and compact habit, and a free and continuous bloomer. This latter quality is amply evidenced by the appearance of the plants even at this advanced season. The flowers are large, and bright sulphur-yellow in hue, the palate exhibiting a rather deeper shade of yellow. XXX. Messrs. Dobbie & Co.

Antirrhinum, Majus Scarlet: In habit this Antirrhinum is not so dwarf as Yellow-Queen, but it is well under the average height. The flower spikes are long, and the individual flowers large, and a rich deep crimson in hue. XXX. M. Vilmorin, Rue de Megisserie, Paris.

Zinnia elegans: From M. Vilmorin also came a grand strain of Zinnia elegans. These have done well at Chiswick, the flowers being large, very double, and exhibiting many subtle and beautiful shades of colour. XXX.

Chamaepeuce Sprengeri: This is a handsome new bedding plant of Thistle-like appearance. It produces a tuft of foliage about 10 in. in height. The leaves are dark green on the upper side, silvery-white on the lower, and linear-lanceolate in shape. They are furnished with strong spines, about ¾ in. in length, which are produced in opposite clusters of four or five, at intervals of about 2 in. along their entire length. The midrib, which is strongly developed, is white-yellow in colour. XXX. Messrs. Barr & Son, King Street, Covent Garden.

Beetroot.

The vegetable committee have had a number of varieties of Beetroot submitted to trial at Chiswick. In the following report it will be seen that several of the standard varieties tested have earned fresh honours.

Nutting's Selected Red.—The flesh is dark, sweet, and of excellent colour when cooked. The roots are of medium size and good shape. XXX. Mr. F. C. Heinemann and Messrs. Dobbie & Co.

Dell's Black Leaved.—A very distinct variety, with very dark, handsome foliage. XXX. Messrs. Vilmorin-Andrieux & Co., Messrs. Jas. Veitch & Sons, and Messrs. Dobbie & Co.

Egyptian Dark Red.—The great merit of this variety is that it is exceptionally early. The flavour is excellent. XXX. Messrs. Nutting & Sons, 106, Southwark Street, S.E., and Messrs. Jas. Veitch & Son.

Cheltenham Green Top.—An extra fine, dark red variety of great merit. XXX. Messrs. Yates, and Messrs. Watkins & Simpson, Exeter Street, Strand, W.C.

Barr's Green Top.—A new variety of great promise. XXX. Messrs. Barr & Son.

Turnip-rooted Red Globe.—A new Turnip-rooted variety of considerable merit. XXX. Messrs. Watkins & Simpson.

Nutting's Dwarf Red.—A very dwarf growing sort, with roots of medium size, excellent shape, and good colour. XXX. Messrs. Nutting & Sons and Messrs. Jas. Veitch & Sons.

Perfection Dwarf Red.—Another very fine dwarf variety of great merit. XXX. Messrs Hurst & Sons, Houndsditch, E.C.

Potatos.

Syon House Prolific.—XXX. Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford.

Early White Kidney.—XXX. Mr. Dean.

Saxon.—XXX. Messrs. Kent & Brydon, Darlington, Durham.

Triumph.—XXX. Messrs. Sutton & Sons, Reading.

Famous.—Award of Merit. Mr. Ross.

Peas.

Sixty varieties of Peas have been accorded a trial at Chiswick during the past season. The seed was sown on March 17th on ground that had previously received a good manuring and had been trenched 3 ft. deep. As is now a matter of history, the season turned out an abnormally dry one, and thus the haulm throughout was considerably shorter than would have been the case under ordinary circumstances. The crops, however, turned out satisfactorily in spite of the trying experience. Two meetings were held by the fruit and vegetable committee for purposes of examination—the first on June 15th for the inspection of the early varieties, and the second on June 29th for the later sorts. The following varieties came out best:—

Sutton's Bountiful (Sutton & Sons).—An abundant bearer, with the haulm, pods, and seeds grass green. The pods contain, on an average, seven peas in each. The flavour is sweet and excellent. Height, 3 ft. 6 in.; seeds slightly wrinkled: ready for use June 15th. XXX.

Sutton's Prizewinner (Sutton & Sons).—This is a fine exhibition variety, the pods being long, straight, and averaging six peas in each. It is a fair cropper, and the flavour is excellent. Height, 2 ft.; seed wrinkled: ready for use June 24th. XXX.

Sutton's Eureka (Sutton & Sons).—A very heavy cropper, the pods being produced in pairs. The haulm, pods, and peas are grass green, the pods being long and averaging eight peas in each; flavour good; height 3 ft.; seed wrinkled: ready for use June 25th. XXX.

Tall Butter Sugar (Vilmorin).—An excellent cropper, with the pods produced in pairs, and the haulm, pods, and peas a pale green. This pea is intended to be cooked and eaten as gathered, pods and all. It was thus treated for the committee, who commended its admirable flavour. Height, 4 ft.; ready for use June 24th. XXX.

Carter's Michaelmas (J. Carter & Co.).—A heavy cropper, with the pods produced in pairs, and haulm, pods, and peas dark green. The pods are large, and contain about seven large peas of first-class quality. Height, 3 ft.; ready for use June 29th; seeds wrinkled. XXX.

BOSTON UNRIVALLED (Johnson).—A heavy bearer, with the pods in pairs, and haulm, pods, and peas pale green. The pods are large and contain about seven peas each, of first-class flavour. Height, 4 ft.; seeds wrinkled; ready for use June 25th.

THE GLADSTONE (Holmes).—An excellent cropper; pods in pairs; haulm, pods, and peas dark green. The pods are of extra length, and often contain eleven large wrinkled peas. Height, 3 ft. 6 in; ready for use June 25th. XXX.

LORD MAYOR (Nutting).—Great bearer, pods in pairs; haulm, pods, and peas a bright grass green; pods of good size, averaging six large peas in each; good flavour; seed wrinkled. Height, 6 ft.; ready for use June 23rd. XXX.

STOKES' HERO OF TROWBRIDGE (Stokes).—Profuse cropper; pods in pairs; haulm, pods, and peas a bright grass green; pods of good size, with an average of seven fine peas in each; flavour excellent; seed wrinkled. Height, 4 ft. 6 in.; ready for use June 23rd. XXX.

LORD GRANBY (Harrison).—Profuse cropper; pods in pairs, of good size, and containing six large peas on the average; haulm, pods, and peas light green; flavour first class; seed wrinkled. Height, 4 ft.; ready for use June 26th. XXX.

SUTTON'S SEEDLING MARROWFAT (Sutton & Sons).—An excellent cropper, the best of the dwarf section haulm pods, and peas pale green, averaging eight large peas in a pod, very sweet in flavour; seed wrinkled. Height, 9 in.; ready for use June 15th. XX.

(*To be continued.*)

PLANTS RECENTLY CERTIFICATED.

THE undermentioned Chrysanthemum received a First-class Certificate at the meeting of the Floral Committee of the National Chrysanthemum Society held at the Royal Aquarium, on Wednesday, September 23rd.

BARBARA FORBES.—This is a new early exhibition variety. It is nearly a pure white, although there is a suspicion of creamy-yellow in it. The florets are long, pointed and incurving. The blooms shown measured fully 9 in. in diameter. Mr. W. J. Godfrey, Exmouth, Devon.

THE PERILS OF GARDENING.

THE gardener's lot is usually regarded by outsiders as being a peculiarly happy one, and is generally considered as one of the most healthful professions that a man can possibly adopt. It is very true that the physical advantages offered by horticulture to its students are many and great, but the fact must not be lost sight of that there is another side to all this, that the apparently clear sky has a few clouds, and that perils as well as pleasures have to be reckoned with. Before a man can aspire to the position of a head gardener, or even of a foreman in any particular branch of his calling, he has to pass through a long and oftentimes tedious apprenticeship, wherein he has to exert a great deal of physical effort. The wondrous machine known as the human body is subjected to severe strain, which, should there be any inherent weakness, is but far too often followed by painful results that take, as it were, the honey from life, and heavily discount the pleasure engendered by the reaping of the fruits of honest labour.

Amongst the ailments which come to burden and perplex the lives of suffering humanity the gaunt spectre known as "hernia" has assumed terribly threatening proportions, and nowhere does the shadow of its fell presence fall more heavily than upon the gardener's profession. The labour of lifting heavy plants from place to place, under conditions when the human body is least able to bear the strain, is a fruitful cause of the ailment in question. Often enough, young lads of comparatively low muscular development are put to work with older men at the task of moving plants by means of the hand barrow. A sense of mistaken pride prevents these young fellows from calling out against the loading of the barrow to an extent that is utterly beyond their power to bear, without having to pay the penalty demanded by outraged nature. The older men are thus unthinkingly the instruments of torturing their younger and weaker brethren to a degree that only the sufferers themselves can subsequently appreciate, and thus the evil goes on. Besides the bearing of heavy loads, the twisting and straining of reaching from ladders and steps in the thousand and one avocations of the gardener, as for instance the gathering of fruit, or the pruning and tying of fruit trees, have seriously to be reckoned with.

From the very nature of the complaint a sense, as of shame, leads the sufferer to conceal his sufferings from human eyes, and thus not only is the evil aggravated by slight cases becoming gradually worse, but gardeners generally are prevented from discovering how prevalent it is among their ranks. Observation, however, will soon convince any impartial person of this fact, and the importance of the recent discovery of surgical science whereby a cure is promised will be then appraised at its full value.

We recently paid a visit to the establishment which has such a claim to the attention of the civilized world, viz. The Hernia Institute, 489, Oxford Street, W. So much of quackery, deceit, and humbug in connection with the treatment of hernia has been laid bare of late that we were all the more pleased when we failed to discover anything but candour, honesty, and the fairest of fair dealing in connection with the Hernia Institute. In addition to this the arrangements for the accommodation of patients are as perfect as a lavish expenditure of money, combined with a thorough knowledge of human nature can make them. No merciless arrays of surgical instruments are here cruelly ominous of the pain they can inflict, but instead everything that can minister to the mental and physical ease of patients, who, if they desire, can be accommodated with sleeping apartments in the Institute, under the personal charge of the surgeons until a cure is effected. It has been demonstrated over and over again that it is impossible to cure hernia by means of a truss only, no matter how skilfully designed or applied except in the cases of young children. Something more is needed, and this something The Hernia Institute claims to supply, and it is ready to back its opinion to the extent of a legal guarantee that a cure is effected, under which all moneys are returned *should* failure result. The treatment, moreover, is declared to be nearly or quite painless. The time taken to effect a cure is said to be from two to eight weeks, surely a brief period of probation when the nature of the complaint is taken into account. Although the Institute is not, strictly speaking, a vendor of trusses, we were shown several which are considered to be the best for patients to wear and for a short period during, and after the cure, for the sake of protection. They are made of celluloid, and nickel steel and are but little more than 8 oz. in weight, among the best of their kind in fact.

We were shown numerous testimonials coming from various parts of the country, and all testifying to the unqualified efficacy of the treatment. They included letters from patients who said they had been cured within the time specified by the Institute after having been afflicted for periods varying from a few months to twenty-five years, all other treatment having proved futile. One of the erstwhile sufferers was over sixty-two years of age when the cure was worked, so that the age limit would seem to be a most indefinite one. Other notable cases were those of a gardener hailing from Buckinghamshire, and a foreman stonemason from Scotland, neither of them suffering any detention from their occupations.

Branches of the Institute are established in Bristol, Bath, Cardiff, and Newport, and we were assured that everywhere the list of unbroken successes has been maintained. Truly surgical science is but just awakening to the sense of its stupendous possibilities.

BEDDING LOBELIAS.

MANY rely upon getting their supply of these from seed, as being less troublesome than the raising a stock every year from cuttings; and we hope they are satisfied with the results. We must confess that we never were satisfied, for, however good the sample of seed is, there will always be a great variety in habit among a batch of plants so raised. We neither take cuttings nor sow seed, and get a stock of plants by a method entailing less trouble than either of these methods. Although not new it may be of interest to many, and of service to some, to briefly describe our *modus operandi*. In the early part of September we lift a few plants from the ground and pull them into small pieces. If this is done during moist weather, almost every bit will have young fibres attached to it. These pieces we plant sparingly into shallow boxes, the width of our greenhouse shelves. We place them in a partially shaded position for a short time in the open air, where they remain till the advent of frost, when they are placed on shelves near the glass. During the winter, if growing too freely, we cut them over. They soon grow again and become a dense mass; and about April we knock them out of the boxes, and again split them up. They can then be planted out in pits, potted off, or boxed up again to suit the requirements and convenience at hand. By this plan a large stock can be worked up with, we submit, a minimum of trouble.—*W. B. G.*

GARDENING MISCELLANY.

CAN MAIZE BE GROWN IN THIS COUNTRY?

SUCH questions might well be answered from Chiswick. The young cobs make an esteemed vegetable when properly cooked, for those who once get initiated into their good qualities. For this reason the Royal Horticultural Society might well institute a trial of varieties of Maize at Chiswick, in order to determine which varieties are most suitable for our climate in the more favoured parts of Britain, at least. Last year we are aware that Maize was advocated as an agricultural crop in Essex. Red and yellow varieties of Maize have not merely been brought to a state fit for cooking in Kew Gardens, but the cobs have been matured. An early variety named Hungarian Maize, has this year been ripened in a back yard in Kew, where no particular attention was given the plants beyond a watering now and again, and the admiring curiosity of those who had, for the first time, seen the Maize in a living, flowering, and fruitful condition. Under more favourable conditions as to raising, exposure to light and air in the open, and a fair or moderate amount of manuring, good results should be obtainable by the cultivation of such early varieties. The cobs in question varied from 3 in. to 6 in. in length and ripened to a golden amber during the first fortnight of September.

PRIMULA FORBESI.

A PATCH of this small flowered but graceful Primula may be seen on the rockery at Kew; so that during the summer season at least, it may be successfully grown and flowered in the open air. The stems are only 6 in. to 8 in. high, instead of 12 in. to 15 in., which usually prevails in the case of plants grown under glass. Each scape bears two to four whorls of purple flowers with a yellow eye recalling that of the Bird's Eye Primrose of this country. The question now to be determined is whether this species may prove longer-lived in the open air than under glass, and likewise its relative hardiness.

PHYSALIS FRANCHETTI.

THE quantity of seed which this fine species annually produces, has enabled it to be quickly and very extensively propagated. Two circular beds of it may now be seen in splendid condition in the herbaceous ground at Kew. The inflated and rich orange calyx to which the ornamental character of this genus is due, is very much larger than that of the better known P. Alkekengi. The fruits of the latter are, if anything more freely produced than in the case of its Japanese congener, so that the cultivator has a choice between large fruits or a greater number of smaller ones. There seems room for both of the species in all gardens of any extent. A large patch of P. Alkekengi may be seen in the rockery, literally aglow with its rich orange calyx covering an orange berry. If the stems are cut and dried before being spoiled by rain, the orange fruits would last a long time for decorative purposes in the same way as everlastings.

A DELICIOUS PEAR.

I HAVE lately been eating a Pear of the finest quality, bought at the shop of Mr. Clarke, No. 302, Strand. He tells me that its name is Beurré Hardy, and that it was grown in California. A well-known authority, who for many years has had opportunities of tasting the best Pears in Herefordshire, remarked of it, "I have never eaten so good a Pear before, and looking to my age I can never hope to eat a finer one or even as good a one again." Can you give me any information about this Pear?—*J. C. Stogdon.*

A PLAGUE OF WATER HYACINTHS.

Some of the members of the aquatic genus Pontederia have become a veritable nuisance in the various streams and waterways of Louisiana, and even in the two city navigation canals of New Orleans. Innumerable sheets of water and lagoons in the southern part of the state are being gradually filled up with floating masses of this beautiful aquatic. This recalls the case of Elodea canadensis or Water Thyme in this country; only the Pontederia seems more far reaching in the mischief and impediment to the traffic which it brings about. Grand Lake is dotted with floating islands of this splendid but troublesome waterweed.

ERIGERON MUCRONATUS.

This is often described as the New Holland Daisy; but when the flowers first expand, the disc is yellow and the rays white, afterwards changing to rose. It therefore differs in that respect from the "wee, modest, crimson-tipped flower" which has the tips of the rays darkest when they first expand, and becoming paler with age. The great length of time during which this Erigeron keeps in bloom is a great point in its favour, independently of its real beauty.

ARTEMISIA ARBORESCENS.

To describe this as a hardy evergreen shrub seems playing upon words for it is not green at all but silvery-gray or almost white. The term evergreen is merely conventional, however, and indicates that the plant to which it is applied retains its leaves all the year round. It forms a bushy, branching shrub about 10 ft. high when allowed to attain such dimensions, and has its leaves three-times divided into linear segments, covered with a silky, silvery-gray tomentum. It, therefore, possesses considerable ornamental value, and may be used amongst shrubbery or in bedding arrangements during the summer months, its size being regulated by annual propagation from cuttings. Being a native of the Levant, from whence it was introduced in 1640, it is relatively hardy, but would no doubt stand best if planted in a dry, sheltered, well-drained position. A fine bush may be seen on the rockery at Kew.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

A Huge Fungus.—*J. R.*: The specimen you sent us was the Giant Puff Ball (Lycoperdon giganteum). It was a magnificent one of its kind, but not the largest on record by 3 in. if we remember rightly. Your specimen measured 3 ft. 9 in. in its greatest circumference. The greater diameter was 15 in and the lesser one 12 in. In depth it was 10 in. Although the species comes up every year amongst the Currant bushes, it is not confined to such situations, but may come up in other places where it can find decaying vegetable matter to its liking. When young and solid it is edible, but was too old for that purpose when it reached us even if we had felt inclined to feed upon it for a week. It was in fact mature, and after lying upon our table for six days, became offensive, and had to be forcibly removed. Its numerous spores are used as a styptic, but fortunately we had no need for its services in that respect. It was the largest we have seen, and excited a considerable amount of curiosity amongst our visitors while it maintained its good behaviour.

Vineries in wet Weather.—*Omega*: If the atmosphere of the house is fairly dry, you may keep the vineries closed for a short period without danger; but if otherwise it may be necessary to slightly warm the hot water pipes now and again during the day in order to dispel the damp. Later in the season it will be almost imperative to keep the pipes slightly warm every day in order to insure the safety of the Grapes, particularly if the weather is mild and damp. In every case when you light a fire you must put on a little top air. If your berries show signs of damping now, you must use a little fire heat, with top ventilation, even if only a little.

Damaged Pears.—After having had a fill of the small fruits the birds are turning their attention to Apples and Pears. They single out the finest fruits and ruin them by pecking holes in them. *R. Williamson* believes himself to be the most unfortunate individual in this respect, and the only comfort we can give him is to assure him that plenty of other people are as sorely plagued as he. Moral: net your fruit, if you want to be sure of it. The best thing that we can suggest is to make use of the damaged fruits by stewing them. Stewed Pears are delicious! We have noticed in rare cases that where late Pears have received only trifling injuries that the wounds will actually heal up in the course of time; but this is only when the flesh is very hard and sound. None of the ordinary dessert varieties will behave thus.

Lily of the Valley.—*Omega*: The crowns are now at rest, and you may lift them at once, transplanting them into well prepared ground, made rich with manure and leaf mould. You may do this at any time between now and the time the crowns start into growth in spring; but you should do it at once or as soon as the ground is sufficiently dry to be workable. They will have time to become settled in the ground before winter, and be ready to start away freely when the temperature rises in spring.

Why are variegated Hollies dwarf?—*J. L. P.*: There are various reasons for this, and one can only get at the true solution of the case, by an acquaintance with the conditions and circumstance under which the trees are growing. Some trees never seem to thrive very vigorously, especially in poor soil or when too heavily overhung by other trees. There is the question of age. Hollies, as a rule, grow very slowly when young. Over and above all these facts you must remember that variegated Hollies, like all other kinds of variegated plants, are never so vigorous as their green counterparts. The reason for this is that the leaves are generally smaller than the green ones, and the amount of chlorophyll or leaf-green is likewise further reduced in proportion as the variegation is extensive. You can prove this by allowing the green branches of Euonymus, Privet, Dogwood or other plant to develop. They will grow more rapidly than the variegated portions, and soon make the plants appear more or less wholly green.

Covering fruit in the fruitroom.—*W. H. K.*: We have seen and heard of this being done, but consider it a very bad practice, particularly in the early part of the season, as it confines the moisture arising from the freshly gathered fruit, and causes it to rot. You cannot do better than lay the Apples and Pears upon the bare shelves of the fruitroom. Later on, say in early spring, late keeping varieties could be kept in a plump condition for a longer period by wrapping up each fruit separately in tissue paper. Straw should not be placed under nor over them, as it soon gets musty and mouldy, tainting the flavour of the fruit.

Root-pruning Apple Trees.—*H. A. M.*: The present is a highly suitable time for performing the operation, provided you do not cut the roots so severely as to cause a loss of foliage, in the event of the weather becoming dry before the natural fall of the leaf. The present moist condition of the atmosphere is highly suitable and favourable for the operation. The trees will get partly established again before winter sets in, if root pruned now.

Names of Fruit.—*D. A. D.*: Apple Catshead.—*J. H. O.*: 5, not known; 6, Bedfordshire Foundling; 7, Flower of Kent; 9, Dutch Mignonne; 10, Scarlet Nonpareil; 11, Forge; 15, not known; 1, 2, 3, 4, 8, 12, 13, 14, 16, had all lost their numbers, which were rolling loose in the box, so that it would have been futile to attempt naming them, as no one could determine which number belonged to which fruit. Apples and indeed fruit of any kind should be packed to prevent their rolling about, otherwise the papers bearing the numbers get wet and fall away. The Apples you sent were much scratched with the pins. A safer plan would be to roll each fruit in a piece of paper bearing the number.

Names of Plants.—*W. H.*: 1, Ophiopogon Jaburan variegatus; 2, Selaginella Brauntii; 3, Dracaena terminalis, apparently, but one leaf is scarcely sufficient for determination; 4, Gymnogramme calomelanos chrysophylla; 5, withered up, send again in damp moss; 6, Asparagus plumosus nanus; 7, Adiantum diaphanum; 8, Chlorophytum elatum variegatum; 9, Adiantum macrophyllum.—*W. K.*: Leycesteria formosa, the first specimen was named and appeared some weeks ago in this column.—*Stuart*: 1, Aster Novi-Belgii densus; 2, Sedum stoloniferum splendens; 3, Campanula isophylla alba; 4, Aster Novi-Belgii Harper Crewe; 5, Matricaria Parthenium flore pleno; 6, Xeranthemum annuum; 7, Phlox Drummondi; 8, Petunia violacea var.; 9, Xeranthemum annuum album; 10, Helianthus rigidus; 11, Helianthus rigidus var.; 12, Aster Novi-Belgii var.—*W. T.*: 1, Odontoglossum Rossii humeanum; 2, Oncidium incurvum; 3, Oncidium ornithorhynchium.—*R. L.*: 1, Asparagus plumosus nanus (a very slender-leaved variety); 2, Nephrodium patens; 3, Adiantum Moorei; 4, Pteris cretica; 5, Pteris umbrosa; 6, Pteris cretica albolineata; 7, Selaginella emiliana; 8, Selaginella uncinata.

Communications Received.—A. E. Stubbs.—Constant Reader.—Alexr. Macrae.—Benjamin Soddy.—A. Kirk.—A. P.—W. G.—H. C.—T. Hardy.—Grower.—G. R.—J. S.—W. Walker.—A. J., C.—T. Wilkins.—A. K.—B. P.—A. E. S.—J. S.—Brighton Society.—Akbar.—D. G. M.—Enquired.—F. Talbot.—Newry.—Richmond.—L. Mantell.

TRADE CATALOGUES RECEIVED.

R. Wallace & Co., Kilnfield Gardens, Colchester.—Autumn Catalogue of Lilies, Calochorti, Brodiaea, Hardy Herbaceous Plants and Bulbs.

Wm. Rumsey, Joyning's Nurseries, Waltham Cross.—Catalogue of Roses, Fruit Trees, Ornamental Trees, Shrubs, &c.

W. and J. Birkenhead, Sale, Manchester.—Choice Collection of Ferns and Selaginellas. Special Autumn List.

COVENT GARDEN MARKET

September 30th, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples..... per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs	25 0	27 6
Grapes, per lb.	0 6	1 6
Pine-apples. —St Michael's each	2 6	6 0
Plums per ½ sieve.....	5 0	
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	0 0
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	2 0
Asters, doz. bches	3 0	6 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Carnations, doz. bchs.	4 0	6 0
Eucharis ...per doz	3 0	5 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	4 0	6 0
Gladiolii, doz. spikes	1 0	1 6
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	3 0	6 0
Lilac, White (French) per bnch.	4 0	5 0
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	2 0	4 0
Roses (indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	4 0	6 0
Pink Roses, doz.	1 0	1 6
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays ...	2 6	4 0
Tuberoses, doz. blooms ...	0 3	0 4
Palmnia, double, doz. sprays	0 6	0 6
Violets (French) per doz. bunches.	1 6	
Violets (English) per doz. bunches.	1 6	2 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, per doz.	9 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope, per doz.	4 0	6 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Mignonette	4 0	6 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet,	2 0	4 0
Solanums, per doz.	12 0	15 0

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, OCTOBER 10th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, October 12th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

TUESDAY, October 13th.—Royal Horticultural Society; meeting of commitees at 12 o'clock.
Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

WEDNESDAY, October 14th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.
Special Sale of Japanese Lilies by Messrs. Protheroe & Morris.

THURSDAY, October 15th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.

FRIDAY, October 16th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.
Sale of imported and established Orchids by Messrs. Protheroe & Morris.

FEATURES OF THE FRUIT SHOW.—The Apples were undoubtedly the dominant feature of the whole show. Pears have been considered more numerous by some, but in the absence of statistics we might be excused for remaining open to doubt. We have no hesitation about the abundance and beauty of the Apples, even if competition in some of the classes was not so keen as it was last year. Culinary Apples took the palm for size, and many of them were exceedingly handsome, as all who have seen them will admit. What the dessert Apples lacked in size they made up in colour and general attractiveness, while quality lay behind a pleasant exterior. Neither of these two classes exceeded, even if they sometimes equalled, the brilliancy of the cider Apples, but most people have an idea that the latter are sour. While looking upon these attractive Apples one could feel little surprise if a modern daughter of Eve might feel tempted. Kent still maintains its superiority for Apples and Pears, both in the nurserymen's and amateurs' classes. While speaking of Kent, there are other counties such as Sussex, Devon and Carmarthen, which make a bold advance for leading positions. The collection shown by Major Bythway from the latter county was considered by many connoisseurs as the best in the show and stood a strong chance of a Gold Medal if it had entered the competitive ranks. No exhibit in the amateurs' class was reckoned worthy of the Gold Medal offered as the first prize, but it would undoubtedly have been awarded if Major Bythway's collection had been entered for competition here. On the other hand, if it really was the best collection in the show it would have taken the Gold Medal in the

nurserymen's class. Surely Major Bythway could not have been aware of his strength otherwise he should have boldly entered the competitive ranks. Soil, climate and cultural skill combined must be credited for the perfection to which Apples and Pears have been brought in the counties named. To prove the truth of this we need only mention the fact that a visitor had obtained some Apples from Kent, and they were so miserably small and poor as to be unworthy of the window of a third class fruit shop. Thus it may be that the worst as well as the best Apples come from Kent. Then it will be evident that there is something in high cultivation after all, and a sure reward for those gardeners who have the ambition to place themselves in the first rank by their own personal endeavour to master the science and practice of their profession. At the same time we admire, and offer encouragement to, as well as sympathise with, those gardeners who attain to eminent positions with their fruits under adverse conditions as to soil and local conditions over which they have no control, and can only modify or ameliorate such by their own personal exertion and skill.

There can be little doubt but that shows like that just held will be the means of bringing all the best varieties of Apples to the front, while the inferior ones will get neglected and finally discarded to the great advantage of fruit culture in general. While fruits are being raised by different cultivators all over the country, and only subjected to the censorship of local shows, it follows as a matter of course that many inferior kinds are tolerated to occupy valuable space that might be more profitably employed. On the other hand, really good things under those conditions could only enjoy a local repute. Like as two peas might very well be applied to Apples; and we are not surprised that some mistakes should have been made by the judges at the Crystal Palace on the 1st inst., as Sir Trevor Lawrence good humouredly admitted at the gardeners' luncheon which followed the completion of the judging. A dish of Cox's Orange Pippin had been honoured with a prize under the name of Ribston Pippin. It is somewhat surprising that such a mistake should have been made with two of the best British Apples in existence. We may take it as an instance of the difficulty of discriminating between the varieties of Apples in all cases except by a specialist. According to our observation, it was not the difficulty of discriminating between two varieties of Apples that was puzzling so much as the fact that varieties were often so unlike themselves. They had lost their usual character in many cases on account of their great size and rich colouration. Few attempts were made in the way of ornamental devices and arrangements, yet on the whole, the fruits of themselves had an attractive appearance, and were never more telling than when baskets or heaps of the large varieties were attractively set up in prominent positions.

Pears were shown in great quantity as already stated, but few of them were notable for high colour. Louise Bonne of Jersey, and King Edward were notable exceptions. Beurré Clairgeau was not half so conspicuous as we have seen it. A large number of varieties were notable for their size. The culinary Pears figured largely in this respect. Pitmaston Duchess, amongst early kinds, was particularly fine and abundant. William's Bon Chrétien was conspicuous by its absence, for we did not observe a single dish of it. If the show had been held three weeks earlier it would have fitted in with several varieties which the early season put completely in the background. All the same, however, we are thankful that Pears, abundant as they were, did not dominate the show, for they are painfully dull subjects with which to get up a show.

Stone fruits generally might be placed in the same category as the early Pears; for although they were all represented, they were very scanty. The absence of the early Pears and the stone fruits such as Peaches, Nectarines, Apricots, Plums and Cherries, must have had some effect on the size of the show; and in a measure they must be held responsible for the smaller size of the show than last year. Apricots were represented, we believe, by a single dish. Figs were more numerous but nevertheless very scanty. The hurricanes of wind and storms of rain, which prevailed for some time previous to the show, must have destroyed the hopes of many would-be exhibitors by the number and extent of the windfalls.

The Grapes came in for a considerable amount of attention, and though there was nothing sensational even in the class for twelve bunches in six varieties, yet we believe that the general average was above the standard of former years. A considerable number of varieties was shown in the several classes, but the competition was keenest in the class for Muscat of Alexandria, which was really well shown except in the matter of finish. Few, if any, of the bunches were properly finished. The sunless and wet month just concluded may be held responsible for this state of matters. Prizes were offered in ten classes for Grapes, and one of the peculiar and, perhaps, unexpected, results of the case was that three exhibitors took all the leading prizes. C. Bayer, Esq., Forest Hill, secured the premier position for six varieties of Grapes, and also for Black Hamburg; he also took two second prizes. Alderman Chaffin, Bath, took four of the leading prizes and one second. His Grapes, which we inspected upon the vines in July last, and recorded in our columns, were really splendid for the size and finish of the berries as well as general excellence. W. K. D'Arcy, Esq., Stanmore, took four of the leading prizes, and also had the honour of the first prize for the collection of eight dishes of ripe fruit. All the other exhibitors had to be contented with a second or third seat, or none at all.

The miscellaneous exhibits were really an important factor in the effectiveness of the show, and germane to it when the exhibits consisted of fruit. The fruiting trees in pots were ocular demonstration of the fact, that people need not nowadays wait half a lifetime to secure a crop of fruit from a young plantation. The collection of berried plants exhibited by Messrs. Veitch, of Chelsea, might well be considered a legitimate branch of a fruit show. The exhibit was unique in its way, and afforded evidence of the wealth of berried plants at the command of the planter and decorator. Nerines shown by the same firm marked a bright spot in the Palace. The tuberous Begonias lifted from the open ground were really charming, and most effective at this late season.

Her Majesty the Queen is fond of Peaches, but her favourite fruit is the Nectarine.

Coloured Vine Leaves for the Tsaritsa.—While the Tsar and Tsaritsa were the guests of the Queen at Balmoral, Messrs. D. & W. Buchanan, Forth Vineyards, Kippen, by Stirling, sent some of the vine leaves, for which they are noted, to the Tsaritsa, and received the following reply:—

Balmoral Castle, Oct. 1st, 1896.

Messrs. D. & W. Buchanan.

Dear Sirs—The Empress of Russia desires me to convey to you her thanks for the beautiful "autumn-tinted vine leaves" which you have offered through me for Her Imperial Majesty's acceptance.—Yours faithfully, Arthur Bigge.

Lord Salisbury is to lay out £10,000 during the winter, in improving the grounds of Walmer Castle, which are in a state of decay.

Some children have objectionable names.—Unfortunately for plants, many of them fall into that category. Raisers of plants, pray take heed of this crying evil.

Mr. R. J. Hammill, until recently general foreman at The Nurseries, Five Oaks, Jersey, has been appointed head gardener to F. S. Roberts, Esq., "Beauvoir," St. Saviour's, Jersey.

Mr. David Gibson, until recently foreman in the outdoor department to T. McMeekin, Esq., Falkland Park, has been appointed head gardener to J. B. Johnstone, Esq., Coombe Cottage, Kingston-on-Thames.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 13, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. At 3 o'clock a lecture will be given by Mr. E. Burrell on "Hardy Summer Flowers." The committees will meet as usual.

William Robinson, gardener to the late F. L. Ames, Esq., died quite recently at North Easton, Mass., U.S.A. He has had charge of the best collection of Orchids outside of Europe, since its formation. He is well known to the horticultural profession, both in America and England, so that his untimely decease will be deplored by a wide circle of friends. His position at North Easton was a most responsible one. He was only about fifty years of age, and leaves a widow and a large family of young children. In his profession he was a smart fellow, and personally much respected.

Mr. Peter Tod, market gardener at Winnipeg, Manitoba, died on the 2nd ult. He was tenant for many years of the farm of Redhall, on the Ayton Estate, Berwickshire, Scotland, and about seventeen years ago settled on the St. Boniface side of the Red River, where he pursued the vocation of market gardener with great success. Deceased was much respected by a wide circle of friends and acquaintances, and always had a welcome smile on his face for his friends who visited him at his home on the banks of the Red River. He leaves a widow, two sons, and one daughter to mourn his loss.

The Bonniest Plaid in Scotland.—The forest of Ballochbuie extends for three miles along the course of the River Dee in Scotland, and at its widest is about four miles in breadth. The soil is thin, the subsoil being gravelly, and is covered with an ancient natural forest of Scotch Fir, of which it still contains some splendid specimens reckoned to be about 200 years old. Before the Prince Consort purchased Balmoral, some of the trees measured 6 ft. to 10 ft. in circumference, with clean stems rising to a height of 80 ft. There is a tradition about this forest that M'Gregor, the last laird of Ballochbuie, sold it to Farquharson, of Invercauld, for a tartan plaid. The Queen caused a stone to be erected in the wood, bearing the inscription: "Queen Victoria entered into possession of Ballochbuie on the 15th day of May, 1878. The bonniest plaid in Scotland."

Woolton Mutual Improvement Society.—The inaugural meeting of this session was held on the 30th ult. at the Mechanics' Institute, when about seventy members and friends were present under the presidency of Mr. James Marsh, J.P. The opening night proved most interesting and instructive, under the capable abilities of Mr. R. W. Ker, who gave a graphic lecture on "Norway: Its Cities and Villages," with a sketch of the history, propagation, and culture of spring flowering bulbs. The lecture was profusely illustrated with limelight views, the first portion consisting of many fine and quaint buildings and their inhabitants. The fields of Hyacinths, Tulips, and Narcissi, were especially admired. Special samples of bulbs were passed round the room to show the results of the system of propagation and the progress the bulbs had made at stated intervals. This was supported by Mr. Ker giving the general outlines of preparing the ground, the details of culture, and the system adopted in the storing and packing rooms. At the conclusion of the lecture a cordial vote of thanks was tendered to the lecturer on the motion of the chairman, and seconded by Mr. R. Todd; and a similar compliment was paid to Mr. Marsh on the motion of Mr. R. W. Ker.

Peas have been a Heavy Crop this year in Germany. This, together with a surplus in Canada, and the United States will keep the prices rather low.

Up-to-Date.—A hulh dealer of New York of an enterprising character has posted up in his window a placard inscrihed with the following:—"Chinese Sacred Lilies—Li Hung Chang's Favourite Flower."

The Egg Plant.—Wrathful housewife: "Merciful heavens! Bridget, what is this you've bought? I ordered an Egg Plant." Bridget: "I couldn't get no hen, so I thought two ducks would be better, as they will lay twice as many eggs. By putting them in the greenhouse it would he like forcing them."

Hurst & Son Cricket Club.—The past season was a most successful one; sixteen matches were played, nine won, two drawn, and five lost. Most enjoyable games were played with Messrs. Sutton & Sons, also Messrs. Carter's, both of which were won by Hurst and Son. Nearly all fixtures have heen made for 1897, but matches could easily be arranged and would be much appreciated with other seed-trade houses.

Dr. Woodman Memorial.—A copy of the balance sheet relaiing to this suhject has been sent us by the hon. secretary, Mr. Wm. Napper, 489, King's Road, Chelsea, S.W. He writes to inform us "that a plain, substantial stone cross has been erected over the grave of his old master, and dear departed friend. The fund closes to-day (Michaelmas), but should anything come in later, the same could, of course, be handed to the widow." The subscriptions received for the Dr. Woodman Memorial amounted to £32. The expenses were as follows:—printing, £1 8s.; stamps, £2 11s.; stationery, &c., 11s.; headstone and curhs, £10 9s. 6d.; cemetery fees, £2 4s. 6d.; gift to the widow, £14 16s.; the whole make a total of £32.

New Palm House, Liverpool.—On Monday, the 5th inst, the new Palm house erected in Sefton Park, by the munificence of Mr. H. Yates Thompson, was formally opened. Prior to the ceremony, the Lord Mayor of Liverpool (the Earl of Derby), entertained a distinguished company to luncheon at the Town Hall. A large company of ladies and gentlenmen were present, when Alderman Ball, Chairman of the Parks and Gardens Committee, introduced Mr. Yates Thompson, who in a charming speech referred to the Palm house at some length from the inception to the completion of the building, acknowledging the gratifying results of the builders, furnishers, and Mrs. Herbert for the general arrangements of the plants, of which a full description was given on page 25. In conclusion Mr. Yates Thompson formally presented the house, through the Lord Mayor to the citizens of Liverpool. The Lord Mayor, warmly expressed the thanks of the citizens for the magnificent building, and presented Alderman Ball an 18-carat gold key to open the house. Alderman Ball hriefly replied, and declared the house open amidst applause.

Heavy Potato Crops.—In reference to a paragraph which appeared on p. 72, Mr. A. Findlay, Markinch, N.B., writes to say that if the paragraph gives the figures as written by Mr. T. C. Steel, he is inclined to think that our correspondent has made a slip in his calculation, and that the 3½ lhs. of Potato "Up-to-Date" planted in spring and giving a return of 14 st. should have worked out at 34 tons to the acre, if planted at proportionally the same distance apart as The Sutton Flourball. As to this we may say that the figures were published as supplied to us. Not knowing at what distances apart the Potatos were planted, we did not care to recast the statistics furnished by our correspondent. Concerning this Potato, we note in the agricultural report for Fifeshire, that in gardens the crop is very heavy. In Cupar five different varieties of Potatos harvested in a garden, varied from 15 to 20 tons per acre. The 40-ton sort was Findlay's "Up-to-Date," the crop of which beat everything the writer had seen, but many of the tubers were too large for profitable market use, numbers of them weighing from 2 lbs. to 2¼ lbs. each. Though large, the tubers were well-shaped and of good quality. While on this topic we may say that the heavy storms of rain recently experienced in Scotland, have washed the soil from the Potatos in many cases, so that the exposed tubers have become green. A good deal of disease exists among the earlier kinds, and the haulm is now completely blackened and gone, both in field and garden, late and early varieties alike. Mr. Findlay is thoroughly in accord with our leader of last week, "Experiments with Potatos," and describes it as a thoroughly sound and common-sense leader.

The Weather Plant.—Lady of the house: "Gardener, have you got the weather plant?" Gardener: "No mem, and I wouldn't advise you to get one; there are only samples to be had, and bad at that."

Signs of Winter.—The higher peaks of Snowdon on Monday last were covered with a mantle of snow. Last Sunday night, and on Monday morning a wild storm of wind and rain prevailed over the western and central portions of Perthshire, to he followed hy sleet and snow later on. The higher Grampians were white with snow. A good deal of corn is still exposed in that part of the country, and much of it has been destroyed by the boisterous nature of the weather.

An Impromptu Concert.—The first annual meeting of the Newport (South Wales) Gardeners' Mutual Improvement Association was held at the Tredegar Hall on the 23rd ult. under the chairmanship of H. J. Manley Power, Esq. There was a good attendance. After a review of the past session had been read by the treasurer, Mr. Treseder read an interesting and instructive paper on "The Cyclamen." After the conclusion of the paper an impromptu concert was carried on during the rest of the evening.

Orchids at the Sale Rooms.—The Central Sale Rooms of Messrs. Protheroe & Morris were packed with Orchids of all descriptions, imported and established, on the 2nd inst. A very fine variety of Cattleya Wageneri was knocked down at 10 gs. Cattleya Skinneri alha fetched £3. Sir Trevor Lawrence, Bart., bought two plants of Odontoglossum praestans at 4 gs. each. The popularity of Cattleya exoniensis still continues, for a plant of six pseudo-bulhs fetched 6½ gs. Cattleya dowiana aurea varied from 30s. to 2½ gs. apiece. A spotted variety of Odontoglossum crispum hrought 4 gs. F. T. Pitt, Esq., secured a rich blue variety of Vanda caerulea for 12 gs. Cypripedium insigne Sanderae was withdrawn after 44 gs. had been offered for it, thus showing the estimation in which this fine variety is still held. Cattleya Trianaei backhouseana reached 4 gs. at the fall of the hammer. A small piece of Dendrobium nobile Cooksoni found a buyer at £2 7s. 6d., and Phalaenopsis gloriosa went for 2 gs.

Devon and Exeter Gardeners' Association.—The annual meeting of the members of this association was held in the Guildhall, Exeter, on the 30th ult., under the presidency of the Right Worshipful the Mayor of Exeter. The hon. secretary (Mr. Andrew Hope) read the committee's report of the session of 1895-96, and here it was stated that at the commencement of the sixth session, the committee could look back with genuine satisfaction upon the accomplished work of the society. Last year's work was marked by the same practical character as former ones. The report also referred to the establishment of a branch of the Gardeners' Royal Benevolent Institution at Exeter last spring. The spring flower show had been a great success, and showed a marked improvement upon former ones. The committee recommended that it be an annual fixture. Handsome gifts to the library were acknowledged, including "A Traveller's Notes," by Mr. James H. Veitch, Chelsea. At the conclusion of the report, the committee thanked the Mayor for the use of the Council Chamber for their meetings and the local and gardening Press. Mr. Mackay submitted the financial statement showing that last year commenced with a halance of £29 16s. 2d. and finished with a balance in hand of £12 6s. 5d. This was explained by the fact that there had been fewer subscribers to the spring show than on former occasions; yet the small halance was sufficient to commence a new session. The Mayor considered the report highly satisfactory and moved its adoption. The election of officers for the ensuing year was next proceeded with. Mr. J. I. Pengelly, in proposing the election of the committee, said he looked upon the association as doing a good work, and might well claim from the municipality some grant from the technical education fund, and if placed before the authorities it might be obtained. It was decided to hold a spring show. Mr. Hope referred to the classes on "Plant Life" now being held in connection with the university extension, and proposed that the association give a prize of 10s. 6d. to the student who should be adjudged to have passed the best at the examination. This was seconded and carried.

The Conservatory can be kept gay for some weeks to come by those who have a plantation of seedling Begonias in the open air. The boisterous weather will prevent the flowers from opening properly in the open air after this date, so that the best and most beautiful varieties may be lifted and transferred to pots. Here the yet unopened buds will open with all their purity and hrilliancy as if the summer season were young, instead of autumn in all its blustering roughness with storms of wind and rain.

Errata.—In an article on Leighton Buzzard Sands, p. 73, the filter sand is supplied from the Mile Tree Road pit, Shenley Hill, and from the Stone Lane Hill pit at Heath, and not from the Grovebury pit. White sand, not gray, is used for filtration purposes. Filtering and sewage sand, and that used for particular purposes, is screened and otherwise prepared. The west upper side of the Stone Lane Hill pit, is the oldest; the upper side was next opened; and the Mile Tree Road pit was the next in age. Mr. Arnold is the sole agent for cutting and selling the peat and loam on the Stock Grove Estate. Reach Green Farm, adjoining Stone Lane Hill, is Mr. Arnold's own property, and comprises thirteen and a half acres of sand of all descriptions, of the same depth as the last mentioned pit.

Assaulting a Gardener.—At Reading, on the 19th ult., William Sellwood and Charles Wise, of Tilehurst, were charged with assaulting Thomas Carver, at Tilehurst. The complainant is gardener to J. Omer Cooper, Esq., and on Septemher 14th when he was working in the garden, the defendants, who were strangers to him, came and asked if he could give them employment. He replied in the negative, and said he would not employ men who came as they did, through a hedge and over a ditch. They went the way they came after some words. As the plaintiff was going to dinner ahout 1 p.m., the defendants came out of a public-house and hegan abusing him. Wise seized him by the collar and threatened him with his fists. Sellwood took him by the arm, and asked for money, at the same time using filthy language. Defendants were each fined 6d. and 7s. 6d. costs, or seven days; they were allowed a week to pay.

THE CHANNEL ISLANDS RE-VISITED.

(*Continued from p. 38*).

Five Oaks and The Cesarean Nurseries.

One of the most interesting details of my stay in Jersey was the visit to Mr. H. Becker's series of establishments, of which the two principal are the nurseries at Five Oaks—a comfortahle walk within easy reach of the town—and the Cesarean Nurseries, which are well within the township of St. Helier. At the latter it is principally fruit that is cultivated, and from the cursory inspection there was ample evidence that Mr. Becker thoroughly deserves the high reputation which he has made for himself in cultivating and raising fruits. There is a multitude of varieties of Pears, Apples, Plums, and, in fact, all the good things dear to the heart of the pomologist. The Cesarean Nurseries are situated on a slight declivity sloping towards the genial sunshine of the south, and well sheltered; but nevertheless the hardier sorts receive their proper treatment, and the cultivation of these for purposes of planting out is carried on with successful results.

It was, however, at the Five Oaks Nursery that we had a most striking illustration of what has heen done in recent years in the development of nursery work in the island. Skirted by a well-arranged boundary the nurseries are approached through a noble gateway of the Old Baronial order, and the visitor is struck by the evident precision with which the stock is arranged, and the various departments conducted. A spacious drive leading from the main gateway extends right through the nursery to the other roadway. The larger section is devoted to the growth of Dahlias, the collection being a very fine one, and at the time of our visit the colour of the massive blooms was remarkable. Moreover, we were surprised to notice such large numbers of extra sized blooms on individual plants, indicating a highly suitahle soil, coupled, undouhtedly, with skilled cultivation. A little further ahead was a fine regiment of young vines of one year's growth out-

doors. These are planted out, not grown in pots in this nursery, and many of them had obtained a height of 14 ft.

Inside the houses three varieties of Grapes principally are grown, Gros Colman, Canon Hall Muscat, and Alicante. Tomatos also receive their share of attention, but the Grapes particularly struck us as being a marvellous crop of excellently-formed bunches. Stretching away to the south were some four acres of young Ferns, and a similar area devoted to Coniferae. We noticed a handsome batch of the new Aster Marguerite, and a large section is also devoted to the cultivation of that always welcome flower, the Rose. The Chrysanthemums give every indication that Mr. Becker will have a strong team for the November competitions, and if he tries issues at some of our English and Scotch shows we are quite sure the competition will be an interesting one. Details of Mr. Becker's new currant, the "Comet," have already appeared in these pages, and, although there is much more to be said, space necessarily prohibits this, and with one word of thanks to Mr. Becker and to his courteous managers, Mr. Roberts and Mr. Hammill, we hasten on to Le Corbiére, an account of which advanture will be detailed in our next.—*Gyp*.

POTATO SATISFACTION.

Being deeply interested in a subject which has been engaging the attention of several of our correspondents, Mr. Alexander Macrae, gardener to Mr. A. Fordyce Burke, Esq., Adderly House, Monifieth, Scotland, sends us a box containing half a dozen tubers of Potato Satisfaction, which are really splendid samples of the noble tuber. Mr. Macrae planted the sets on May 25th, and lifted the crop on September 20th last. The six tubers weighed 6 lbs. in the aggregate, but were not all of equal size, though all were shapely, and five of them good enough for exhibition purposes. They measured from 4¾ in. to 5¾ in. in length; and the largest tuber was 3½ in. wide, and 2½ in. deep.

Our correspondent also lifted a number of larger ones weighing 1½ lbs. each. Being rightly satisfied with this result, he says the variety is well named Satisfaction. He states that the ground was well dug without manure, so that the variety deserves to be grown both for table and exhibition purposes. If the quality is good, which we believe it is, we are quite in accord with what Mr. Macrae says, and should have been pleased to have had his opinion upon them in that respect. As to their exhibition value there can be but one opinion. The tubers sent us were oblong, slightly flattened, smooth or very slightly rough in the skin, and having very shallow eyes. They were also solid, heavy and clean without a trace of disease. The soil in his neighbourhood is sandy, whatever it may be in the garden under his care. It must also be rich, either naturally or by previous manuring, and that would account in a measure for the excellent results, without direct manuring. Mr. Macrae sent us the examples with the above information for the benefit of our amateur readers.

OCTOBER CHRYSANTHEMUM SHOW.

The early autumn exhibition of Chrysanthemums under the auspices of the National Chrysanthemum Society was opened in the Royal Aquarium, Westminster, on Tuesday, the 6th inst., and continued the two following days. As far as the "Autumn Queen," was concerned the greatest interest centred round the three splendid groups arranged for effect. The exhibition on this occasion was made up chiefly of the numerous and extensive exhibits of Dahlias, hardy fruit, perennial Asters, and floral decorations, which were both numerous and attractive.

The prizes for a group of Chrysanthemums and foliaged plants, arranged for effect in a space of 72 superficial feet brought out three entries of a character far superior to what might have been seen a few years ago. Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, was accorded the leading honour for his gracefully and effectively arranged group. It was rectangular in outline, raised at the back, and the plants stood at various heights so as to give an undulating and informal appearance. The plants in the front portion were sunk in a bed of Maidenhair Ferns relieved with Cocos weddeliana and bright Crotons. The Crotons, Cocos, and Dracaenas had a wonderfully brightening effect. Some of his finer blooms were Boule d'Or, Mutual Friend, Emily Silsbury, Amiral Alvelan, and numerous seedlings of his own raising, and of great promise. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, was a very good second. His blooms were the biggest and finest of all the groups, but his group wanted more Palms and Crotons to lighten it up and relieve the massive appearance of the blooms, which were nevertheless arranged on different levels. He had large Palms behind with Asparagus and a line of Maidenhair Ferns in front. His blooms of Madame Gustave Henry, Thos. Wilkins, Louise, and Phoebus were splendid. Mr. G. Stevens, St. John's Nursery, Putney, took the third position with a group that would have easily taken the first place a few years ago. His flowers were simply arranged on the slope with numerous Cocos and Crotons that served to relieve the mass of bloom.

The season is evidently late, and that no doubt accounted for the absence of bush-grown pot plants.

The cut flowers were also remarkably scanty even for an October show. The wet and sunless character of September must be held responsible for the general absence of the exhibitors who used to make this show an interesting one, and truly the advanced guard of the November display. Mr. James Agate, Nurseryman, Havant, was the only exhibitor in the class for twenty-four blooms of Japanese varieties and was accorded the first prize. He had, however, some grand blooms of Emily Silsbury, Phoebus, Madame Gus. Henry, Mrs. E. W. Clarke, Madame Aug. Lacvivier, Mrs. W. H. Lees, Wilfred Marshall, Madame I. Allamond, The Graphic, Duchess of York, and M. Geo. Biron.

Mr. James Agate had likewise the leading award for twelve Japanese blooms, which were even finer than the twenty-four. Phoebus, Mutual Friend, Emily Silsbury, Le Chortrex, Princess May, and Wilfred Marshall, were really grand blooms for October. Mr. James Watt, gardener to Henry Bell, Esq., Fitzjohn's Avenue, Hampstead, was second with very much smaller blooms. A third prize was awarded to a stand of pompons.

Mr. T. Tullett, gardener to G. Alexander, Esq., Warley Lodge, Brentwood, secured the first prize for two vases of Chrysanthemums, having twelve blooms of large flowering varieties in each, with the addition of suitable foliage. Mr. T. Brookes, gardener to W. J. Newman, Esq., Park House, Totteridge, Herts, was second with smaller blooms; and Mr. James Agate came in third with very tall vases.

Mr. James Agate was again the winner for six blooms of incurved Chrysanthemums, showing M. R. Bahuant, Globe d'Or, and Perle Duphinouix. Mr. D. M. Hayler, gardener to W. Hannaford, Esq., J.P., Tenterden Hall, Hendon, took the second place with slightly smaller blooms in good form.

In the amateurs' classes the material shown was rather second-rate, if we except a couple of exhibits. Mr. Martin Silsbury, Providence, Shanklin, came out a good first for twelve blooms of Japanese Chrysanthemums, of not less than six varieties. He had fine samples of Emily Silsbury and Snowdrift, a new and very promising seedling of 1896. Second came Mr. W. Amies, South Ashford, Kent. The first award for six blooms of Japanese also fell to the lot of Mr. Martin Silsbury, Emily Silsbury, as in the previous case being the *pièce de la resistance* of the exhibit. Mr. W. Amies was likewise second here.

In the classes for single-handed gardeners, Mr. J. Knapp, gardener to F. W. Amsden, Esq., 22, Chichester Road, Croydon, received a second prize for twelve blooms of Japanese Chrysanthemums; also the first award for six blooms of the same section.

In the open classes, the chief features were the floral decorations, which, as may be supposed, constituted the greater part of the decorative material. Mr. L. H. Calcutt, Fern Bank Nursery, Stoke Newington, N.W., had the best table of bouquets, wreaths, sprays, etc., illustrating the value of the Chrysanthemum for such purposes. Some of Mr. Calcutt's devices, although rather heavy were very effective. Mrs. W. Green, Jun., Harold Wood, Essex, was placed second for an exhibit that was little, if any, behind that of the first prize-winners. Mr. Henry O. Garford, Stoke Newington Station, was awarded the first place. Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Highgate, N., had the best three epergnes of Chrysanthemums suitable for table decoration. Mr. C. J. Gatehouse, Granville Nursery, Lewisham, was second; and Mrs. W. Green, Jun., third. The best single vase of Chrysanthemums was contributed by Mr. D. W. Hayler, gardener to W. Hannaford, Esq., J.P., Tenterden Hall, Hendon.

The miscellaneous exhibits constituted by far the largest, and the most important part of the show. Some grand groups of cut flowers and brightly-hued foliage plants with scarcely less brilliant arrays of superb hardy fruit were on view, and these came into the gap and did the work that early autumn Chrysanthemums could not do of themselves. The fountain at the lower end of the hall had been charmingly and tastefully decorated with Chrysanthemums, Dahlias, and perennial Asters, with suitable greenery, by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. The difficulty that is usually experienced in furnishing the lower part of this properly had been surmounted by arranging numerous pyramidal bunches of Pompon, and the smaller flowered Cactus Dahlias in very effective fashion. At the other end the Ichthemic Guano's Trophy displayed the virtues of its famed specific, illustrating the same by the plants with which it was decorated, and which had been reared upon it to their present excellence.

Messrs. J. Cheal & Sons, Crawley, Sussex, were responsible for an exceedingly pretty table of flowers and fruit. Pompon, Cactus, and single Dahlias, comprised the former, whilst such Apples as Worcester Pearmain, Peasgood's Nonsuch, Jubilee, and King of the Pippins, and such Pears as Pitmaston Duchess, Marie Benoist, Catillac, Belle de Brussels, and Beurré Diel, were represented by some fine dishes (Silver Gilt Medal).

Mr. W. Davies, gardener to—Parnell, Esq., Devonshire House, Stamford Hill, received a Silver Medal for a collection of remarkably well-grown and well coloured Crotons.

Messrs. Cutbush & Sons, Highgate, N., were awarded a Silver Medal for a very pretty table filled with miscellaneous material comprising neat specimens of Begonia Gloire de Lorraine, Palms, Dracaenas, Ferns of various kinds and Crotons.

Certainly the brightest spot in the hall was that whereon Mr. H. J. Jones, Ryecroft Nursery, Lewisham, had deposited a grand collection of cut flowers of double and single zonal Pelargoniums. Mr. Jones is well known as a specialist in the culture and improvement of this charming and popular class of plants, and his latest effort at the Aquarium fully sustained his reputation. Eric Hilda, Edith Tabor, Gertrude Pearson, Dr. Shaw, Mrs. W. Morris, Mr. G. C. Smith, Lady Brooke, and Mrs. Wm. Walters are a few amongst a host of beauties (Silver Gilt Medal).

Rarely have Messrs. Dobbie & Co., put up a more effective group than they did on this occassion, when a Silver Gilt Medal rewarded their efforts. Dahlias were exceptionally bright for the time of year, especially those of the Pompon, and Cactus sections, Early Flowering Chrysanthemums also added their quotum of grace and elegance.

Messrs. Sankey & Sons, Bulwell Potteries, hit upon a very tasteful way of showing off the excellence of their pot wares. A charming little grotto had been arranged decorated with Ferns and Isolepis gracilis growing in pans and pots suitable for hanging against a wall or suspending from the roof.

A Bronze Medal was voted to Mr. W. Piercy, 89, Beadnell Road, Forest Hill, for a small collection of Chrysanthemums, no buds having been taken from the plants from which the blooms were cut.

A superb collection of cut sprays of perennial Asters won for Mr. Norman Davis, the Vineries, Framfield, a Silver Gilt Medal. Despite the unfavourable character of the season. Lucidulus, Amellus, cordifolius elegans, Vimineus, and Andromeda were all represented in splendid condition.

Mr. C. Shaw, Sherwood, Nottingham, sent a nice lot of cut early Chrysanthemums (Silver Medal).

Mr. W. J. Godfrey, Exmouth, Devon, sent a number of well-developed Chrysanthemums, including grand samples, for the earliness of the season, of Barbara Forbes, and Exmouth Yellow, the latter being one of the best yellow Japs lately sent out. From the same source also came a small batch of Calla Little Gem, the plants being clean, healthy, and well-grown (Silver Medal).

Messrs. H. Cannell & Sons, Swanley, Kent, contributed a very neat batch of Cannas in small pots (Silver Medal).

M. S. Mortimer, Rowledge, Farnham, Hants, sent ten dozen blooms of show, fancy, and Cactus Dahlias in first-rate order, the colours being wonderfully vivid considering the prevailing wet weather (Silver Medal).

Messrs. John Laing & Sons, Forest Hill, S.E., sent 300 dishes of Apples and Pears in grand condition, the whole constituting a specially fine display of all the best varieties of British grown fruit all of them being superbly cut (Silver Gilt Medal). A small group of foliage plants also came from the same firm.

Messrs. Gaymer & Son, Norfolk, the well-known cider makers, received a Silver Medal for an exhibition of cider and cider Apples.

Mr. H. Berwick, Sidmouth Nurseries, Sidmouth, showed a large table of Apples and Pears in first-class condition. Many of the leading varieties of Apples were represented (Silver Gilt Medal).

Mr. L. H. Calcutt received a Bronze Medal for a very pretty floral table.

Mr. W. Smith, gardener to S. Gardener, Esq., Mount Park, Harrow, received a Silver Medal for a very nice collection of vegetables; and Mr. John Watkins a similar award for an exhibition of cider, and a collection of over fifty dishes of cider Apples.

VEGETABLE CALENDAR.

Lettuce.—To provide for a good supply of Lettuces during the early summer months, it will now be necessary to sow some approved green Cos and Cabbage varieties in a cold frame. The frame should be raised a foot or two by the aid of some rough litter, and face south. Fill to within 6 in. of the glass with light sandy loam and leaf soil, and over this, 1 in. of dry sandy road sweepings mixed with fine wood ashes passed through a sieve, to give a good seed bed, and prevent the young plants from damping off at the collar. Sow broadcast and keep the frame close until germination takes place, when the frame should not again be closed except during very severe weather. The young plants must be kept dwarf and stocky by removing the lights on fine days, but care must be taken not to expose them during rain, otherwise damping off may set in and prove difficult to check. A one-light frame will give sufficient plants for a large establishment, and if planted in warm positions in succession, from the beginning of February onwards, will give the best Lettuces during the whole year. A good stock of full-grown Lettuces should now be in condition for lifting and planting thickly in cold frames. A fine day must be chosen for lifting them, and a small ball of earth taken up with each, when they will, with care, keep fresh and good for two months or more. Continue to plant out from previous sowings, in sheltered positions, and also in frames. When growing them in the latter during winter a soil composed mainly of leaf mould will give the best and quickest results. A bed may also be formed outside by laying down 6 in. of leaf mould and thoroughly rotted dung with a layer of soil over it, and be planted at once. This bed should be made of a size to suit a cold frame, which should be placed over the plants a little later on. For this planting and also in frames, the Cabbage varieties should be selected.

Beets.—Where the roots have attained a useful size, they should be lifted and stored without further delay, as a frost sufficiently severe to affect the roots may occur at any time after this date. Great care should be taken in lifting so as to secure them without much damage to the roots. The leaves also must be carefully twisted off without damaging the crown. Any not fully grown may remain out a little longer, but it will be advisable to draw a little earth over the top of the roots and crown.

Endive.—A good proportion of this crop should now be fully grown, and some system of blanching will be necessary to render it fit for use. The green curled kind may be covered with inverted flower pots, or clean tiles may be laid over the hearts of the plants. The broad-leaved kinds are better lifted with small balls of earth, and placed in a dark shed, cellar, or Mushroom house. If a little extra warmth can be given them after lifting, it will add greatly to the tenderness of the blanched leaves, and the prrduce from each plant much increased. Late crops may still be planted in light land; and in sheltered positions under fruit trees this plant often does well through the winter months, and proves very useful in early spring.

Routine Work.—The removal of all refuse from used-up crops should be attended to frequently at this season, and the ground roughly hoed and made tidy; ready for digging or trenching for future crops. Growing crops of all kinds should have the surface soil frequently stirred with the hoe during dry days. Hand-weeding will be necessary among small growing crops and seed beds. Cauliflowers turning into use should be looked over occasionally, and any having the centre exposed should have a few leaves laid over them to ensure colour and prevent damage from slight frosts. Where a row or two of Scarlet Runners were sown late and grown without sticks as advised, a good crop of Beans will now be hanging on the plants, and provisions should be made for covering them during frosty nights. The latest beds of Cabbages should be planted as soon as possible now, to get the plants well rooted before winter. Any small plants left in the seed beds, may be pricked out a few inches apart on a warm border, ready to fill up gaps in the spring.—*J.R.*

THE ORCHID HOUSES.

Cymbidiums.—These beautiful evergreen Orchids are represented by some thirty or forty species, but as some of them are hardly up to what we in these days expect an Orchid to be, it will only be necessary in this article to mention those generally met with, and which are well worth growing.

For general usefulness and ease of culture I suppose I shall not be very wrong in placing C. lowianum first. They are free flowering, and last a long time in full beauty. The only possible fault that can be urged against them is that they take up too much room. This they must have, both head room and pot room, if you hope to do them well. The best place for them is on the middle stage of the Cattleya house.

C. eburneum is altogether a most handsome species, and one that flowers in February and March when white flowers are in great request. Its treatment differs but very little from the preceding variety; the compost, however, may be of a somewhat lighter nature; for, whilst the former delights in a rather strong compost of peat, loam, and dried cow dung, we use two-parts peat to one of loam, and instead of the cow dung we add shopped Sphagnum moss for C. eburneum, feeding the plants with weak guano water when well established, and throwing up, as they are doing just now, their flower spikes.

C. Mastersii resembles C. eburneum in its habit of growth and requirements, but here the similarity ends, as the flowers are different in shape, besides having numerous spots of purple on the lip. It produces its flowers somewhat earlier, too.

C. tracyanum is a most handsome variety of C. giganteum, of recent introduction, and as might be gathered by its name, was first flowered by Mr. Tracy, of Twickenham. Its habit of growth is exactly like C. giganteum, and its treatment must be of the liberal order as regards richness of compost and the amount of root room allowed.

There are a few others, including C. Parishii, C. dayanum, etc., that are well worthy a place where room is no object. They are singularly free from the attacks of insects, but sometimes they are infested with a little white scale, though this is mostly the fault of a too dry and arid atmosphere.

Stock-seed Scale, too, seems very partial to them, and as it gets down into the heart of the young growths, it requires some patience to eradicate the pest without doing damage to the foliage. A bit of sponge tied on to the point of a stick, is about the best thing we can find to get at the scale, using soapy water during the operation.—*C.*

THE FLOWER GARDEN.

The flower garden has been having a sad time of it of late. What with heavy gales of wind and rain, and want of sunshine, some trouble will have to be expended to prevent a widespread feeling of dreariness and desolation. The leaves, too, are beginning to fall apace, and the broom must be plied vigorously and continuously if lawns and paths are to be kept tidy. The beauty has been well-nigh knocked out of all the flower beds, although, as long as they look green, we do not care to meddle with them. By dint of frequent picking over they may be made to look fairly presentable.

The Herbaceous Border.—Here everything is topsy-turvy, and a good deal of labour will be necessary before matters are put straight. Dahlias wil continue to produce a few flowers as long as the frost keeps off, and thus it will be worth while to re-stake any plants that have been blown from their fastenings by the winds. The same remarks will apply to perennial Asters with which the rain has dealt very badly. Late flowering plants of Gladiolus brenchleyensis will come in very handy now.

Palms on Lawns.—Where these have been plunged in holes dug for the purpose in various parts of the lawns it will be advisable to make preparations for lifting them. Rough winds are liable to lacerate the leaves, especially of the fan-leaved kinds, and the plants may as well be spared this trying experience. If no other place offers, they will pass through the winter very well in a north house that is kept up to a temperature of 45° Fahr. It is unwise to defer lifting them in until the last moment, as heavy work of this kind is better done in the daylight if possible.

Ornamental Vases in which American Aloes are placed need not be touched just yet, as two or three degrees of frost will not harm them very much, and wet weather does not affect the appearance of the plants. Large vases which have been filled all the summer with Coleuses, Fuchsias, Celosias, and other tender stuff, are now looking much the worse for wear, and the best plan will be to fetch the old plants out of it and fill in their places with Coniferae and other evergreens to stand the winter. If it is not usual to fill the vases again after their summer occupants have been disposed of they may be emptied of soil at once, the crocks washed, and returned to their places.

Carnations.—In the previous calendar we gave directions for potting up the layers preparatory to wintering them in cold frame. Some growers favour the practice of consigning them straightway to their flowering quarters in the autumn, thus saving the underglass space that they would have occupied. This system answers very well in cases where the soil is fairly light and warm, but not where it is of a cold and retentive nature. If is elected to plant in autumn it should be done without delay. The ground, which will have been manured and dug previously, should now receive a dressing of soot, or soot and lime mixed. This may be forked nicely in, and planting proceeded with as soon as a fine day offers when the soil can be trodden upon without getting pasty.

Wallflowers.—Beds which it is intended to plant with Wallflowers to bloom in the coming spring should be cleared as soon as they get shabby without waiting for the frost to finish them off. The Wallflowers will thus get a chance to make themselves comfortable before winter sets in. A digging fork must be used to lift the plants with, for a trowel will neither be long enough nor strong enough in the blade for the purpose. It is important that the plants should be lifted with good balls of earth attached. The loose earth, all dead leaves, and any suckers arising from the base may be removed by hand. If the nursery beds are far from the flower beds a hand barrow should be employed as a means of transport, as is the plants are jolted along in a wheelbarrow they will most assuredly not be improved thereby. Plant pretty firmly, but avoid treading on the ground much, as planting in June and planting in October are two very different things.

Anemones.—By planting several batches with a few weeks interval between them a succession of bloom may easily be kept up. The finest named varieties should be kept until later if the soil is at all inclined to be heavy. A batch should be put in now in any vacant bed, or failing that, a few clumps in the herbaceous border will give an excellent account of themselves. As Anemones like rich feeding, the positions they are to occupy should receive a good dressing of cow manure. Plenty of light is also necessary; thus the situation should be open, and if possible, well drained. If the cow manure is only applied just previous to planting it should be buried deeply enough so that the tubers do not come into direct contact with it. They may be planted about 3 in. deep, and from 4 in. to 6 in. apart, according to the size of the tubers. When planted in clumps in the herbaceous border the places must be marked by sticks or labels, otherwise they may be disturbed inadvertently.—*A. S. G.*

HINTS FOR AMATEURS.

HOUSING CHRYSANTHEMUMS.

WITH the commencement of October, special attention is usually paid all over the country generally to the removal of the pot Chrysanthemums to their warmer quarters. Perhaps a week more or less is given according to the particular locality, whether high and dry, or low-lying and damp; but now it is high time for all Chrysanthemums to be placed under protection, as a frost now, especially where the buds are fairly forward, would be simply disastrous.

Vineries.—Often enough a vinery is one of the contrivances that the amateur has to press into service in which to flower his "Mums." Such a house, providing the canes are well upon the road that leads to maturity, may be made to answer admirably. Light, and plenty of it, is now the main consideration. In order to get as much of it as possible without injuring the Vines, the lateral growths may be cut back half way. This will in no way injure the Vines, provided they are fairly well advanced, and will let in a lot more light than would be available if the foliage were allowed to remain on until it dropped off naturally. True it is, that by depriving the canes of the leaves, they are robbed of some of their working members; but then, part of the work in the way of unnecessary buds is also taken away at the same time, and thus compensation is gained.

It will not be advisable to stand the plants directly upon the borders. A few planks, from 5 in. to 9 in. in width, laid along, make capital contrivances for the bottoms of the pots to rest on. Failing these, bricks or paving stones may be employed.

Crowding.—It would be of not the slightest use to give the advice of "don't crowd"; for it is well nigh impossible to avoid doing this, in some degree at least, at this time of the year, so we must content ourselves with saying "crowd the plants as little as possible. Should there be a portion of the house where more light falls than in the other parts, let the later plants have the benefit of it, if it can thus be managed. They stand most in need of it, for they have to make a part of their growth, besides developing their flowers.

Standing the pots level.—Although a minor point, it is of considerable importance, and one that cannot be lightly neglected. If the pots are not stood level, they will hold but comparatively little water, and this will all run to one side, leaving the other dry.

Ventilation—After being used to having the free winds of heaven blowing about them as they list, the plants will naturally feel the change to the closer atmosphere. Consequently no coddling should be attempted, or this, combined with any lack of light that may be caused by the foliage of the vines overhead, will cause the plants to become drawn. Plenty of air is an absolute necessity, but it must be given in such a way as to avoid draughts as far as possible.

Thrips on Azaleas.—If these plants were syringed well with a solution of Nicotine Soap before they were taken indoors, the plague of thrips that seems to have attacked most Azaleas this year, will have been considerably lessened. Since the last washing, however, the little pests will have had time to make another start, and the plants will need looking over again. With a houseful of mixed subjects, and at this time of the year, too, it will not be possible to syringe the plants as they stand, as the moisture hangs about a long time now. A fine day should be chosen, and the plants taken out on the grass, laid on their sides, first syringed with the insecticide, and afterwards washed well with clean water. The plants should be allowed to stand out all day to dry, but may be taken in before nightfall, and restored to the places from whence they were taken.

Zonal Pelargonium Cuttings that were dibbled in the open ground some time about the beginning of September will now have rooted, and in any case they must be lifted, as it will not be safe to leave them out of doors any longer. Some people are very fond of leaving them out until the frost comes and compels them to take them in, but it is better to lift them not later than the beginning of October, so that they may have a chance of getting settled in the pots somewhat, before the dull weather sets in. Thirty-two size pots are the handiest to use for the rooted cuttings, six of which may go to each pot. The kind of soil does not matter a great deal, except that whatever is used it should be on the dry rather than the wet side. Avoid handling the cuttings much, as the young roots are very tender and quickly break off. The *modus operandi* is as follows:—After the pot has been drained nicely with one large piece of crock covered by two or three smaller pieces, and the drainage covered with rough leaf soil, or old horse droppings, fill it two-thirds full of the compost. Level this down and press it fairly firm with the fingers. Arrange five of the young plants round the edge of the pot and one in the middle Then introduce the soil carefully among these, level it and press it with the fingers, and finish off by giving a smart tap or two on the bench. The pot should be filled up to within half an inch of the top. No water should be given, as with the saturated atmospheres common to this particular season of the year this would only lead to damping off. For the time being the plants may be kept in a cold frame, but as the autumn draws on, and severe frosts may be expected, they will not be safe in such a position, and should be removed to a shelf in the greenhouse, which, by that time, will have been emptied of many of its Chrysanthemums.

Hanging Grapes.—Ripe Grapes have at least outlived some of their enemies, for wasps are too far gone to do much harm now. Birds also are not so troublesome as formerly. The great difficulty now will be damp. The bunches must be carefully watched, and as soon as any bad berries are discovered they must be cut neatly out with the scissors. One bad berry in a bunch, if neglected, will soon spoil the shape of the bunch by spreading decay on all sides.

After the recent heavy rains we have had, the wisdom of not only making the walks well in the first place, but also of keeping the drains and water courses clear will be fully established. If this latter precaution were taken we should not see those pools of water standing on the paths in villa gardens, or, what is scarcely less of an eyesore, the channels which have been rinsed upon paths running down a gentle slope. The leaves are now beginning to fall, and hence all drains must be cleared out once a week or they will soon become blocked.

Palms on Lawns.—It is high time that these were taken indoors now, for even if frost does not come to cripple them the rough winds will lacerate their leaves and spoil their appearance. The plants are so sodden with water, and so heavy that it is as well to do the lifting during daylight, instead of driving it off until the last minute and having to do it in the dark.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Cupressus Nutkaensis.—I have a plant of this nearly two feet high, with three nearly equal stems. I am told it should be confined to one stem or leader, otherwise when large it will open in the middle and look ugly. Kindly advise me what to do.—*T. G.*

Your informant is perfectly correct with regard to the desirability of keeping a Cupressus to a single stem. In cases where two or three stems are allowed, heavy falls of snow, gales of wind and rain are almost sure to cause the tree to open in the middle and cause it to look unsightly. The restriction to a single stem must be closely attended to in the earlier stages of the tree, when it is a matter of but small difficulty. Your specimen has, however, got too far advanced for the removal of two of the stems to be attended with success, as you would only have a one-sided, ugly, plant left. The best course will be to secure the three leaders to each other gently but firmly, so as to keep them from separating. A piece of thick cloth, leather, or old hose piping must be passed round the stems to prevent the supports from cutting the tender bark. If neatly done, the supports will be entirely hidden.

Ilex Aquifolium var. laurifolia longifolia.—This is the name of a very fine Holly at Kew. It does not appear to have any synomym; nevertheless I have not yet found it in any trade catalogue. Can you say where it can be purchased?—*Sherwood.*

This variety certainly does not appear in the trade catalogues, possibly because none of the nurserymen have a sufficient stock of it to enable them to offer it to the general public. Your best plan will be to apply by letter to one of the large nurserymen asking directly for it.

Hardy Fernery.—I have in view the formation of a fernery of hardy Ferns, chiefly garden varieties. Which of the smaller growing ornamental trees or larger growing shrubs will be most suitable for planting, so as to give the requisite shade without unduly robbing the fern roots? South aspect; sandy soil.—*Notts.*

If the fernery is to be a success the ground must not be too much overhung with trees. If circumstances permit, a few Lombardy Poplars may be planted. These will grow rapidly in almost any position, and will give shade without overhanging the ground. For light trees to dot about here and there, Acer Negundo, and A. japonicum are both handsome and effective. Robinia Neo-mexicana is a low tree some twenty to twenty-five feet in height with elegant pinnate foliage and very handsome flowers. Lilacs, Laburnums, Crataegus Oxyacantha Paul's Double Scarlet, C. O. foliis aureis, C. O. multiplex, Amalanchier canadensis, and Rhus Cotinus are all well worthy of planting. Several of the finer kinds of Coniferae may be turned to account, but it will not be possible to plant with ferns the ground covered by them. Among these Cedrus Deodara must not be forgotten. Gingko biloba does well in gardens in the south of England and is a most handsome tree. Of the bushes you mention, there are plenty from which to pick and choose, but these will have to be planted in sheltering clumps, as they will not be tall enough to cover the ground and allow of planting being done under them. Variegated Hollies, Berberis Darwinii, Rhododendrons, and Philadelphus coronarius may be utilised in this way with advantage, It will be a good plan to make your fernery under the shade of large established trees, when you will get the amount of shade you require without the ground being too closely overhung.

Keeping Apples.—You may ventilate your fruit-room fairly well up to the end of the present month, *Enquirer*, after which the fruit will keep better if kept close and in the dark. The dampness of the situation will not matter in the slightest, as long as it is not too wet, and the frost can be kept out. A temperature a little above 32° Fahr. will be amply sufficient.

Chrysanthemums under Peach Trees.—*G. D.* asks what he is to do to hasten the fall of the leaves from his Peach trees. He is afraid that his Chrysanthemums will suffer from the want of light. You must not attempt to force the leaves of the tree, even in seeking to benefit your "Mums." Take a finely twigged broom and draw this gently up the tree, commencing from the bottom. Any loose leaves will thus be got rid of. No severer treatment than this must be practiced.

Sowing Peas in Autumn.—Many people are in a hurry to get early Peas, and *Akbar* is one of them. He intended sowing some Peas next month, hoping that they would come in early next season. A friend of his has dissuaded him from doing so, as he says the land is too wet and heavy to make autumn sowing a success, and advises him to wait until towards the end of January. Our correspondent wishes to know if his informant was right, to which we can only reply that if the land is of a heavy nature to be thankful he has got such a friend?

Fly on Cinerarias.—If the whole of the plants are attacked. *F. F. Mason*, fumigation will be the readiest means of effecting a cure. If only a few leaves are affected sponge them with tobacco water.

Destroying Wasps.—Noticing on p. 72 that Cyanide of Potasium is recommended for the destruction of wasp's nests, and as this substance in such a deadly poison, and can searcely be got, as chemists don't care about selling it, I would like to draw attention to a less dangerous chemical which is quite as effective as the Cyanine of Potassium, namely, Carbon Bisulphide. This is also a poison, but can be got more easily than Cyanide of Potassium, as

you don't require to sign your name or go through any performance before obtaining it. If a piece of cotton wool be saturated with the Carbon Bisulphide, and pushed into the mouth of the nest at night or during a wet day, when all the wasps are in, the whole of the insects will be dead in a very short space of time. I have destroyed a lot of nests very successfully during the past summer with this chemical.—*Entomologist.*

THE ALLINGTON NURSERIES.

About the middle of last month we paid a visit to the Allington Nurseries of Messrs. Geo. Bunyard & Co., situated at Barming, about two miles from Maidstone. Here the trees are reared and grown which bear the renowned Apples, Pears, and other fruits which were so much in evidence at the Crystal Palace last week. At the time of our visit much of the earliest fruit had been gathered, yet a good harvest still hung upon the later trees, and the rest was in the fruit-room, which was laid open to our inspection.

Fruit-Room and Houses.

The fruit-room stands in a fully-exposed position, and consists of matchboard covered with a thick layer of the Common Reed (Phragmites communis) so plentiful in wet and marshy places and by river sides. This covering must be very effective in maintaining an equable temperature, if we are to judge by the fruits that are kept here and brought before the public in good condition late in the spring. On this occasion amongst the Apples we noted Sops in Wine so richly coloured as to remind us of the well-known Mère de Ménage. Beautiful also was the Duchess of Gloucester, with small red fruits, more correctly known as Duchess's Favourite, and popular for market work. One of the best old Apples in cultivation, Ribston Pippin was notable for the richness of its colour, some fruits being of a deep red on the exposed side. It is grown as half-standards and as bushes on the Paradise stock. Bietigheimer Red is remarkable for the light carmine flush of the fruits, and their attractive appearance. Worcester Pearmain is well known as one of the prettiest of our dessert Apples, and here it takes on a beautiful colouration. The Queen was raised in Essex by a boy, as recorded in our columns last year, and at the Allington Nurseries it attains a large size and rich colour. The same may be said of Emperor Alexander. Lord Suffield also does splendidly on the Greensand overlying the Kentish rag. Hoary is equally well-known for the beauty of its red splashes and stripes. Washington is one of the few American Apples which do well in this country, and is both handsome in form and colour. The same might be said of American Mother, which is of smaller size and more oblong or conical in outline, whereas Washington is oblate. James Greive is a Scotch Apple of fine flavour, suitable for dessert, conical, and red on the exposed cheek. It is quite new and likely to become a favourite, as it is hardy, and does well even in the far north. The above are only a few of the Apples in the fruit-room, notwithstanding the large quantity on exhibition in Maidstone on the occasion of our visit.

Amongst the Pears, William's Bon Chrétien and Beurré Superfin, were notable for their fine proportions. Dr. Jules Guyot is a September Pear, and bears some resemblance to Bon Chrétien, but is larger, more beautiful, and likely to supersede the latter for market and early use generally. The orchard house contained a number of the late varieties about the time we speak of, and the pot trees bore some large and handsome fruits. Conspicuous amongst these, in this respect, were Durondeau and Doyenné du Comice. The former ripens during this month and keeps until November. Finer in every way is Doyenné du Comice, a popular Pear keeping till December. Marie Benoist keeps for the same length of time, and is a russety skinned variety of rare merit, keeping till December.

The Peach crop had mostly been harvested, and the trees stood out in the open before the middle of last month. It was different with the Figs, which bore no evidence of going to rest. Indeed, the young bushes in 24-size pots were simply laden with fruits about half grown or even younger. Excellent varieties are Brown Turkey, Negro Largo, and Pingo de Mel, a delicious white-fruited variety. Numerous sorts are kept in stock, and the size we mentioned above is that intended for sending out. The house in which the Figs are grown is a low-roofed structure with wooden sides of no great height. The plants are, therefore, close to the glass and well exposed to light.

Apple Hambling's Seedling.

Wire-Netting House.

When the Apples have been grown in the orchard-house till the fruits have attained a certain size, they are placed in a structure consisting of wire-netting so fine that it will exclude the smallest birds that are likely to be tempted in the same way as old mother Eve. Here then we have ocular demonstration of the conditions under which the Apples and even Pears are brought to that perfection which suprises the public at the various exhibitions throughout the country, and which gives a fame to the Kentish grown fruit to which those in the midland and northern counties cannot aspire.

Tibbett's Pearmain is a huge conical Apple striped and splashed with red in a very handsome way. Twenty-ounce Pippin is another, in many respects similar to the last named, but paler. It is a large but little-known fruit. Cornish Aromatic is an old favourite of a rich red. The fiery-crimson of

Cox's Pomona is sufficient to make the average grower green with envy. This applies with equal or more force to Gascoigne's Scarlet Seedling, or Glory of England as it is sometimes called. It is of excellent flavour, and may be used for kitchen or dessert purposes. No one can help admiring it wherever it is exposed to the public gaze. Like Cornish Aromatic, Cornish Gilliflower is an old favourite of exquisite flavour, and though not very highly coloured, as a rule, it is so here. Large and imposing fruits are Lady Henniker and Warner's King. Baumann's Red Winter Reinette attains a large size here, and great intensity of colour. Calville Blanche is pale green ultimately becoming almost white. Emperor Alexander gets so highly coloured here that it gets almost out of character as we generally know it. What then shall we say of Peasgood's Nonsuch, which is imposing even under ordinary circumstances; its size and colour are simply magnificent. Beauty of Kent also gets splendidly coloured. Annie Elizabeth is usually a green Apple with a polished skin, but here it becomes yellow, heavily shaded with red on the sunny side.

OPEN GROUND.

In following our guide while making an examination of the plantations, we rambled over acres and acres of young fruit trees, grown in all the leading forms and bearing more or less heavy crops of handsome fruits. Allington Pippin, sometimes called South Lincoln Beauty (See illustration, p. 91), is said to be a cross between King of the Pippins and Cox's Orange Pippin. It is larger and more conical than the latter, and bronzy green in the early stages, becoming yellow and heavily suffused with red. The tree is a strong and vigorous grower, a heavy cropper, and well worthy of cultivation where Cox's Orange does not succeed. It was honoured with a First-class Certificate by the Royal Horticultural Society under the name of South Lincoln Beauty, and is almost certain to become a great favourite for dessert purposes on account of its excellent flavour. It was put into commerce this year for the first time.

Another new Apple we cannot omit mentioning is Hambling's Seedling (see illustration, p. 89), first sent out by the firm in 1894, and consequently quite new. It may be used for cooking or dessert purposes, and is a green Apple of good quality, in season from December to March. It is a fruit of the first size, and well worthy of attention on account of its excellent keeping qualities. For the illustration of this, and for Allington Pippin, we are obliged to Messrs. George Bunyard & Co.

Some splendid samples of Pears not yet mentioned are worthy of attention on account of their handsome proportions. In this respect we would particularly mention the brownish-red King Edward, a handsome variety; also the huge Pitmaston Duchess, Duchesse d'Angoulême, Beurré Foucqueray, Vicar of Winkfield, Souvenir du Congrès, Brockworth Park, Marie Louise d'Uccle and Margaret Marrillat, a very large, shortly pear-shaped variety of great merit and quite new.

TREES.

Any report would be incomplete if mention of the trees from which these grand fruits are derived were omitted. The number grown is simply enormous. Apples are grown as standards, pyramids, bushes, and as amateurs' standards. The latter are distinguished by the short branches on the stems, which bear fruit heavily from top to bottom, quite independently of the head. Young trees on the Paradise are notable for bearing very early; in fact, Bismarck bears a few fruit even on maiden trees. Golden Spire behaves in the same way; in fact, the fruits were lying almost on the ground. Pyramid Apples vary in height from 3 ft. to 8 ft.

The two-year-old Apples on the Paradise are always worth seeing. Many of them bear heavily, while all are sturdy stuff and in excellent condition for transplanting to form new plantations. Amongst the trees coming into this category we noted large quantities of Stirling Castle, Cox's Pomona, Lane's Prince Albert, Baumann's Red Winter Reinette. Lord Derby, New Hawthornden, Bismarck, Newton Wonder, Allington Pippin, and many others above mentioned. The branches of Golden Spire at the time of our visit were hanging like ropes of Onions, and in first-class condition as their high colour testified. The trees are pruned but sparingly, and frequently lifted in order to encourage the development of roots. May Queen is another beautiful variety added to the collection, and being sent out this year for the first time. The fruits are of medium to small size, and of a rich crimson-red on the sunny side. The name refers to its keeping qualities, for it is in season during April and May, when it will be appreciated for dessert purposes. Those that are suitable for this purpose are by no means numerous.

Pears are grown in an equal number of ways, and are as well done as the Apples, though second to the latter in popularity. There are also maiden Peaches with the foundation of trained trees already well commenced. Their vigour is great. A large breadth of Plum stocks in excellent condition has just been budded.

CRYSTAL PALACE FRUIT SHOW.

THE great annual fruit show held under the auspices of the Royal Horticultural Society, took place on the 1st, 2nd, and 3rd inst., at the Crystal Palace, and occupied either end of the central area of the building as in former years. On all hands it was admitted to be a splendid show, though not quite so large as last year. This would apply more particularly to certain classes of early fruits, especially the stone fruits. Peaches, Nectarines, Plums, and Cherries, were deficient; and the same might be said of Williams' Bon Chretien Pear, of which we did not notice a single dish, all being out of season. Apples, Pears, Grapes, berried plants, and Nerines were the leading features of the show; but as might have been expected the Apples were the dominating feature, both as to attractiveness and quantity.

FRUITS GROWN UNDER GLASS OR OTHERWISE.

The class for a collection of twelve dishes of ripe fruit was interesting on account of the variety it afforded, compared with the hardy fruit exhibits. Lord Harrington (gardener, Mr. J. H. Goodacre), Elvaston Castle, Derby, took the leading award, with well ripened Pines, Muscat of Alexandria, and Alicante Grapes, two Melons, two dishes each of Apples and Pears, and a dish each of Plums and Peaches, laid on coloured vine leaves. Lady H. Somerset (gardener, Mr. F. Harris), Eastnor Castle, Ledbury, took the second place with fine Muscats, a Pine, Pears, etc Sir Joseph W. Pease, Bart., M.P. (gardener, Mr. J. McIndoe), Hutton Hall, Guisborough, Yorks, took the third place with some fine Gros Maroc Grapes, Exquisite Peaches, Pines, etc.

W. K. D'Arcy, Esq. (gardener, Mr. W. Tidy), Stanmore Hall, Middlesex, staged the best eight dishes of ripe fruit, including well finished Alnwick Seedling and Muscat Grapes, and Passiflora edulis (The Granadilla). Mrs. Wingfield (gardener, Mr. W. J. Empson), Ampthill House, Ampthill, Beds, took the second place here with an even lot.

GRAPES.—Chas. Bayer, Esq. (gardener, Mr. Wm. Taylor), Tewkesbury Lodge, Forest Hill, S.E., took the leading award for six varieties of Grapes, which included fine bunches of Alicante, Gros Maroc, Trebbiano, Gros Colman, and Muscat of Alexandria. Messrs. de Rothschild (gardener, Mr. G. Reynolds), Gunnersbury Park, Acton, W., were second with finely finished bunches of most of the sorts. The berries of Gros Maroc were of enormous size, but not quite ripe. Lord Hartington took the third place.

The leading prize for three varieties of Grapes was taken by Alderman Chaffin (gardener, Mr. W. Taylor), Bath. Gros Maroc, Muscat of Alexandria, and Madresfield Court, were the varieties shown. Lady H. Somerset was second.

Chas. Bayer, Esq., took the lead for three bunches of Black Hamburgh, which were finely finished. F. W. Fleming, Esq., was a very good second; and the Hon. F. W. Buxton (gardener, Mr. W. H. Godden), Sawbridgeworth, was third.

Alderman Chaffin again led the way in the class for three bunches of Madresfield Court, which were large in berry and finely finished. C. Bayer, Esq., was a very good second, but his bunches were smaller. Alderman Chaffin had the best three bunches of Gros Colman in large and finely finished bunches. W. K. D'Arcy, Esq, was awarded the leading prize for Alicante; but the bunches of Alderman Chaffin were larger, and of better shape, while the berries were altogether finer, yet he was only awarded the second place. We failed to see the justice of the decision.

W. K. D'Arcy, Esq, rightly took the lead in the class for Lady Downes, which was beautifully finished. Mr. E. Kemp, Coolhurst, Horsham, was second with nice bunches. W. K. D'Arcy again took the lead for any other black, showing Alnwick Seedling; C. Bayer, Esq., was placed second. F. W. Fleming, Esq., came in third with grand bunches of Mrs. Pince's Black Muscat.

W. K. D'Arcy took the leading award for Muscat of Alexandria, and was followed by Sir Geo. Russell, Bart., M.P. (gardener, Mr. F. Cole), Reading; and F. A. Bevan, Esq. (gardener, Mr. W. H. Lees), Trent Park, New Barnet, was third. There were thirteen entries in this class and little difference between the winning stands. For any other white Grape, Alderman Chaffin led the way with Cannon Hall Muscat. Messrs. de Rothschild were second with fine samples of Foster's Seedling. T. W. Erle, Esq. (gardener, Mr. P. H. Edwards), Liphook, was accorded the first prize for Figs.

Collections of fruit by amateurs were fairly well represented, but none was considered worthy of a Gold Medal. The second award for a collection of fifty dishes was taken by Mr. A. Wyatt, Hatton, Middlesex, who had some good samples for the county, but the dessert varieties particularly, were small. Lord Foley (gardener, Mr. Miller), Ruxley Lodge, Esher, was placed third. The first prize for a collection of thirty-six dishes of hardy fruit grown under glass to illustrate orchard house culture, was taken by Sir Joseph W. Pease, Bart., M.P., who had Grapes, Figs, Pears, Apples, Cherries, Nectarines, Peaches, Apricots, and Plums. J. W. Melles, Esq. (gardener, Mr. J. Nicholson), Sewardstone Lodge, Chingford, was second with a good lot of Apples and Pears.

NURSERYMEN'S CLASSES.

There was no competition in the class for a collection of fruit trees bearing fruit. The leading place of honour for a collection of hardy fruits grown partly or entirely under glass to illustrate orchard house culture, was taken by Messrs. Geo. Bunyard & Co., Maidstone, who had a splendid table. In the centre were pot trees of Apples, Vines, Figs, &c. laden with fruit, and all round the sides were dishes and baskets of Apples, Pears, Figs, &c, the Apples being of handsome size and superbly coloured. Very handsome were Emperor Alexander, Gascoigne's Scarlet Seedling, Warner's King, Washington, Twenty-Ounce, The Queen, Peasgood's Nonsuch, and King of Tomkin's County. Messrs. Geo. Bunyard & Co. deservedly received the Gold Medal offered by the Fruiterer's Company, for a collection of not more than 100 distinct varieties of hardy fruit. A pyramid of fruit occupied the centre of the table; and this was surmounted by a crown made of Crab Apples and berries of the Fiery Thorn. Conical baskets of Apples with a Palm or other plant in the centre occupied the prominent positions, and the intermediate spaces were filled up with magnificent samples of Apples.

The first prize for a collection of fruit grown entirely out of doors, and not more than fifty varieties, was taken by Mr. H. Berwick, Sidmouth, Devon. Cox's Pomona, Gascoigne's Scarlet and others were notable for their colour; and the collection generally was very fine. Mr. A. Wyatt, took the second place here.

Messrs. Geo. Bunyard & Co., took the leading honours for a collection of not more than fifty varieties of Pears. Some were in baskets, others in plates, but a large proportion was of splendid size. Mr. H. Berwick, was second here.

Messrs. Geo. Bunyard & Co., again proved invincible in the class for thirty to fifty dishes of Apples grown entirely in the open air. For size and colour, the varieties were simply magnificent. Mr. John Basham, Fair Oak Gardens, Bassaleg, Newport, Monmouth, was second with a fine lot.

FRUITS GROWN IN THE OPEN AIR.

APPLES.—The classes in Division III. were open to gardeners and amateurs only. The Bunyard Centenary Prizes brought out some splendid exhibits of twenty-four dishes of Apples, distinct, sixteen cooking and eight dessert. The first award was carried off by Roger Leigh, Esq., (gardener, Mr. G. Woodward), Barham Court, Maidstone. All the fruits were grand of their kind, but the cooking ones were of enormous size, and included Peasgood's Nonsuch, Emperor Alexander, Lord Derby, Mere de Menage, Belle Dubois, Warner's King, Bismarck, Bramley's Seedling, Stone's, Waltham Abbey, and others. Amongst dessert Apples, Washington, Cornish Aromatic, Cox's Orange, Melon, Barnack

Beauty, Ribston Pippin, and Baumann's Red Winter Reinette were conspicuous for their rich colour. The second prize was taken by J. Colman, Esq. (gardener, Mr. W. King), Gatton Park, Reigate. The Queen, Blenheim Orange, Beauty of Kent, and Cox's Pomona were grand samples; but on the whole the fruits were smaller than those of the first prize lot. Mr. John Nowell, Maindiff Gardens, Abergavenny, took the third place with good samples for Wales.

The first award for twelve dishes of Apples, eight cooking, and four dessert, was taken by J. K. Wingfield-Digby, Esq., M.P., (gardener, Mr. W. G. Pragnell), Sherborne Castle, Dorset. The Queen, Gascoigne's Scarlet and American Mother, were notable for their high colour. The cooking varieties on the whole were grand. Mr. T. W. Startup, West Farleigh, Maidstone, was a good second; and Earl Dysart, (gardener, Mr. G. H. Sage), Ham House, was third, with good Apples but not highly coloured.

Mrs. Crawford, (gardener, Mr. W. Slogrove), Reigate, had the best nine dishes of Apples, Warner's King, and Peasgood's Nonsuch being of huge size and all clear and clean skinned. Mr. T. Turton, Maiden Erlegh, Reading, was a good second, his Mere de Menage, being splendid. C. R. W. Adeane, Esq., (gardener, Mr. J Hill) Babraham Hall, Cambridge, was third.

Roger Leigh, Esq., was again to the fore with the best six cooking Apples of splendid size and clear-skinned. Mr. T. W. Startup was a good second; and Thos. Oliverson, Esq., (gardener, Mr. Lewis), Staplehurst was third with a good lot.

H. H. Hurvard. Esq. (gardener, Mr. J. Bowery), Attleboro, had the best three dishes of cooking Apples, Peasgood's Nonsuch being beautifully coloured. Sir E. G. Loder, Bart. (gardener, Mr. Geo. Goldsmith), Horsham, was second; and Earl Dysart was third.

The dessert Apples were very highly coloured and attractive, but small by comparison with the cooking ones. Roger Leigh, Esq., had the best six dishes, Calville Praecox being very fine. J. Colman, Esq., came second with nearly as fine a lot, and Sir E. G. Loder, Bart., was third. G. H. Field, Esq. (gardener, Mr. R. Edwards), Beechley Lees, Sevenoaks, took the lead for three dishes; Mr. F. B. Parfitt, Reading, was second.

Pears.—The prizes for twenty-four dishes of dessert Pears were also offered by Messrs. Geo. Bunyard & Co., as Centenary prizes. Roger Leigh, Esq., again carried off the leading award, with a magnificent exhibit. Pitmaston Duchess, Beurré Superfin, Marie Benoist, Beurré Hardy, Doyenné du Comice, Beurré Baltet, Brown Beurré, Beurré Diel, and Bon-Chretien Turc were notable for their great size. Durondeau, King Edward, Princess (Rivers), and Louise Bonne de Jersey were notable for their colour, particularly the last-named which was magnificent. Soldat Laboreur is considered one of the best flavoured Pears grown. Col. Brymer, M.P., (gardener, Mr. J. Powell), Islington House, Dorchester, was a very good second, but not up to the size of the first prize lot. Sir E. G. Loder, Bart., took the third position, with a very fine lot, indeed, many of the samples being of magnificent size. There were seven entries in this class.

J. K. D. Wingfield-Digby, Esq, took the leading award for twelve dishes, showing grand specimens of General Todleben, Pitmaston Duchesse, &c. Mr. John Warren, Handcross Park, Crawley, was second; and Sir Wm. Geary, Bart. (gardener, Mr. W. Cotterell), Oxon Hoath Park, Tonbridge, came in third.

J. R. Brougham, Esq. (gardener, Mr. W. Jones), Carshalton, took the leading prize for nine dishes of dessert Pears, showing Pitmaston Duchess, Marie Louise, Conseiller de la Cour, Beurré Superfin, &c. He was followed by Mr. G. Fennell and Earl Percy (gardener, Mr. G. Wythes), Syon House, Brentford, in the order named.

Mrs. Crawford had six dishes of dessert Pears all in excellent form, large and well coloured. The Hon. W. Lowther (gardener, Mr. Andrews), Campsea Ashe, Wickham Market, was a good second. A. O. Smith, Esq. (gardener, Mr. C. Harris), East Grinstead, had the best three dishes of dessert varieties, and was followed by Mr. T. W. Startup.

The stewing Pears brought some very fine exhibits Here again Roger Leigh, Esq., took the lead with Uvedale's St. Germain, Grosse Calabasse, and Cattillac, all of huge size. Sir E. G. Loder, Bart., was a good second; and Sir Wm. Geary, Bart., was third. Captain Carstairs (gardener, Mr. C. Ross), Welford Park, Newbury, had the best single dish in Uvedale's St. Germain. H. W. Stock, Esq. (gardener, Mr. H. Beames), Rutland Lodge, Petersham, took the second place. A. O. Smith, Esq., was third in strong competition. There were thirteen entries in this class.

Peaches and other stone fruits were rather scanty owing to the early season, and the late period at which the show was held. This class of fruit was practically out of season. The leading award for three dishes of Peaches was taken by Roger Leigh, Esq., with nicely coloured fruits. Col. H. Walpole (gardener, Mr. A. Maxim), Winchfield, was a good second; Sir Joseph W. Pease, Bart., M.P. was third. Ralph Sneyd, Esq. (gardener, Mr J. Wallis), Newcastle, Staffs., had the best single dish. T. F. Burnaby Atkins, Esq. (gardener, Mr. Gibson), Sevenoaks, was second. Sir J. W. Pease, Bart., M.P., took the lead for one dish of Nectarines.

Plums.—Sir J. W. Pease, Bart, M.P., also took the lead for four dishes of dessert Plums, showing Jefferson's, Brynston Greengage, Grand Duke, and Coe's Golden Drop. Mrs. Wingfield (gardener, Mr. J. Empson, Ampthill, was second. Lady H. Somerset (gardener, Mr. F. Harris), Ledbury, had the best dish of dessert Plums. Mr. H. C. Prinsep, Uckfield, was a good second; both showed Coe's Golden Drop. Sir J. W. Pease, Bart., M.P., again led the way for four dishes of cooking Plums, showing Magnum Bonum, Pond's Seedling, Diamond, Belle de Septembre. Mrs. Wingfield took the second place.

Mr. H. C. Prinsep had the best dish of a cooking Plum, showing Monarch in fine form. Mr. G. Fennell, Fairlawn, Tonbridge, was second. C. R. W. Adeane, Esq., had the best Gage Plums, showing Reine Claude du Bavy. Mrs. Wingfield was the only exhibitor of Damsons and Bullaces, taking the first prize. Lady H. Somerset had the best Morello Cherries; and Lady Fortescue (gardener, Mr. C. Herrin), Maidenhead, was second.

Nuts.—Mr. G. Chambers, Mereworth, had the best collection of nuts; showing English Walnuts, Sweet Chestnuts, Kentish Cob, Webb's Champion Cob, Cosford Cob, and Hazel Nuts Mr. T. Turton was a good second, showing three varieties of Walnuts, &c. J. Colman, Esq.. was third.

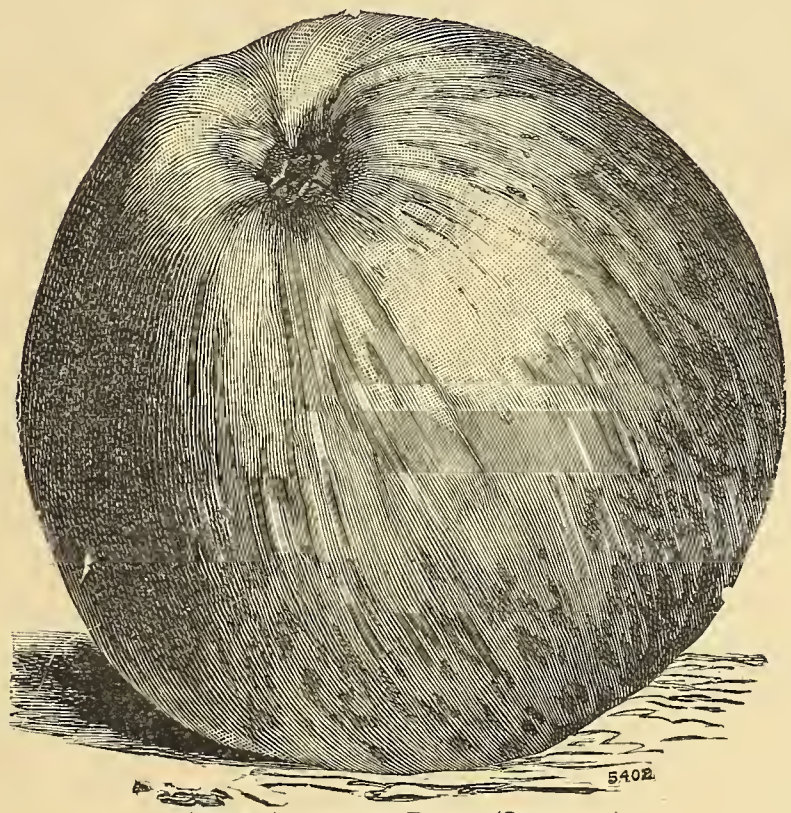
Quinces.—Mr. H. C. Prinsep took the first prize for a dish of Quinces, which were of splendid size, but not so ripe as some of the others. F. W. Fleming, Esq. (gardener, Mr. Mitchell), Chilworth Manor, Romsey, Hants, was second; and Sir E. G. Loder, Bart., came in third.

Single Dishes of Fruit.

Dessert Apples.—The competition here was fairly keen although the number of entries varied considerably. William's Favourite was not shown at all, but Cox's Orange Pippin, Ribston Pippin, and King of the Pippins came out very strongly, the rich colouring possessed by the fruit being the most remarkable feature. The popularity of these last three varieties is indisputable.

The following is the prize list in this section, the names of the most successful candidates following the names of the variety:—Allen's Everlasting—second, Mr. G. H. Godden, gardener to the Hon. F. W. Buxton, Sawbridgeworth; third, Mr. J. Hudson, gardener to the Messrs. de Rothschild, Acton. Baumann's Red Winter Reinette, six entries—first, Mr. J. McKenzie, gardener to F. S. Cornwallis, Esq., Linton Park, Maidstone. Braddick's Nonpareil—first, Mr. G. Woodward, gardener to R. Leigh, Esq., Maidstone. Brownlee's Russet—first, Mr. G. Woodward; second, Mr. T. Bennett, gardener to T. L. Boyd, Esq., Tonbridge. Claygate Pearmain, five entries—first, Mr. H. C. Prinsep, Uckfield; second, Mr. W. H. Bannister, gardener to H. St. Vincent Ames, Esq., Bristol. Court Pendu Plat, ten entries—first, Mr. C. Ross, gardener to Captain Carstairs, Newbury; second, Mr. A. Kemp, Coolhurst, Horsham; third, Mr. W. Mills, Shoreham, Kent. Cox's Orange Pippin, thirty-three entries—first, Mr. W. King, gardener to J. Colman, Esq., Reigate, with a superb dish of fruit; second, Mr. G. Woodward; third, Mr. Mitchell, gardener to F. W. Fleming, Esq, Romsey, Hants. Fearn's Pippin, ten entries—first, Mr. McKenzie; second, Mr. W. H. Bannister. Kerry Pippin—first Mr. T. W. Startup. King of the Pippins, twenty-one entries—Mr. W. G. Pragnell, gardener to J. K. Wingfield-Digby Esq., Sherborne, with a splendidly coloured lot; second, Mr. W. King; third, Mr. J. Powell, gardener to Col. Brymer, M.P., Dorchester. Mabbot's Pearmain—first, Mr. J. McKenzie. Mannington's Pearmain, seventy-six entries—first. Mr. T. Turton, Reading; second, Mr. G. Woodward. Margil, eight entries—first Mr. Geo. Goldsmith, gardener to Sir E. G. Loder, Bart., Horsham; second, Mr. G. H. Sage, gardener to Earl Dysart, Ham House, Richmond. Mother (American), eight entries—first, Mr. J. McKenzie; second, Mr. T. Spenser, gardener to H. C. Moffat, Esq., Ross.

Ribston Pippin, nineteen entries—first, Mr. C. A. Bayford, gardener to C. Lee Campbell, Esq., Ross; second, Mr. A. Kemp; third, Mr. G. H. Sage; highly commended, Mr. W. H. Bannister. Rosemary Russet — first, Mr. J. C. Tallack, Bury St. Edmunds. Scarlet Nonpareil, eight entries—first Mr. J. Hudson; second, Mr. C. Ross. Sturmer



Apple Allington Pippin (See p. 90.)

Pippin, ten entries—first, Mr. G. Chambers, Mereworth; second, Mr. C. Ross. Worcester Pearmain, eleven entries—first, Mr. W. J. Empson, gardener to Mrs. Wingfield, Ampthill; second, Mr. George Goldsmith; third, Mr. H. C. Prinsep. Wyken Pippen—first, Mr. W. H. Godden. Yellow Ingestrie—eight entries—first, no name on card; second, Mr. T. Spencer; third, Mr. C. Ross. Any other variety, twenty-four entries—first, Mr. T. Spencer, with "Melon"; second, Mr. George Woodward, with "Washington"; third, Mr. W. Slogrove, gardener to Mrs. Crawford, Reigate, with "Washington."

Cooking Apples.—In the classes for single dishes some excellent material was shown, which, for both size and colour, was well up to the average. Such sorts as Bismarck, Emperor Alexander, Peasgood's Nonsuch, and Lane's Prince Albert were especially strong. It will be observed that Mr. George Woodward was a heavy winner. Appended is the list of prize-winners in their respective classes.

Alfriston, seven entries—first, Mr. C. Ross; second, Mr. George Woodward; third, Mr. John Nowell, Abergavenny. Bismarck, eleven entries—first, Mr. J. McKenzie; second, Mr. George Woodward; third, Mr. F. B. Parfitt, Reading. Blenheim Orange sixteen entries—first, Mr. W. H. Bannister, with grand samples; second, Mr. W. King; third, Mr. W. H. Godden. Bramley's Seedling, nine entries—first, Mr. J. Gibson, gardener to Prince Hatzfeldt, Chippenham; second, Mr. C. Ross. Cellini, ten entries—first, Mr. James Culton, Dildawn Gardens, Castle Douglas, N.B.; second, Mr. John Nowell, Abergavenny. Cox's Pomona, sixteen entries—first, Mr. W. King; second (no name); third, Mr. C. Herrin, gardener to Lady Fortescue, Maidenhead. Duchess of Oldenburg—Mr. John Nowell. Dumelow's Seedling, thirteen entries—first, Mr. C. Ross; second, Mr. C. Herrin; third, Mr. J. McKenzie. Ecklinville Seedling, six entries—first, Mr. J. McKenzie; second, Mr. George Woodward. Emperor Alexander, thirteen entries—first, Mr. George Woodward; second, Mr. J. McKenzie; third, Mr. George Goldsmith. Gascoigne's Scarlet, six entries—first, Mr. George Woodward; second, Mr. T. W. Startup.

Golden Noble, nine entries—first, Mr. Geo. Woodward; second, Mr. T. W. Herbert, gardener to J. T. Charlesworth, Esq., Nutfield—third, Mr. J McKenzie. Golden Spire—first, Mr. Geo. Woodward—second, Mr. John Noble. Grenadier—first, Mr. Geo. Woodward. New Hawthornden—first, Mr. Geo. Woodward. Hormead Pearmain—first, Mr. Geo. Woodward. Lane's Prince Albert, seventeen entries—first, Mr. C. Ross—second, Mr. Geo. Woodward—third, Mr. G. H. Sage. Lord Derby, nine entries—first, Mr. Geo. Woodward; second, Mr. G. H. Sage. Lord Grosvenor—first, Mr. Geo. Woodward. Lord Suffield, four entries—first, Mr. Geo. Woodward; second, Mr. T. W. Startup. Mère de Menage, nine entries—first, Mr. T. Turton; second, Mr. Geo. Woodward.

Newton Wonder, six entries—first, Mr. J. Hudson. Peasgood's Nonsuch, ten entries—first, the Horticultural College, Swanley; second, Mr. J. Morter, Upper Norwood; third, Mr. J. McKenzie. Pott's Seedling—first, Mr. J. H. Salmon, Holly Bank, Rowton, Chester; second, Mr. T. W. Startup. Sandringham—first, Mr. Geo Woodward. Royal Jubilee—first, Mr. Geo. Woodward. Seaton House—second, Mr. T. Turton (no first). Spencer's Favourite—first, Mr. Geo. Woodward. Stirling Castle—first, Mr. W. H. Bannister. Stones, five entries—first, Mr. Geo. Woodward; second, Mr. J. McKenzie. The Queen, seven entries—first, Mr. T. W. Startup; second, Mr. G. Chambers, Mereworth. Tower of Glamais—first, Mr. C. Ross. Warner's King, fifteen entries—first, Mr. J. McKenzie; second, Mr. H. C. Prinsep; third, Mr. T. W. Startup. Any other variety, twenty-six entries—first, Mr. W. Mancey, Upper Gatton, Merstham, with Hollandbury; second, Mr. J. McKenzie, with Striped Beefing; third, Mr. Woodward with Waltham Abbey.

Dessert Pears.—These, if anything, were an improvement upon the last year, Pitmaston Duchess Durondeau, and Louise Bonne of Jersey being represented by some superb samples. The undermentioned are the most successful exhibitors in their several classes.

Bergamotte d'Esperen, nine entries—first, Rev. O. L. Powell, Weybridge; second, J. R. Brougham Esq., Carshalton. Beurré Bosc—first, Mr. Andrews, gardener to Hon. W. Lowther, Campsea Ashe, Wickham Market. Beurré Diel, sixteen entries—first, Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford; second, Mr. Geo. Woodward; third, Mr. W. H. Bannister. Beurré Hardy—first, Mr. Geo. Woodward; second, Hon. W. Lowther. Beurré Superfin, nine entries—first, Mr. Geo, Woodward; second, Mr. Geo. Goldsmith. Conference—first, Mr. J. Nicholson, gardener to J. W. Melles, Esq., Chingford. Conseiller de la Cour—first, Mr. A. Basile gardener to Rev. O L. Powell, Weybridge. Doyenné du Comice, fifteen entries—first, Mr. B. Calvert, gardener to Col. Archer Houblon, Bishop's Stortford; second, Mr. Geo. Woodward; third, Mr. R. Edwards, gardener to G. H. Field, Esq., Sevenoaks. Duchesse de Bordeaux—first, Mr. Geo. Goldsmith. Durondeau, twelve entries—first, Mr. W. G. Pragnell, gardener to J. K. Wingfield-Digby, Esq, Sherborne; third, Mr. W. Cotterel, gardener to Sir Wm. Geary, Bart., Tonbridge. Easter Beurré—first, Mr. J. Powell. Emile D'Heyst—first, Mr. Geo: Woodward. Fondante d'Automne—first, Mr. A. Basile. Glou Morgeau, nine entries—first, Mr. Geo. Woodward; second, Mr. W. Cotterell. Josephine de Malines, sixteen entries—first, Mr. C. Ross; second, Mr. Geo. Woodward. Louise Bonne of Jersey, fifteen entries—first, Mr. J. Gibson; second, Mr. J. Bowery, gardener to H. H. Hurvard, Esq, Attleboro. Marie Louise, sixteen entries—first, Mr. J. Hill, gardener to C. R. W. Adeane, Esq., Cambridge; second, Mr. W. A. Cook, Calne, Wilts. Nouvelle Fulvie—first, Mr. T. Spencer. Pitmaston Duchess, nineteen entries—first, the Horticultural College, Swanley; second, Mr. W. Mancey, Upper Galton, Reigate; third, Mr. C. Harris, gardener to A. O. Smith, Esq., East Grinstead. Seckle—first, Mr. C. Ross. Souvenir du Congres—first, Mr. W. H. Bannister. Thompsons—first, Mr. F. Harris, gardener to Lady Henry Somerset, Ledbury. Winter Nelis—first, Mr. R. Edwards, gardener to G. H. Field, Esq., Sevenoaks; second, Mr. Geo. Woodward. Any other variety—first, Mr. W. Saunders, Andover, with a dish of unnamed fruit; second, Mr. H. C. Prinsep.

Special Prizes for Dessert Apples and Pears. Messrs. J. Veitch & Sons have offered a series of special prizes through the Royal Horticultural Society for the best flavoured Apples and Pears, the said prizes to be available for competition from the society's first meeting in July, 1866, and continuing till the last meeting in July, 1897, the Temple Show being alone excepted.

Apples.—First, Mr. H. C. Prinsep, with Cox's Orange Pippin; second, Mr. T. W. Startup, with Ribston Pippin.

Pears.—First, Mr. W. Cotterell, with Thompson's. The same exhibitor took the second award with Beurré Hardy.

Miscellaneous Exhibits.

The non-competitive exhibits of Apples were fairly numerous and extensive, forming a conspicuous feature of the show. The finest exhibit was that of Major Wm. Bythway (gardener, Mr. Walter Wilkins), Warborough, Llanelly, Wales; for the Apples were really magnificent, and arranged unostentatiously in large and small plates on a side table. The finest dishes of several varieties were to be seen here, including Peasgood's Nonsuch, Blenheim Orange, The Queen, Rosemary Russet, Gascoigne's Scarlet Seedling (syn. Glory of England), Cox's Pomona, Bramley's Seedling, Lord Suffield, Grand Duke Constantine, Withington Fillbasket, Seaton House, Hoary Morning, Reinette du Canada, and Merè de Menage. Altogether there were ninety-one dishes, containing 996 fruits, of clean, brightly-coloured, and well-formed Apples. Had the exhibit entered the competition, it is widely admitted that it would have taken the Gold Medal (Very Highly Commended).

Messrs. Rivers & Son, Sawbridgeworth, exhibited a splendid collection of fruit, including twenty-two pot trees of Apples, Pears, and Plums, heavily laden with fruit, all highly coloured. The table was draped with red cloth and covered with wood wool. Apples and Pears were neatly arranged in groups and designs, and there were some baskets as well. They also had Grapes, Plums, Crabs, Bullaces, etc., worked into the arrangement (Highly Commended).

Messrs. J. Laing & Sons, Forest Hill, S.E., had a large table of Apples, Pears, Grapes, &c., tastefully set off with plants. A tall ridge built up with fruit occupied the centre and the fruit was well coloured, including grand samples of Hollandbury, Cox's Orange Pippin, The Queen, Wellington, Peasgood's Nonsuch, Emperor Alexander (Highly Commended).

Messrs. J. Peed & Sons, Roupell Park, West Norwood, had a collection of Apples and Pears, mostly the former occupying one large table. They had large samples of Lord Suffield, Eclinville Seedling, Warner's King, &c. (Commended).

Messrs. S. Spooner & Sons, Hounslow Middlesex, occupied a side table with Apples and Pears, the former being neatly set up in baskets (Commended).

Messrs. Charles Lee & Son, The Royal Vineyard Nursery, Hammersmith, staged a fine collection of large and well-coloured Apples on one of the central tables (Commended).

Messrs. James Veitch & Sons, Chelsea, occupied a large central table with a magnificent collection of Apples. A large proportion were arranged in large baskets packed with wood wool, and had a massive appearance. Notable were Tyler's Kernel, Blenheim Orange, Warner's King, Frogmore Prolific, Cellini, Bismarck and Peasgood's Nonsuch, the latter being of enormous size (Highly Commended). They also had two large sidle tables, one entirely occupied with Pears, and the other with Apples, Quinces, Grapes, Plums, Medlars, Physalis Franchetti, &c. A central table of Nerine Fothergilli major, set up with Maidenhair Ferns and Veitch's Hybrid Streptocarpus, and shown by Messrs. J. Veitch & Sons, had a bold and telling effect. The table of berried trees and shrubs set up by them and consisting of a vast number of finely-fruited branches, was unique, and much admired by the visitors. Flowers of Hemerocallis aurantiaca major in a block of ice, was another uncommon feature on the Nerine table.

Messrs. J. Cheal & Sons, Crawley, Sussex, exhibited a large and beautiful collection of fruit, consisting of richly-coloured Apples in all the best varieties, and well-grown Pears. Cordon Apple trees laden with fruit occupied the centre. A conical basketful of Apple Jubilee was very conspicuous, as was another of Bismarck (Highly Commended). A side table by the same exhibitors was occupied with Cactus, pompon and single Dahlias. They had another table of Dahlias and Pears.

Messrs. J. R. Pearson & Sons, Chilwell, Notts, staged a beautiful exhibit of Apple Newton Wonder, which seems to have a future before it (Highly Commended).

A collection of twelve varieties of Grapes, and a large number of varieties of Pears, was brought up from the Royal Horticultural Society's gardens at Chiswick (Highly Commended).

Messrs. Fellowes & Ryder, Orpington, Kent, exhibited thirty-four dishes of Duke of York Tomato in splendid condition for market (Highly Commended).

Mr. W. Horne, Perry Hill Cliffe, Rochester, Kent, exhibited Apples and Pears.

Mr. John Watkins, Withington, Hereford, had a table of Cider Apples of rich colour. Messrs. Gaymer & Son, Banham, Attleboro', Norfolk, had a conspicuous table of Cider Apples and Cyder in bottles, etc. (Commended).

Messrs. Wood & Son, Wood Green, London, N., exhibited a neat collection of horticultural sundries, including Le Fruitier, Potato, and other manures, Orchid peat, ornamental grasses, insecticides, stakes, baskets, Archangel mats, Cuba bast, wood wool and Bamboo stakes of different colours some of which were natural, including Phyllostachys nigra.

Messrs. Young & Dobinson, Holmesdale Nurseries, Stevenage, Herts, were commended for a very fine display of Tomatos. These included the new variety known as Young's Eclipse, a medium-sized beautifully-shaped fruit of excellent quality, and a very heavy bearer. Samples of the firm's new Cucumber, Telegraph Improved, were also submitted

Messrs. John Laing & Son, Forest Hill, S.E., contributed a charming group of hardy cut flowers in excellent condition, when the late unfavourable weather is taken into account. In combination with some Palms in pots large bunches of perennial Asters formed a very effective background. Included also were a box of cut Roses, and a couple of branches of that curious plant, Phytolacca decandra.

Dahlias of the Cactus section were well shown by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. The varieties were arranged in groups according to colour, in which way they proved singularly effective. From the same source also came a very nice group of tuberous Begonias, both double and single flowered sections being in strong force. The doubles

particularly caught our eye, as much for the many subtle and beautiful shades of colour they exhibited as for their excellence of form and large size.

A comprehensive display of fruit in excellent condition was made by the Horticultural College, Swanley. It included well finished Grapes, Tomatos, Apples, Pears, and Filberts; and the whole gave an apt demonstration of the practicability of the College as an institution, and an earnest of its complete success from a cultural point of view.

In another part of the Palace, and opposite to their group of hardy flowers, Messrs. John Laing & Sons staged a most brilliant and effective group of flowering and foliage plants. Amongst the former, tuberous Begonias, Nerines, Odontoglossums, Streptocarpus, and the rare and beautiful Curcuma roseana appeared at their best, whilst Dracaena Lindeni, Cocos weddeliana, and Crotons of various kinds represented the foliage element. This was one of the prettiest groups in the show.

Mr. John R. Box, Croydon, and West Wickham, well and worthily sustained his reputation as one of the foremost cultivators of the charming and popular tuberous Begonias. Both single and double flowers were at their best, and that is saying a good deal. The plants were all this year's seedlings obtained from seed sown in January. We scarcely knew which to admire the most, the quality of the flowers, or the dwarfness and vigour of the plants. Mr. Box has evidently got his hand upon a good strain.

Mr. H. A. Orr, Bedford, was responsible for a unique exhibit in the shape of a number of patent wooden racks suitable for the storing of fruit. These are light, handy, and eminently useful contrivances, and, we doubt not, will come largely into use in the near future, both to take the place of permanent racks fitted to regular fruit-rooms, as well as to eke out storage room during especially abundant years.

THE LECTURES.

A series of lectures bearing upon hardy fruit cultivation, and related industries had been arranged for, one lecture being given each day at 3.30 p m. in the large garden hall.

Mr. E. J. Bailie.

On Thursday afternoon a goodly concourse of people assembled to hear Mr. Edmund J. Bailie, F.L S., discourse upon the importance of "British Fruit Growing from a Food Point of View." Undoubtedly the worthy lecturer's genial personality proved a great attraction, and as a well-known authority upon matters vegetarian, it was confidently expected that he would impart to an audience something worth listening to. Mr. George Bunyard presided.

In his opening remarks, Mr. Bailie observed that the subject of his paper differed considerably from the usual class of papers brought before the Royal Horticultural Society, these usually dealing with the practical production of fruits and vegetables, or the consideration of some special branch or branches of botanical science, whilst his own was devoted to an economic subject, and bore indirectly rather than directly upon practical production. In human life it was necessary, continued Mr. Bailie, to observe and preserve a proper balance, and everything must proceed in due proportion to its surroundings, for the great law of average will not be despised, and outraged nature has to be reckoned with. Close relations existed between "science and art," "theory and practice," and what was commonly, although probably erroneously, called "Capital and Labour." These should all work side by side with each other. Nowadays, exhibits of honey, fruits and preserves of fruits, found a place in the shows of agricultural and horticultural societies, which was a step in the right direction; but whilst it was necessary to assist by practical demonstration, production and the producer, it was also highly important that the masses of the people should be educated in the consumption of fruit as a food. Even amongst the higher classes although fruit was taken with food, and after food, in the shape of dessert it was not often that it was taken as food.

With regard to the necessary requirements of the human family there existed many different views as to what were necessaries, and what were luxuries. He might quote the words of a learned professor upon this point who said, "give me good bread, and good water, and I have the necessaries of life; add an Apple, and I have its luxuries."

Our food, generally, was drawn either from the animal or the vegetable kingdoms; and the vegetable products were of immense value. The natural order Graminae held an important place as furnishing our cereals; whilst we eat the tubers of one plant, the roots of another, and the stems, leaf, stalk, and fruits, or seed vessels of others. The bulk of the people if not exactly omnivorous, lived upon a mixed diet, whilst savages approached more nearly the carnivorous. It is said that the nearer man approached to primitive innocence, or indeed to innocence of any kind the more nearly did he affect a vegetable diet. That it is possible to sustain life on fruits and herbs is an undoubted fact, for until very recently the greater part of the inhabitants of Ireland, and Scotland, if not vegetarian in principle were so in practice.

Mr. Bailie had furnished himself with copious statistics dealing with the relative values of various food stuffs. These he said he would not trouble his audience with as they were easily obtainable from the Vegetarian Society.

Fruit, continued the lecturer, has an absolute value in human dietetics, and he had vivid recollections of how in his boyhood's days the fare at farmhouses consisted in staple of good milk and bread stuffs, Apple dumplings of liberal size also constituting a favourite dish. Again the medicinal value of a fruit diet was great, as evidences of which he referred to the efficacy of the "Grape cure" in certain complaints. Of the Apple especial praises were sung. Bearing all this in mind it was a great pity that the use of fruit should be confined to so small a part of the populace. Even during a plentiful season if one visited some of the more thickly populated centres with a basket of ripe Apples or Tomatos they would be speedily surrounded by a crowd of eager children.

Foreign importations formed a serious question. Of course such fruits as Oranges, and Bananas were a great addition to our resources, but there was no necessity to import a single barrel of Apples when such magnificent samples far ahead of foreign material in point of quality could be grown on British soil. For this reason he was a warm advocate of extensive fruit cultivation. True, if might be urged that there was a danger of the supply exceeding the demand, but their was no danger of this as long as we continued to import foreign Apples. The question of fruit, however, was not simply national; it was important enough to be gloriously international. The production of fruit, moreover, was one of the healthiest and happiest occupations that a man could adopt.

But there was another side to all this, for the importance of home-grown fruit would never be realised until masses of the population are educated in matters of domestic economy, better methods of cookery, &c, which would overturn their present notions of the relative values of foodstuffs. Fruit as a food is at present practically unknown amongst working classes even amongst seasons, so-called, of superabundance. A little observation will easily enable one to see upon what sorry stuff a working man has to bear the heat of a labour day. The great movement of technical instruction is commendable but there is still a great want of education as to the value of fruit. In this great and good work he should be pleased to see the Royal Horticultural Society taking an active part.

In conclusion, Mr. Bailie pointed out the necessity that means should be devised to help the producer over his difficulties. The item of expenditure for carriage before the fruit could be placed upon the market was a serious one; for unless we grapple with and meet these difficulties we can never realise the importance of "British Fruit Growing from a Food Point of View."

In the discussion which followed the reading of the paper, Mr. Roupell testified to the value of Tomatos. He grew them, and disposed of them, and always found that there was a ready market for good fruit. He was much amused sometimes with the lengths to which his vegetarian friends occasionally went, for even an Apple dumpling was all the better for a little good beef suet (laughter). He advised all Apple cultivators to use the Paradise stock, as trees grafted upon it came into bearing the second year after planting, besides the fruit being earlier and of better quality. Mr. Masham, who is largely identified with the fruit-growing movement in South Wales said that the R.H.S. fruit show was a splendid object lesson of how to do it. He then produced a miserable little specimen of an Apple (sops of wine) and amid the laughter of the audience averred that that was an object lesson of how *not* to do it. He had seen bushels of similar fruit put upon the market. He perfectly agreed with Mr. Roupel in his remarks anent the value of the Paradise as a stock. Mr. Bythway, in a most amusing manner gave an account of his trials and successes as a fruit grower in South Wales. He declared with great emphasis that he lived in a gale of wind. To this latter remark Mr. Pearson, on proposing a vote of thanks to Mr. Bailie, which was subsequently carried unanimously, referred and said that the splendid fruit shown by Mr. Bythway was conclusive evidence that he had had something else besides wind to grow them on. A vote of thanks to Mr. Bunyard for presiding brought the proceedings to a close.

(*To be continued*).

LITHOSPERMUM FRUTICOSUM OR SHRUBBY GROMWELL.

This beautiful little plant is a real gem among hardy rock plants flowering in spring and early summer. The beautiful dark blue colour of its flowers equals that of our Alpine Gentians. Its compact habit and freedom of flowering entitle it to a place among even limited collections of rock plants, and the freedom with which it may be increased should place it within the reach of anyone whose inclination lays in the direction of Alpine plant growing. There are two or three methods by which it may be increased, namely, by division, or cuttings placed under a hand light during the summer months, on a warm border, shading from bright sun being given till they root. A better plan is to lift and pot up a few plants in the autumn. Do this rather early in order to have them well established before winter; place in a cold frame keeping the lights off, unless during heavy rains and sharp frosts. When the lights are on give as much air as possible. During February clean them over and place them in a gentle warmth. Under this treatment, they make rapid growth and produce plenty of cuttings. Make these about 2 in. in length as they strike roots readily, and when fit may be potted into thumbs, placing them in a warm pit or frame. These young plants if a large stock is required, may be stopped when 2½ in. to 3 in. long, and the points made into cuttings; at the same time the old plants, if well attended to, will give an ample supply of cuttings. The young plants should be well hardened off before planting them out, and in two months from the time the cuttings are rooted; but the final planting out in most instances is better deferred till May.—*W.B.G.*

GARDENING MISCELLANY.

SEEDLING WHITE BEGONIA.

Some flowers of a very pretty variety of tuberous Begonia have reached us from Mr. Robert L. Croucher, 24, Bruntsfield Place, Edinburgh. We are not positive that it is absolutely new, because there are already some in cultivation which come very near, though perhaps not strictly identical. The flowers are single, perfectly circular, crenate at the edge, or shallowly fringed, and beautifully crimped. They are pure white on the face, slightly tinted with pink on the back, and casting a faint reflection through the petals. Possibly under glass the pink would disappear. If the habit of the plant is good, and it flowers freely, the variety would be worthy of propagation for pot culture or bedding out. Under glass the flowers might come larger, and would therefore be useful for the decoration of the greenhouse and conservatory.

PEAR BEURRE HARDY.

This is a well-known Pear in this country, but is seldom, if ever singled out with such prominence as J. C. Stogdon gives it at p. 77. This fact may be accounted for to some extent by the fruits having been grown in California where sunshine is more prevalent and the season longer than in this country, for climate has a great deal to do with the size and quality of Pears, more so than in the case of Apples, which are hardier. In this country it is an October

Pear and therefore in season after the supply from California is over. An old description says that the flesh is white, melting, and juicy with a pleasant flavour and slight perfume; fruit large and excellent, in season during October and November. The tree is a strong grower and a good bearer. At the Pear Conference held at Chiswick in 1885, it was described as melting, very juicy, and richly-flavoured, ripening in October. The best fruits in this country would be obtained from wall trees or from pyramidal trees on the Quince stock.

LOBELIA MISS EVELYN GREEN.

This was a selection from a batch of seedlings, showing a considerable amount of variation, in the flower garden at Bayham Abbey, Lamberhurst, Kent. It is of dwarf habit, branching freely, and flowering most profusely. The flowers are large even for the bedding varieties of Lobelia Erinus, and of a beautiful light blue, with two prominent white eye-like spots on the lip. In fact, they have been described as coming as near caerulean blue as we can get. This would be sky blue, a colour which is very rare in nature, as far as the colours of flowers are concerned. Mr. A. Methven, the gardener, picked it up as a solitary specimen amongst a great number.

DOUBLE BEGONIAS AT STEVENAGE.

Messrs. Young & Dobinson devote a considerable portion of their establishment at Stevenage, Herts, to the cultivation and improvement of the tuberous Begonia. The double flowered section receive especial attention, which is not surprising when we consider their great suitability for bedding purposes. They are far more showy than the singles, although the great point is to select varieties with sufficiently stout peduncles to uphold the heavy flowers, and cause them to stand well above the foliage. This is a *sine qua non* to a good bedding Begonia. As the samples lately sent to us by Messrs. Young & Dobinson have not been named we are prevented from going into much detail with regard to the better forms. The colours merit a word of approbation, for they were very vivid, some shades of salmon-buff being truly delightful. One fine crimson-scarlet flower measured fully 5 in. in diameter, the peduncle being especially stout and strong. The palm for beauty of form, however, goes to one rosy-salmon flower that was of a distinctly superior type. Doubtless this enterprising firm will be heard more of with regard to the further development of this popular flower.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Guide to Hampton Court.—*Alexander Macintosh:* We think there would be no difficulty in getting a copy if you apply to Mr. Graham, Superintendent, of the Gardens, Hampton Court, Middlesex. As far as we can remember its price is 6d., or something very near that price.

Replanting Yiolas. — *D.W.D.:* You can lift, divide and replant Violas now with every hope of success, provided the plants are well furnished with roots. Good modern varieties should be so. That plan has been pursued for many years, but we think you would get larger flowers and better results generally by putting in cuttings in September every year, in a cold frame and planting them out in spring. You then get vigorous young plants which make excellent growth next summer

Preparing Border for Roses.—*D.W.D.:* The light sandy soil must be in poor condition owing to its not having been manured for the last three years. We would therefore advise you to trench it 18 in. or 2 ft. deep, keeping the best soil on the top and merely breaking up or loosening the bottom. If you could afford to remove the more sandy material, and replace it with substantial soil from somewhere else, so much the better. If you cannot do this, then get a quantity of clayey material and mix with the natural soil. While trenching the ground, work in plenty of good farmyard manure in the bottom, and also about 1 ft. or 9 in. beneath the surface. This will give the Roses a good start, They can be assisted afterwards by digging in some manure every year. Clayey soil gives the best results with Roses, but you can grow them very successfully by assisting them in the manner above suggested.

Protecting Old Plants of Antirrhinums.—*D.W.D.:* Antirrhinums will live without protection on the top of an old wall, but in a border even in the south of England they get killed except in the mildest of winters. We are afraid therefore that you can hardly preserve them out of doors in Sutherland. The best plan is to take cuttings in September and treat them like Pentstemons in a cold frame. They will be rooted and ready to transplant to the beds and borders in April or May, according to convenience. On the other hand you may lift the old plants and put them into boxes rather thickly after shortening back the stems, and protect them in a cold frame. Ventilate freely in favourable weather. We do not advocate this plan. By sowing seeds under glass early every year you can get the plants to bloom outside the same year Seeds and cuttings are the best methods of increasing and raising stock. Gather seeds and take cuttings of the best varieties always. If you care to make the experiment you could place a thick layer of bracken between and amongst the plants in the open border, to see if they will live through the winter. This could be done on the approach of frost.

Fungus.—*E. Slade:* The specimen sent is one of the varieties of the common Mushroom and apparently Agaricus campestris hortensis, but it was too far advanced to show the character properly. It is one of the edible ones, but you might use it cautiously to commence with.

Books.—*Vitis vinifera:* "Hooper's Gardening Guide" deals largely with flowers and vegetables and contains numerous illustrations of the subjects grown there. At the end of the book is a monthly calendar of operations, dealing with fruit, vegetables, orchard house, vinery, flower garden, pleasure grounds, greenhouse, pits and frames, conservatory and stove. The details are not lengthy but short and to the point. The fourth and newest edition may be obtained at this office for 2s. 6d. "Grape Culture" reviewed by us on September 26th, is sold for 2d. and the postage would be another 1d. The first pamphlet of this series was "Strawberry Culture," by the same publisher and at the same price.

Names of Fruit.—*Constant Reader:* The yellow Apple was Dumelow's Seedling; the green one was Northern Greening.—*J. H. O.:* 5, Hambledon deux Ans; 6, King of the Pippins; 12 and 15, Beauty of Kent; 8, 9 and 13, were not sent; 1, 2, 3, 4, 7, 10, 11, 14, 16, had every one of them lost their numbers, which were simply attached to the wet sides of the tin box. Without packing, Apples will not travel by post with numbers stuck on with pins. The paper bearing the numbers gets wet and drops off the pins with the bad usage in coming through the post. See instructions in last week's issue. Some of the very best British Apples were in the box, but it was impossible to identify them with the numbers.

Names of Plants.—*Constant Reader:* 3, Pontederia crassipes; 4, Muehlenbeckia platyclada.—*W. H.:* 1, Begonia semperflorens Crimson Gem; 2, Begonia semperflorens var., possibly Princess Beatrice. Both these Begonias are excellent for bedding in average seasons, but require a warm greenhouse in winter; 3; Bougainvillea glabra; 4, Maranta sp.; 5, Photinia japonica (The Loquat): 6, Catalpa bignonioides; 7, Bambusa not recognised; 8, Robinia Pseudacacia var.; 9, Negundo aceroides variegata; 10, Thuya orientalis aurea; 11, Cobaea scandens variegata; 12, Grape Gros Colman.—*J. M.:* 1, Crataegus coccinea; 2, Cupressus nutkaensis; 3, Libocedrus decurrens; 4, Juniperus communis suecica (the Sweedish Juniper); 5, Retinospora pisifera; 6, Tsuga canadensis; 7, Aster dracunculoides; 8, Solidago lanceolata; 9, Helianthus decapetalus.—*W. J.:* 1, Helianthus orgyalis; 2, Adiantum tenerum; 3, Nephrodium decompositium glabellum.—*H. A.:* 1, Cattleya gaskelliana; 2, Cypripedium barbatum crossianum; 3, Oncidium Krameri; 4, Oncidium dasytile?—*J. Metcalf:* 1, Asplenium Bellangeri; 2, Selaginella cuspidata; 3, Cassia occidentalis; 4, Senecio grandifolia; 5, Tsuga canadensis; 6, Pseudotsuga Douglasii; 7, Colchicum autumnale.—*H. Watt:* 1, Arbutus Unedo; 2, Symphoricarpus racemosus; 3, Cotoneaster Simonsii.

Communicatioos Received.—D. Houston.—F. H.—J. Mayne.—R. L.—T. B. J.—A. T.—J. West.—R. Hendry.—J. P.—A. James.—W. Catto.—Alex. Ward.—Bicton.—G. H. R.—John Anderson.—J. R. Wilson. Messrs Grassing.—H. J. J.—Chester Courant.—Amygdalus,—G. Roper,—Y. G. Ellason.—M. N.—F. W. B.—Bucks.—T. Peters.—Wood & Son.—Boekhandel Van J. B. Wolters.—E. W. M.

TRADE CATALOGUES RECEIVED.

Gebr. Ketten, Rose grower, Luxemburg, German.—Luxemburg Roses.

Benjamin Soddy, 243, Walworth Road, London, S.E.—Soddy's Bulbous Flower Roots

Frederick W. Kelsey, 145, Broadway, New York.—Choice Hardy Trees, Shrubs, Bulbs and Plants for Fall Planting.

LONDON SEED TRADE.

October 6th, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 39, Seed Market, Mark Lane, report a steady demand for finest English Red Clover; and best grades of Canadian Alsike realise an advance of 5s. per cwt. White Clover and Trefoil steady. Ryegrasses unchanged.

COVENT GARDEN MARKET

October 6th, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs	25 0	27 6
Grapes, per lb.	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....	5 0	
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
ArtichokesGlobe doz.	2 0	3 0
Asparagus,per bundle		
Beans, French, per ha't sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bnuch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bnndle	1 0	
Cucnmbers per doz.	1 6	3 0
Eudive, French, doz.	1 6	
Herbs .....per bunch	0 2	0 0
Horse Radish, bundle	2 0	4 0
Lettnces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Smallsalading,puuuet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per buu.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	3 0
Asters, doz. bches	3 0	6 0
Bouvardias, per buu.	0 6	0 9
Carnations doz.blms.	0 6	2 0
Carnations, doz. bchs.	4 0	8 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	4 0	6 0
Gladiolii, doz. spikes	1 0	3 0
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	3 0	6 0
Lilac, White (French) per bnch.	4 0	5 0
Marguerites, 12 bun.	1 0	2 0
MaidenhairFern,12bs.	4 0	6 c
Orchids, doz. blooms	1 6	12 0
Pelargoninms, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	4 0	6 0
Pink Roses, doz.	1 0	2 0
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays	2 6	4 0
Tuberoses, doz. blooms	0 3	0 4
Primnla, double, doz. sprays	0 6	0 6
Violets (French) per doz. bnches.	1 6	
Violets (English) per doz. bnches.	1 6	2 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis,doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens,Invar.doz	6 0	24 0
Erica, per dcz.	9 0	15 0
Ferns, iuvar.,per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope. per doz.	4 0	6 0
Lycopodiums. doz.	3 0	4 0
Marguerite Daisy doz	6 0	9 0
Myrtles, doz.	6 0	9 0
Mignonette	4 0	6 0
Palms in variety,each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet,	2 0	4 0
Solanums, per doz.	12 0	15 0

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, OCTOBER 17th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, October 19th.—Sales of Mr. Chas. Noble's Nursery stock of Sunningdale (6 days) by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

TUESDAY, October 20th.—Annual Sale at the Hale Farm Nurseries, Tottenham, (3 days) by Messrs. Protheroe & Morris.

Sales of Dutch Bulbs by Messrs. Protheroe & Morris and Mr. J. C. Stevens.

WEDNESDAY, October 21st.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

THURSDAY, October 22nd.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, October 23rd.—Sale of Imported and Established Orchids by Messrs. Protheroe & Morris; and of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

A NOTED ORCHID COLLECTION.—There are few Orchid growers and collectors who have not heard of the famous collection of Orchids got together by Sir Trevor Lawrence, Bart., at Burford Lodge, Dorking, romantically situated at the foot of the most abrupt escarpment of Box Hill, which is here clothed with dark Yew trees intermingled with Beeches whose leaves are now reddening in their autumn hues.

About the middle of September we visited the establishment, not particularly to see the Orchids, and not expecting to see many of them in bloom, because they were entirely out of season as the saying goes. In this, however, we were considerably mistaken, for the number of kinds in bloom quite exceeded our expectations, and gave us the impression that Orchids are never out of season at Burford Lodge, even at the dullest period of the year for this class of plants.

The warm or East Indian house contained its quota of beautiful or interesting subjects including Aerides lawrenceanum, one of the finest of the genus in cultivation. Many varieties of Dendrobium Phalaenopsis were already in bloom in various beautiful shades of colour, and others were advancing. The fragrant flowers of Epidendrum fournierianum were not the least recommendation of this species which bears panicles 3½ ft. to 4 ft. long. The horse-shoe shaped and ragged lip of Microstylis bella was interesting in its way; and Arundina Philippi resembled a reed except in its flowers which discountenanced such an assumption. Though not an Orchid, the Lattice-leaf-plant successfully grown in this house could hardly be overlooked by the visitor. It is grown in a tank which is fed with fresh water once a day by means of a siphon. The plants suffered somewhat during the fierce light of summer, we were informed, but the leaves had begun to develop again beautifully. The damp wall of the house was covered with the fine-leaved Ficus minima. For the sake of tidiness, the ground under the stages had been covered with a thick felt of growing moss, and where most exposed to light, planted with the two beautiful and well-known species of Gymnostachys, of which G. Verschaffeltii had leaves measuring 9½ in. by 6½ in. in width. The edges of the benches in some parts of the house were fringed and draped with Cyrtoderia metallica. Both here and in another house, the collection of Calanthes

for which the establishment is noted, was making wonderful growth.

After a terrific downpour of rain which occurred early in the afternoon, the sun again shone out brightly as we discovered on finding ourselves in one of the warmest houses on the establishment. Here were some beautiful pieces of Anoectochilus so tantalising to many Orchid growers, on account of the difficulty in preserving them in a healthy condition for more than a few years at most. The olive-green and velvety leaves of A. Rollisonii were variegated and banded with yellow. The olive leaves of A. Dawsoni were beautifully netted with pink lines. A fine plant of Macodes Petola would have been the envy of many an Orchid grower, for its velvety leaves were beautifully fretted and netted in a most intricate way with slender lines like threads of gold-coloured silk. A strange looking Orchid named Eulophiella Casimir Pierriere may furnish a surprise later on when it comes into bloom. Many strange and rare Orchids as well as showy ones find their way here; and and we were pleased to notice that singular looking species Bulbophyllum grandiflorum in bloom. The huge upper sepal was pale orange-brown, tessellated with white. Not far off was the pretty Cirrhopetalum mastersianum, with buff-yellow and brown flowers arranged in whorls forming half or three-fourths of a circle. The larger flowers of Bulbophyllum Dearei were even more showy, with orange veins and ornamented with white tesserae. Nor less curious and fantastic were Catasetum fimbriatum and C. christyanum, with their fringed lips and grotesque forms generally. Here, too, were some of those forms which are strikingly intermediate between C. Bungerothi and C. macrocarpum, judging by the form and great size of the lip which suggests natural hybrids. Nor less singular was that Swan's-neck Orchid, Cycnoches Lehmanni.

The Cattleya house was occupied with a varied assortment of Orchids widely different in character, but all agreeing in the temperature and general treatment they required. The Cattleyas were mostly out of season, with the exception of the late summer-flowering C. Eldorado. There were, however, some closely related plants in the shape of several forms of Laelia elegans, including L. e.alba, and L.pumila praestans marginata. Five very distinct species of Epidendrum were in bloom, including the delightfully fragrant E. fragans, and E. ottonis. On the other hand E. sceptrum and E. prismatocarpum are notable for their showy, crimson blotched flowers. E. O'Brienianum had been flowering continuously since the Temple Show, and that not from a batch of plants, but the same identical specimen which had been exhibited at that time. Three species of Oncidium were at their best, including O. boothianum with its long pendulous panicles of bloom, and a richly spotted form of O. jonesianum. A beautiful subject is Burlingtonia venusta, growing in a wooden Orchid basket, and furnished with a profusion of white flowers. A strong contrast was furnished by the richly coloured flowers of a dark form of Miltonia moreliana. Several other types were in bloom including M. Clowesii and M. bicolor, having white flowers with a large violet blotch on the lip. A huge piece of Sobralia macrantha splendens had been flowering for many weeks previous to our visit. The collection of Cypripediums was in fine condition and throwing up flower spikes plentifully. A large and thriving piece of the beautiful, but somewhat fastidious, C. Schlimii was pointed out to us with pride. C. Charlesworthi had commenced its annual flowering season, which continues over a long period. That dwarf and pretty species C. purpuratum is not too frequently met with in collections, but here we noted it in the pink of condition.

Many strange and rare Orchids have been flowered here from time to time, including some things with which most Orchid growers fail. Whether success will attend the efforts to flower Grammatophyllum speciosum remains to be seen; but the huge specimen to be seen here is very striking, and as likely to flower at Burford Lodge as anywhere. Vanda Hookeri with very tall stems was pushing up its flower stalks; and the new Dendrobium cruentum with an orange-red blotch on the lip had quite and uncommon aspect. Many terrestrial Orchids find a happy home here, and many an exhibition table has been graced with the species grown here. At the time of our visit Habenaria militaris, with the scarlet lip, and the delicately chaste, flesh-tinted H. carnea with its pure white variety, H. c. nivosa, were flowering as they had been for weeks previously. All three are quite unlike our British species, one or two of which grow on Box Hill not far off, or did so until quite recently. The species above mentioned never fail to find admirers whenever brought before the public.

Strictly cool Orchids are not forgotten, though most of them were making their new growths. Odontoglossum crispum, and O. Pescatorei were represented by several varieties. The Bee Orchid (Oncidium dasytile) is quite unlike our native Bee Orchis (Ophrys apifera) which finds a home on Box Hill and other chalk hills of the North Downs. The pretty Odontoglossum aspersum roseum drew attention to its beautifully marked flowers, the petals and lip being purple, while the sepals were spotted or blotched with purple and brown. Elsewhere, the Indian Crocuses were throwing up their scapes for an autumn display. Close by was a collection of the hybrid forms of Dendrobium nobile and its allies in a resting condition. The plants in many cases were of wonderfully large size, notwithstanding the fact that they were grown in very small pots or pans.

Throughout the entire establishment everything was healthy and clean, clearly indicating the fact that Orchids of all kinds are still as carefully looked after as they have been for many years past. Mr. W. H. White, the grower, deserves great credit for the orderly condition in which he maintains everything under his charge, and for the success which attends his cultivation amongst so numerous a collection of representatives of this popular family.

Smell of the Country.—Those people must have had an intense longing for the country who smelt the peat on view at the Crystal Palace recently.

A pension for Mr. John Richardson.—At a recent meeting of the Liverpool City Council a recommendation of the finance committee was adopted, namely, a pension of £192 to Mr. John Richardson, late of the Botanic Gardens, for life.

Disposal of Market Produce.—A contemporary gives an instance of how railway companies might make themselves useful to the community by quoting an instance from the Eastern counties. A grower in the Isle of Ely had a large quantity of Asparagus for which he could not find a market. He wrote to the railway company which serves the district, explaining matters, and the manager readily consented to help him. A number of circulars concerning the produce, were printed and circulated amongst the season ticket-holders on that particular railway. So great was the demand for the Asparagus that the vendor was able to dispose of not only his own produce but large quantities from other people.

Mark Hawkes, a Chelmsford labourer was assisting in thrashing down the nuts from a Walnut tree, when he lost his balance and fell to the ground, a distance of 25 ft., breaking his neck.

A Golden Eagle, a fine specimen of its kind, having been caught in a trap in Sutherlandshire, was sent to the British Museum to be stuffed for exhibition. That is probably the place where the last specimen of this noble British bird will be seen.

There is a proposal for an Agricultural Hall in Ayr, and some of the inhabitants are suggesting that it should be made large enough to accommodate the horticultural exhibition. How much longer should London wait for a Horticultural Hall?

A Wash for Aphides.—A German writer recommends a mixture of 10 parts soft soft, 50 parts quassia powdered, and 5 parts of salicylic acid in 200 parts of alcohol. The plants are sprayed with this in order to destroy and keep aphides at bay. The mixture is said to be harmless to the plants to which it is applied.

The first prize Group of Chrysanthemums and foliage plants staged at the Royal Aquarium last week by that prolific exhibitor Mr. H. J. Jones, rightly named the Ryecroft Hero, has been moved to the windows of Messrs. Cheeseman, Bros., High Street, Lewisham, where thousands of the local inhabitants of that thriving suburb have availed themselves of the opportunities of inspecting it. At times the crowd around the windows was so great as to completely block the sidewalks.

Erratum.—On p. 86, in the fifth line from the bottom of the third column, Mr. W. J. Godfrey is represented as exhibiting Calla Little Gem. This was an oversight in reporting. He had his two new Richardias named Devoniensis and The Godfrey, both of which are superior to Little Gem in the freedom with which they flower. The former is also earlier and superior in form and substance to Little Gem. The Godfrey is much earlier, dwarfer in habit, and purer white than R. africana.

Distribution of Bedding Plants.—Arrangements have been made for the distribution to the public, on the days named under, of any surplus bedding plants, there may be at the following places:—At the Island Gardens, Poplar, on October 12th; Finsbury Park, Myatts' Fields, and Southwark Park, on October 14th; Meath Gardens and Victoria Embankment Gardens, on October 15th; Ravenscourt Park, Royal Victoria Gardens (North Woolwich), Victoria Park, and Waterlow Park, on October 20; Kennington Park, on October 21st; Battersea Park and Dulwich Park, on October 23rd; Bethnal Green Gardens, on October 26th. At Clissold, Brockwell, and Peckham Rye Parks, there are no surplus plants this year.

Flowers amongst the Japanese.—The use of flowers for interior decorations, particularly on occasions of ceremony and festivity, has always been a universal custom among the Japanese, and out of this pastime they have elaborated a method distinctly their own, which, upon examination, reveals aesthetic principles of a high order. With the October number of the *Studio*, which is the first part of a new volume, will be commenced a series of illustrated articles fully describing for the first time in any European publication, the wonderfully original methods of flower arrangement adopted in Japan. This number will also contain the first of a series of illustrated articles upon the Arts and Crafts Exhibition of the New Gallery.

Syndical Chamber of Belgian Horticulturists.—The monthly meeting of this society, for estimating the value of horticultural products, was held in the Casino, Ghent, on the 4th inst. Certificates of Merit were awarded to Yucca gloriosa medio albo-picta presented by M. E. Bedinghaus; to Miltonia Bluntii lubbersiana, presented by M. Jules Hye; to Agave ousselghemiana variegata, exhibited by M. E. Bedinghaus; to Miltonia moreliana illustris, shown by M. L. De Smet-Duvivier; to Odontoglossum grande var., shown by M. Jules Hye; to Cypripedium Vulso, a hybrid between C. Veitchi Demidoff and C. bellatulum Mariae, exhibited by M. Jules Hye; and to a collection of Begonia Rex crossed with B. decora, staged by M. L. De Smet-Duvivier. Five certificates were also awarded for culture, and one Honourable Mention.

Mushrooms in greater abundance than has occurred for many years has been gathered in the vicinity of Ashby, Leicester, since the accession of the rains. So plentiful were they that they were selling at 2d. a pound retail. Large quantities were bought at one penny per pound, yet were of excellent quality.

The Ceylon Botanic Gardens.—Mr. J. C. Willis, the newly-appointed Director of the Ceylon Botanic Gardens arrived safely at the close of last month and has now assumed office at Peradeniya. The retiring Director, Dr. H. Trimen, is reported to be in a precarious state of health, and his numerous friends are full of anxiety on his behalf.

A gigantic Specimen of Pumpkin (French "Potiron") is now being exhibited by Messrs. Ruhmann Bros., Importers of Foreign Provisions and Vegetables, at 32, Tottenham Court Road, W. It is supposed to be the biggest "Potiron" ever grown, and measures about 2 ft. 9 in. in diameter, 1 ft. 5 in. in depth, while its weight is not less than 198 lbs.

A Smoking Concert is in course of organisation in aid of the Jubilee Festival Funds of the National Chrysanthemum Society. We understand that Mr. A. E. Stubbs undertakes the arrangement of it, and the secretary and treasurer to the function is Mr. E. Ellis Abrahamson, 290, Dashwood House, E.C , who will be glad to hear from any one willing to take part.

He knew it.—Two sons of Erin were walking along a road one day, and one was loitering behind. The two in front came upon a big toadstool, and one of them asked his mate what it was, when he got for a reply, "Wait till Mike comes up, he knows everything." Mike came up and looked at it in silence for a minute, then exclaimed "Begorra! it's a what-you-may-call-it." "There now," said the adviser, "I told you he would know it."

Early Chrysanthemums.—Two varieties appeared on the New York markets as early as September 18th. One of these with pink heads about 4 in. in diameter, and named Madame Marie Masse, is not unknown in this country. It is well adapted for flowering in the open and made its appearance at a meeting of the National Chrysanthemum Society last autumn, but did not get honoured with a certificate. The other variety was Madame Gastellier, a white bloom about 4½ in. in diameter, and a fortnight earlier than Madame Bergman.

Farm and Garden Produce.—The Midland and the Great Northern Railway Companies, where their lines are in combination, have agreed to reduce the tariff considerably for farm and garden produce. In this respect they have followed up the example set them last year by the Great Eastern. Many new railway vans on the Midland line may be noticed labelled "For Fruit and Milk." Fruit growers and market gardeners generally will do well to lay aside their local jealousies, and co-operate in taking advantage of the privileges now offered them,

The Torquay District Gardeners' Association opened its fifth session at the Abbey Road Lecture Hall on Wednesday, September 30th, when Dr. R. Hamilton, Ramsay, delivered his presidential address. After congratulating the assembled members upon the continued success of the society, Dr. Ramsay offered some interesting remarks on "the home garden, and some plants worthy to find a place therein." The home garden, he said, belonged especially to a mansion where the owners lived for the greater part of the year. Many such gardens were the pride of designers in the sixteenth and seventeenth centuries, but too many of them had been ruthlessly swept away during the opening years of the nineteenth century, when the park had been brought right up to the door with a gravel sweep, and the garden proper had been banished to a distance from the house. The great point to remember in making a garden, continued the lecturer, was not to affect any particular style, which might fetter too much the minds of the owner and the gardener, preventing those gleams of originality which might lend a charm to the design. By all means let him take from any style which might suit his purpose, as did the sculptor—

To faultless nature true, he stole a grace
From every fairer form, and sweeter face.

Dr. Ramsay also gave some excellent suggestions as to the most attractive way to contrast the home garden, to stock, and to shelter it. A hearty vote of thanks was accorded him at the close.

The Bulbs of Roman Hyacinths are small, smooth skinned, and solid this year on account of the past season's growth. The great demand for the bulbs is partly accounted for by the fact that about 1,000,000 of them will be sold west of the Ohio River, U.S.A., this year.

Two Crops of Potatos.—Mr. William Whiteside, Preesall, Lancashire, has had two crops of Potatos from the same piece of land during the past season. The first crop was planted on April 12th, and lifted on June 25th. The second crop was planted on the latter date, and an excellent harvest was gathered recently.

Potato Crop in Scotland.—Some very heavy crops are talked about, but they are exceptional. From six tons to nine tons per acre are considered more likely as a general average. The tubers in some cases are of great size, but hollow in the centre. Early varieties have been more or less severely attacked by disease.

Lord Winchilsea and others in the Eastern Counties are making great efforts to establish a system of depots for the fruit and other produce for the market. In this respect they are only copying our Continental neighbours, who find that by collecting the small lots from any one district to a depot, they may be shipped as one consignment at a relatively much smaller freight.

The Fruiterers' Company.—After a short fit of usefulness this company appears to have lapsed into its erstwhile state of inaction. With one exception, perhaps, the members have no direct interest in the welfare of the craft, and consequently the whole matter lies dormant. Will Mr. Brooks, of Regent Street signalise his accession to office by reviving the enterprise so ably conducted by Sir James Whitehead?

The Belladonna Lily.—As a pot plant the flowers of Amaryllis Belladonna would appear tame beside the best forms of the modern hybrids. Out of doors in the autumn, however, it has no rival; yet a most striking thing is that so little of it is seen in gardens about. It has been flowering for weeks past in a narrow border close to the walls of the Orchid house at Kew. The individual flowers last but a short time, but each bulb carries a number of flowers which expand and die in succession. Some bulbs are early and others late, hence the duration of the flowering season. At first the blooms are pink with a white throat, but they gradually deepen with age until of a deep rose, throat and all.

Devon and Exeter Gardeners' Association.—The winter session of this society was recently opened at the Exeter Guild Hall, when Mr. W. Charley, gardener at Wonford house, read an instructive paper on soils. Mr. A. Hope presided over a full attendance. After dealing with the composition of soil the essayist observed that soils might well be spoken of as the graveyard of countless generations of animated nature, stocked with plant food at once available, and fortified with further, as yet unprepared, material, which would be forthcoming when required. In order to possess proper fertility, a soil must afford ready ingress and egress to water, but at the same time must have sufficient retentive power to guard against protracted drought. Its texture must be at once firm and yielding so as to afford protection to root fibres, whilst it allowed of their free passage in search of nutriment. The essayist then went on to discuss the evil effects of a water-logged soil, also the beneficient action of lime upon sour torpid soils which exerted a powerful mechanical effect on sandy soils by imparting a certain amount of tenacity; on heavy soils by opening up and dividing them; and on peaty soils by breaking down their fibrous vegetable tissues. Sand, full of humus, hitherto valueless, could be made fertile and productive by a judicious use of lime. A soil abounding in lime, said Mr. Charley, would grow legumes well, also Potatos. Clay soils, while excellent for agricultural products, require to be lightened for garden crops. This could be done by the addition of sand, lime, or woodashes. After referring to the manures necessary for several kinds of land, Mr. Charley dealt with the chemical composition of the soil, and concluded by saying that in order to thoroughly understand the texture or mechanical nature of the soils, their relations to heat and water had to be taken into account.

A new Insecticide.—This is a substance made by dissolving 3 oz. of sodium arsenate in a quart of water, and 4¾ oz. of lead acetate in a like quantity of water. After this they should both be poured into a barrel containing forty-five gallons of water, stirring the mixture. The amorphous lead arsenate remains for a longer period in a state of suspension when thus treated than when concentrated solutions are mixed and afterwards diluted. The mixture is further diluted till the solution is made up to fifty gallons, after which it is ready for use.

SMALL FRUIT CULTURE IN BELGIUM.

Our contemporary *The Dundee Advertiser* is publishing a series of articles on Belgian gardens and other subjects in relation to fruit culture. The first article is illustrated with a sketch of a Belgian market cart, containing the owner, his wife, and some market baskets, not unlike the bushel baskets of our markets, but deeper and furnished with two handles. This load is drawn by two dogs. Ordinary agriculture has not been paying in Belgium, and the tendency is to extend the cultivation of small fruit, which is grown in gardens rather than extensive fields. Many of the gardens, both for fruit and hops, consist only of twenty to thirty poles of land. Much of the fruit shipped from Ostend is grown in the neighbourhood of Ghent. The land is generally held on a lease of nine years, and the rent is about 240 francs per hectare, that is about £6 per acre. Strawberries are more profitable than Gooseberries. At Lede, between Ghent and Brussels, the schoolmaster is also a fruit grower, and he considers that fruit culture is extending.

No garden is entirely given up to the culture of any particular fruit, all or most of the kinds being represented. Vegetables are also grown in considerable quantity. Onions and Carrots come in for a large share of attention, and one grower admitted that he had sold large quantities of Carrots to a jam maker in Scotland, but apologised for the jam maker by saying that if he put nothing worse in the jam it would do no harm.

Produce is carried over the Belgian railways at lower rates than ordinary and less perishable commodities. Much of the Belgian fruits finds its way into British markets after it reaches Ghent, Ostend, and Antwerp, from whence it is conveyed to Britain by fast steamers at low rates. More fruit is shipped from Ghent than any other Belgian town. One shipper has two steamers sailing for Leith every week, three for London, two for Hull, and three for Goole. Most of the Strawberries shipped from Ghent are sent to Glasgow in baskets and sieves. The sea passage to Leith takes thirty-six hours, and the freight is 30s. per ton; for London the charge is about 25s. 6d. per ton. If the fruit leaves the port of embarkation at 2 p.m. it is in London by 6 a.m. next morning, so that perishable fruits can be gathered in Belgium one day and marketed in London the next.

Although the distance from Antwerp to Hull is 260 miles, the passage is made in twenty-six hours, and the charge per ton is 24s. From Hull to Manchester the distance is ninety-one miles, and the railway freight 23s. 9d., or practically double the long sea journey. Fruit leaving Antwerp can be placed upon the Manchester markets within thirty-four hours, the distance covered being 351 miles, at a total cost 47s. 9d. per ton.

The Belgian Government has long recognised the value of technical education for the peasantry. There are schools for this purpose in various parts of the kingdom, and the most notable of them is that at Vilvorde, in the neighbourhood of Brussels, and which was founded about fifty years ago. About thirty to forty students attend it at the present time and are educated free of charge. The school is small but well equipped, and has about twenty acres of ground attached to it. Fruits, flowers and vegetables are grown here, including Grapes and Tomatos for the culture of which there are glass houses. Vines are also trained to wires out of doors, and Strawberries planted between them. The Belgian Government also gives attention to the best methods of culture and the disposal of the produce. There is an Agricultural Information Department, where farmers and growers generally can get information free of charge concerning the best crops to grow, where the best markets are to be found, and other particulars relating thereto.

LIVERPOOL FARMERS' CLUB.

THE annual exhibition of this society was held in Great Nelson Street, Liverpool, on the 10th inst. The exhibits exceeded those of former years, which necessitated a goodly number being staged outside. Although under the auspices of the Farmers' Club the majority of the exhibits are interesting from a horticultural point of view; in fact the Potato section may be classed amongst the most important in the provinces, the number of dishes entered this year being 568 in a vast number of varieties. The first prizes in their respective classes will give a selection of reliable sorts.

POTATOS.

Early white Kidneys—Mr. John Halsall with "Lord of the Isles." Sutton's Early Regent—Mr. Thomas Rimmer. Early round—Mr. Peter Davies with "Best of All." Second early kidneys—Mr. James Johnson with "Snowdrop." Second early rounds—Mr. G. Longton with "Universal." Any other shape—Mr. B. Ashton with "Alderman."

Reading Giant—Mr. Edwin Clarke with very fine and clean tubers; twenty-one entries. Scarisbrick Favourite—Mr. Robert Blezard. Sutton's Abundance — Mr. James Johnson. Satisfaction — Mr. Peter Davies. Drone—Mr. J. Newton. Maincrop—Mr. G. Longton; there were twenty-nine entries in this class. Bruce—Mr. John Halsall. Antrim—Mr. Thomas Rimmer. Fidlers Colossal—Mr. S. T. Rosbotham.

Late Kidney, any other variety—Mr. B. Parker with "Up-to-Date." Late round, any other variety—Mr. Peter Davies with "Saxon"; nineteen entries. Late any other shape—Mr. Peter Davies with "Up-to-Date"; twenty-nine entries. Red or coloured early or second early Kidney—Mr. B. Ashton with "Mr. Bresee." Red or coloured early or second early—Mr. G. Wells showing "Reading Russet." Red or coloured kidneys, late—Mr. R. Newton with "Edgecote Purple." Red or coloured round, late — Mr. G. Wells with "The Dean." New varieties early or second early kidneys—first, Mr. Thomas Tinsley with Twist's "Perfection"; second, Mr. B. Ashton with Sutton's "Best of All." Early or second early round—first, Mr. James Johnson with "Lancashire Hero"; second, Mr. B. Parker with Shand's "Favourite." Late Kidneys—first, Mr. B. Parker with "Storr's Castle"; second, Mr. E. S. Wiles with "Progress." Late round—first, Mr. T. Wilkin with "Industry"; second, Mr. James Johnson with "Superb." Heaviest six tubers—Mr. John Halsall; weight 18 lbs. 9 oz.; heaviest single tuber. 4½ lbs.

Special prizes for new (1896) kidney varieties—first, Mr. B. Parker with "Storr's Castle"; second, Mr. Peter Davies with "British Queen." Round varieties—first, Mr. E. S. Wiles with "Duke of Marlborough"; second, Mr. W. Kerr with "Bee Hive." Special for three dishes, prizes presented by Messrs. Sutton & Sons—Mr. P. Parker with "Satisfaction," "Reading Russet," and "Windsor Castle." Two dishes, prizes presented by Mr. William Kerr, Dumfries—Mr. Robert Blezard with "Cigarette" and "Leda." Two dishes, prizes presented by Messrs. Little & Ballantyne, Carlisle—Mr. John Halsall with "Knowfield Early Round" and "Her Majesty." Two distinct varieties, one Kidney one round, prizes presented by Mr. W. L. Hutton, Ormskirk—Mr. T. Wilkin with "Bee Hive" and "Queen's Own." Mr. W. Scotson, Allerton, Liverpool, staged a hamper of Challenge, weighing 138 lbs. from one pound of seed.

VEGETABLES.

Six white Turnips—Mr. Peter Davies. Six yellow Turnips—Mr. Peter Davies. Two Savoy Cabbages—Mr. J. Mordaunt. Two red Cabbages—Mr. Peter Davies. Two Scotch Cabbages—Mr. W. Ledson. Two Cauliflowers—Mr. W. Gertrey with large white heads; nearly the whole of the twenty-one entries were too large for the table. Three sticks white Celery—Mr. John Wright. Three sticks red Celery Mr. John Wright; eighteen entries. Six long Carrots—Mr. J. Blundell. Six intermediate Carrots—Mr. M. Eccles. Six any other kind—Mr. T. Wilkin. Six Beet—Mr. B. Ashton with "Lathom red," very fine. Six Parsnips—Mr. T. Wilkin, Dorset, with "The Student." Six Onions—Mr. T. Wilkin. Six Leeks—Mr. E. Alty. Two Cucumbers—Mr. John Wright. Six Tomatos—Mr. J. Stephenson with excellent fruits of "Duke of York."

FRUIT.

Six culinary Apples—Mr. J. H. Salmon with "Peasgood's Nonsuch." Six dessert Apples—Mr. J. Wynne with Cox's Orange Pippin; twenty-two entries. Six culinary Pears—Mr. H. Lyle Smith with "Catillac." Six dessert Pears—Rev. Canon Blundell with "Marie Louise." Any other fruit—Mr. J. Stephenson with Black Alicante Grapes, fine heavy bunches.

The following collections not for competition were highly commended:—Messrs. W. Kerr & Co., Liverpool, for a collection of vegetables. Messrs. Dickson & Robinson, Manchester, for forty-two varieties of Potatos. Mr. W. Troughton, Preston, for "Prizetaker," Onions, and Potatos. Messrs. Webbs & Sons, Stourbridge, for Onions, "Banbury Reliance," "Cocoanut," "Bedford Champion," and "Masterpiece."

The arrangements were excellent, under a strong committee, and Messrs. Peppin & Mawdsley, hon. secretaries.

TRIALS AT CHISWICK.

(*Continued from p. 77*).

THE undermentioned are the remainder of the varieties of Peas tried.

THE SUTTON FORCING (Sutton & Sons).—Good cropper; haulm, pods, and Peas, pale green, averaging five Peas to a pod, of good flavour; seeds wrinkled. Height of haulm, 9 in.; ready for use June 15th.

SELECTED AMERICAN WONDER (Sutton & Sons).—A good type of this well known variety, averaging five Peas in a pod; seed wrinkled. Height, 9 in.; ready for use June 15th.

SUTTON'S EXCELSIOR (Sutton & Sons).—A moderate cropper; haulm, pods, and Peas light green, and averaging six Peas in a pod, of good quality; seed wrinkled. Height of haulm, 9 in.; ready for use June 15th.

ENGLISH WONDER (Sutton & Sons).—Much like American Wonder, but taller, and a heavier cropper; averaging six Peas in a pod; flavour good; seed wrinkled. Height, 15 in.; ready for use June 15th.

WILLIAM HURST (Sutton & Sons).—Heavy cropper; haulm, pods, and Peas, light green, averaging five Peas in a pod; sweet flavour; seed wrinkled. Height, 12 in.; ready for use June 13th.

SUTTON'S MAY QUEEN (Sutton & Sons).—Heavy cropper; haulm, pods, and Peas, pale green, averaging six Peas in a pod; flavour good; seeds wrinkled. Height, 3 ft.; ready for use June 13th.

SUTTON'S A1 (Sutton & Sons).—Profuse bearer; haulm, pods, and Peas, pale green; averaging eight Peas in a pod; flavour good; seed wrinkled. Height, 3 ft.; ready for use June 12th.

EXONIAN (Sutton & Sons).—Great bearer; haulm, pods, and Peas, dark green; pods small, but well filled with an average of eight Peas; quality fair; seed wrinkled. Height, 3 ft. 6 in.; ready for use June 15th.

ECLIPSE (Sutton & Sons).—Very similar in appearance to Exonian, but a little earlier than that variety, and the seed more wrinkled; ready for use June 13th.

SUTTON'S PRODUCTIVE MARROWFAT (Sutton & Sons).—Heavy cropper; haulm, pods, and Peas pale green; pods in pairs, averaging five Peas in each; flavour sweet and good; seed wrinkled. Height, 2 ft.; ready for use June 17th.

SUTTON'S FAVOURITE MARROWFAT (Sutton & Sons).—Moderate cropper; haulm, pods, and Peas light green; pods usually single, with an average of five large Peas in each; flavour sweet and good; seed wrinkled. Height, 2 ft. 3 in.; ready for use June 23rd.

ADVANCE (Sutton & Sons).—Heavy cropper; haulm, pods, and Peas, light green; pods small, averaging four Peas in each; flavour fairly good; seed wrinked. Height, 2 ft. 3 in.; ready for use June 23rd.

YORKSHIRE HERO (Sutton & Sons).—Excellent bearer; pods in pairs; haulm, and produce pale green; flavour good; seed wrinkled; a well known old favourite. Height, 2 ft.; ready for use June 24th.

SUTTON'S MAGNUM BONUM MARROWFAT (Sutton & Sons).—Good cropper; haulm, pods, and Peas, light green; pods in pairs, and well filled with an average of seven Peas in each; flavour good and sweet; seed wrinkled. Height, 3 ft.; ready for use June 29th.

SUTTON'S EXHIBITION MARROWFAT (Sutton & Sons).—Moderate cropper; haulm, and produce dark green; pods in pairs, straight, and averaging seven large Peas in each; flavour fair; seeds wrinkled; a fine exhibition variety. Height, 3 ft.; ready for use June 29th.

DR. MCLEAN (Sutton & Sons).—A well-known old favourite; seed wrinkled. Height, 2 ft. 6 in.; ready for use June 29th.

SUTTON'S LATE QUEEN (Sutton & Sons).—Good cropper; pods in pairs; haulm, pods, and Peas, dark green; flavour excellent; seed wrinkled. Height, 3 ft.; ready for use June 29th.

WALKER'S PERPETUAL BEARER (Sutton & Sons).—Good cropper; pods in pairs, dark green, and averaging five large Peas in each; flavour good; seed wrinkled; an old variety. Height, 3 ft.; ready or use June 29th.

HUNDREDFOLD (Vilmorin).—Great bearer; pods in pairs; haulm, pods, and Peas, dark green; pods short, and well filled, with an average of five medium-sized Peas of fine flavour; seed round. Height, 4 ft. 3 in.; ready for use June 24th.

SERPETTE EXPRESS (Vilmorin).—Good cropper; pods in pairs, small, but well filled, with an average of six Peas in each; flavour second-rate; seed slightly wrinkled. Height, 3 ft. 6 in.; ready for use June 22nd.

DWARF BEBARBIEUX EDIBLE-PODDED (Vilmorin).—Moderate cropper; haulm and pods light geeen; flavour fairly good. Height, 3 ft.; ready for nse June 29th.

EARLY DWARF CLAMART (Vilmorin).—Profuse bearer; pods in pairs, short, with four Peas in most; haulm, pods, and Peas, dark green; flavour moderately good; seed round. Height, 18 in.; ready for use June 23rd.

PLUPERFECT MARROW (J. Veitch & Sons).—Heavy cropper; pods in pairs, straight, six seeded; haulm, pods, and Peas, light green; flavour good; seed wrinkled. Height, 4 ft.; ready for use June 24th.

CARTER'S SPRINGTIDE (J. Carter & Co.).—Crop light, and not a success; seed wrinkled. Height, 2 ft.; ready for use June 17th.

ORCHARD'S KING WILLIAM (Orchard).—Good cropper; pods in pairs, large, well filled, with an average of five Peas in each; haulm, pods, and Peas, light green; flavour fair; seed round and slightly wrinkled. Height, 3 ft. 6 in.; ready for use June 22nd.

LONGFORD QUEEN (Ward).—Good cropper; pods single, long, with eight Peas in each; haulm, pods, and Peas, light green; flavour fairly good; seed wrinkled. Height, 3 ft. 6 in.; ready for use June 29th.

POLLETT'S EARLY MARROW (Pollett).—Same as Pluperfect Marrow.

GEORGE CLELAND (Dobbie & Co.).—Moderate cropper; pods in pairs, averaging six large Peas in each; haulm, pods, and Peas, dark green; seed wrinkled. Height, 2 ft. 6 in.; ready for use June 27th.

COMPACTUM (Laxton), PRIMUM (Laxton), LAXTON'S POSSIBLE (Laxton), EARLY LAXTON (Laxton), THOMAS LAXTON (Laxton), and LAXTON'S PROFIT (Laxton), are all varieties full of promise, but sufficient seed was not received to enable the committee to properly judge of their merits.

WONDER OF AMERICA (Dammann).—Same as American Wonder.

PRINCE ALBERT (Dammann).—Light crop and stock mixed.

EXPRESS (Dammann).—Moderate crop; pods and Peas small; deficient in flavour; seed round. Height, 2 ft.; ready for use June 22nd.

GIVRACRINO (Dammann).—Poor cropper; pods small, averaging four Peas in each; flavour indifferent; seed slightly wrinkled. Height, 2 ft.; ready for use June 29th.

CORATA (Dammann).—Stock very mixed.

CARACTUS (Dammann).—Good cropper; haulm, pods, and Peas, light green; pods well filled, with an average of five Peas in each; flavour fair; seed round. Height, 4 ft.; ready for use June 23rd.

FASCINATION (Harrison).—Heavy cropper; pods in pairs, large, averaging seven Peas each; haulm, pods, and Peas, light green; flavour good; seed slightly wrinkled. Height, 2 ft. 6 in.; ready for use June 29th.

EARLY DAWN (Harrison).—Moderate cropper; pods in pairs, rather short, averaging five Peas in each; haulm, pods, and Peas, very pale green;

flavour second-rate; seeds slightly wrinkled. Height, 4 ft.; ready for use June 20th.

VEITCH'S PERFECTION (Watkins & Simpson).—Good cropper; haulm, pods, and Peas, dark green; flavour excellent; a favourite old variety; seed wrinkled. Height, 2 ft. 6 in.; ready for use June 29th.

IMPROVED TELEGRAPH (Watkins & Simpson).—Same as the old variety; see below.

RENTPAYER (Watkins & Simpson).—Moderate cropper; pods in pairs, long and well filled, with an average of seven Peas in each; haulm, pods, and Peas, dark green; flavour good; seed wrinkled. Height, 18 in.; ready for use June 29th.

IMPROVED QUEEN (Watkins & Simpson).—Heavy cropper; pods in pairs, of good size, with six Peas usually; haulm, pods, and Peas, dark green; flavour very sweet; seed wrinkled. Height, 2 ft.; ready for use June 29th.

TELEGRAPH (Watkins & Simpson).—Profuse bearer, of good quality; a well-known and popular variety; seed wrinkled. Ready for use June 26th.

VEITCH'S GOLDFINDER (R. Veitch).—Moderate cropper; pods short and well filled, with an average of four large Peas in each; haulm, pods, and Peas, deep green; flavour excellent; seed wrinkled. Height, 3 ft.; ready for use June 29th.

NOTTS EXCELSIOR (Yates).—Good cropper; haulm, pods, and Peas, light green; pods short and well filled; flavour very good. Height, 1 ft.; ready for use June 17th.

EMPEROR OF JAPAN (Harrison) and an unnamed variety (McClure).—Seed received late; will be tried again in 1897.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned subjects received First-class Certificates from the National Chrysanthemum Society, at the Royal Aquarium on the 6th inst.

CHRYSANTHEMUM SURPRISE (Calvat).—This October flowering, Japanese variety measures about 6 in. in diameter. The bloom is solidly built up, and has broad, recurved florets of a rich dark amaranth-purple, with a clear silvery reverse It will prove a valuable sort for early market work. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

CHRYSANTHEMUM MADAME GUSTAVE HENRY.—In this we have another beautiful October variety, measuring about 7 in. across by 5 in. in depth. It is a pure white, true Japanese type, with a silky gloss, and having its long florets incurved and beautifully interlaced at the tips. The best blooms are obtained from the second crown bud. Late struck cuttings give a fairly good later bloom from the first crown bud. Mr. W. Wells.

DAHLIA MISS WEBSTER.—This white Cactus Dahlia has now received fourteen certificates. Messrs. Dobbie & Co., Orpington, Kent, and Rothesay, N.B.

DAHLIA CLARISSA.—The blooms of this pompon are small, neat in form and primrose yellow. Dagmar, maroon-crimson, and Guinevere, yellow, with orange-crimson edge are equally choice pompons in their way. M. C. Turner, Slough.

APPLE SIR JOSEPH BANKS.—This early autumn variety bears some resemblance to King of the Pippins, but is oblate and not so deep, being flattened on the top, with an open eye rather deeply sunk in a rounded cavity. The exposed side is rosy-red, and the other half is yellow It is, therefore, a beautiful variety, and of large size for a dessert Apple. Messrs. J. Laing & Sons, Forest Hill, S.E.

CHRYSANTHEMUMS FOR EXHIBITION.

Now that the buds are slowly unfolding their petals, we must take warning that the "Autumn Queen," will shortly be holding her court and receptions, when the whole of the available space in these columns will be required to record her beauty, progress, and importance; and with that end in view this must be the concluding paragraph before the exhibition season. The grower should at this stage be most careful to note the advice given as to cleanliness and dampness. If green fly is present in the least, fumigate so as to get rid of the pest before the flowers open, or if fumigation has to be resorted to at a later period the flowers will suffer. Moisture must also be kept at the lowest possible state; water in the morning, being careful not to let any fall on the floor or surroundings, so that the atmosphere may be on the dry side.

BLOOMING PECULIARITIES.

This is a detail that should be considered, some varieties being naturally early, some late, some quick in the opening stages, others the reverse. Amongst the varieties that are usually early or quick in their opening are, in the incurved section, Mons. R. Bahuant, Baron Hirsch, and the Queen family. Japanese varieties in this category are, Rose Wynne, W. Seward, Bouquet des Dames, Sir W. Raleigh, &c. Late varieties which may require a little pressing include the incurved R. Cannell, Robert Petfield, Lord Rosebery, and Princess of Teck family; late Japanese sorts are Boule d'Or, Lord Brooke, Sunflower, and many others. Nitrate of soda acts beneficially on flowers that are somewhat late in flowering, but should not be given too frequently or in heavy doses, half a tea spoonful to each plant being ample.

BAD AND GOOD KEEPERS.

This is a subject that can be best learnt by experience, but a few hints may prove acceptable. Mons. R. Bahuant, John Salter, Alfred Salter, Lord Wolseley, Prince Alfred, W. Seward, Charles Davis, Viviand Morel, and Edwin Molyneux, are all bad to keep; and, if finished many days before the show, will lose their brilliancy and freshness. Nearly all whites and yellows keep well, although they lose slightly in size; blooms of some of these varieties can be used for exhibition after being cut a month, the means adopted being to cut the flowers with long stalks, and place in bottles of salt and water, with a piece of charcoal in each bottle to keep the water pure, and cutting off ½ in. of the stem every two or three days. The best position for placing the bottles is in a cool cellar fairly well darkened. Many growers prefer placing the plants in a cool dry dark shed to retard the flowers, which is the course recommended if suitable quarters can be obtained; but either system will not prove very satisfactory for pink, bronze, or similar coloured flowers. Every effort in these cases must be made over a longer period, commencing at the time of housing.

DRESSING.

THE most important work of this nature can be done on the plants by assisting nature in the removal of all misshapen florets and seed petals. This allows the remaining petals plenty of room when they will develop generally into proper position. In some cases where a flower is late the centre should be entirely removed a few days before required, when the petals will fill up the vacancy and give the appearance of a finished flower.—*W.*

THE PLANT HOUSES.

Greenhouse and Cool Conservatory.

THERE should be no lack of flower here just yet, for many of the summer flowering subjects are yet blooming away with surpassing freedom. Chrysanthemums are fast coming into bloom also, and some of the Salvias, such as S. Bethelli, and S. splendens are doing good service, so that, what with the late summer stuff and the early winter flowering material, the house is looking fairly gay. As a rule it is wisest to do without fireheat for as long as possible, but we are having such a deal of damp weather that it will really do good if the pipes are warmed slightly now and again. This will assist in dispelling the damp and will make the air more buoyant and genial. Plenty of air should be given at the same time, although the house, instead of being left open all night as formerly, must be closed up at dusk.

BALSAMS.—The latest batch of these may be kept in fairly presentable condition for a time by dint of a little picking over. The top flowers will not be so fine as the lower ones, but they will look well enough, and may help to fill up what would otherwise be a gap.

TACSONIAS.—As these often make a great deal of growth during the summer, it will be advisable to give it a judicious thinning out now, otherwise the plants that are standing beneath them will come poorly off with regard to light, which for the next three or four months will be of the first importance. A few strings of mealy bugs will then most likely be brought to view, and a little cleaning rendered necessary. A wineglassful of petroleum stirred into a couple of gallons of warm water makes a cheap and efficient insecticide if properly used, and the mealy bug may soon be got rid of in this way. Choose a bright day for cleaning, so as to allow of the superfluous moisture being dispelled.

CHRYSANTHEMUMS IN BLOOM.—It will be inadvisable to give these artificial stimulants for two reasons. First of all, to do so would hasten the collapse of the blooms, and second, the odours arising from manures are not very acceptable in a conservatory.

WATERING is becoming day by day a more important matter. Hitherto it has been performed towards the latter part of the afternoon; now it should be seen to in the mornings, although the thirstiest plant should be looked over again about three in the afternoon.

Pits and Frames.

EVERY particle of space is crowded here, and will continue to be so until batches of Primulas, Freesias, Cyclamen, Cinerarias, etc., are depatched to take their places in the conservatory when a little breathing room will be forthcoming.

HYACINTHS.—The earlier batches of Hyacinths that were potted up at the end of August or the beginning of September will now be ready for a shift out of their plunging beds. In the six or seven weeks that they have been under the ashes, roots will have been formed pretty freely, and the tops will likewise have begun to move. When they have reached this stage the sooner they are taken out of confinement the better, or the incipient leaves are liable to receive injury, The plants may be removed to a cold frame from whence they may be taken into heat as desired. A little shading from bright sun may be needed for a few days after they have been brought to the light, but the young leaves will soon take on their normal green colour, and the shading may be dispensed with. Bulbs for later flowering may be potted up as soon as they are received. They will come in very well after Christmas.

DEUTZIAS, LILACS, AND STAPHYLEAS that will be required during the forthcoming winter season for forcing purposes will be better if deeply plunged in ashes—burying the rims of the pots at least 2 in. deep. This precaution will save the splitting and cracking of the pots by frost, and the plants can easily be lifted into heat as they are called for.

RUSSIAN MATS.—These form the staple of the covering material, and as they will be regularly in use by the end of the present month for a period of at least five months it is now quite time to see that there is a sufficient stock ready to hand for emergency. The mats need to have the raw ends trimmed and tied before they are fit for use, and this will be a "job in the dry" for some of the men when outside work is impossible.

BRACKEN.—As long as this can be kept dry it is an ideal covering, and there are many gardeners who annually lay in a stock of it for covering purposes, During periods of very severe frost the covering of Russian mats may well be supplemented by a layer of bracken spread lightly over them by means of a pitchfork.

HYBRID PELARGONIUMS.—Young plants of these that kept on blooming until late, and were cut down about the beginning of September are now sufficiently advanced to call for potting up. They may be knocked out of their pots at once, as much of the old soil shaken away from them as possible, and potted up into a size smaller pot than that they now occupy. This will encourage the formation of young roots. A pit that is kept up to about 45° Fahr. by night, rising to 50° by day will suit them admirably for the present.

POTTING ROSES.—If this has not hitherto been attended to, no time should be lost in seeing about it. If desired, plants may now be lifted from the open ground and potted up for forcing purposes. The roots should be carefully trimmed, and 8-in. pots employed. The compost must consist in staple of good turfy loam to which may be added a third part of well rotted and dried manure, and leaf soil. A few nodules of charcoal, and a handful of crushed bones, are an excellent addition.

Established plants of Tea Roses that are intended for forcing this season, if they do not require potting now, should be removed to a pit or frame where they are near the glass. The Hybrid Perpetuals are considerably hardier and will do very well if plunged in ashes the same as the Lilacs and the other forcing stuff. They may be pruned some time next month, and a portion of them placed in heat early in December.

HERBACEOUS CALCEOLARIAS.—Until very severe frost sets in these plants will do well if stood upon a bottom of ashes in a cold frame. Keep a sharp look out for slugs, and ventilate freely whenever it is at all possible to do so.—*A.S.G.*

HINTS FOR AMATEURS.

Sunflowers.—It is really astonishing how popular these are amongst holders of small gardens—and curious that amateur gardeners should hit upon such a giant flower to plant in such close quarters. Certainly the sight of the great golden discs can scarcely fail to be an imposing one. Ancient mythology has it that the nymph Clytie, who must have been a very forward young person as judged by a nineteenth century standard, became deeply enamoured of the sun, and was changed for love of him into our friend the Sunflower. The spirit of the nymph still is unchanged in her affections and thus the golden discs are held on high, and follow the course of the sun all day in order to catch as many of the rays as possible. A very pretty piece of witchery and *diablerie* is this to have in a back yard or a front villa garden.

The greater part of the glory will now have departed from the gorgeous heads, which if they are to be kept for the sake of the seed they contain must be cut off at once and taken indoors. Before stowing them away, they should be laid to dry in a shed or outhouse out of the way of the rats. These mischievous little pests are inordinately fond of Sunflower seeds, and there will not be many to store if they have a chance at them.

Lifting vegetable roots.—The lifting and storing of these should be seen to at once as they will not grow any more now, and fine days are getting more valuable as time goes on. The greatest care is required in lifting Beetroot for even a small wound will cause a root to bleed when cooked; and robbed of its colour, thus it will be insipid and worthless. The digging fork should be inserted at a safe distance from the crown, and worked as a lever with one hand the tuft of leaves being firmly grasped with the other. The root may then be easily and safely drawn out. Instead of using a knife, the leaves may be easily twisted off close to the crown by a twist of the hand. The roots will keep well if stored in a shed in a small heap or stack, in which a layer of dry soil or sand is placed between each layer of roots. Severe frost must of course be excluded.

Carrots are perhaps even more popular than Beetroot, and are generally regarded as an indispensible ingredient for flavouring soups as well as an appropriate accompanying vegetable for hot boiled beef. If beds of both the Intermediate and the Short Horn types are grown it would be advisable to stack the roots separately if room can be found. In lifting the roots it will be found easier to chop off the leaves about 1 in. away from the crown, then to twist them off in the same way as the Beetroot. Stacked with alternate layers of dry soil the roots will keep sweet and fresh until the early Short Horn Carrots are fit for pulling, after which they will not be in very great request.

Parsnips.—These may be lifted if desired, but it is a generally accepted fact that Parsnips are much sweeter and fuller in flavour if left out in the open ground all the winter, and only dug up as they are wanted for use. The greatest drawback to this system is that during periods of hard and continuous frosts it is extremely difficult to get the roots out of the ground. This difficulty may be got over in two ways, either by lifting a few when severe frost threatens, and storing them in sand, or by covering a portion of the ground with a layer of manure, straw, or stable litter. The protection thus given will prevent the frost from making the ground so hard as to prevent the use of pick and spade.

Mushrooms.—The present is a capital time for making up Mushroom beds, as the spawn runs very freely in the autumn months just before the cold weather sets in. The proper preparation of the material is half the battle, and more than one failure is undoubtedly brought about by laxity in this direction. If sufficient horse droppings can be obtained from an adjacent stable to make up the bed these should be thrown up in a heap to heat, and a good turning and shaking over given every alternate day until the whole mass is heated through equally, and the rankest gases got rid of. It often happens, however, that the material for the bed has to be obtained a little at a time, and in such a case there is even a greater probability that some of the material will be spoiled before it is used. The manure should be under cover somewhere, or it will have a good deal of its goodness washed out by rain. A corner in an old cowshed, or a place partly sheltered by trees, may thus be turned to good account. Every time that a fresh barrowload of manure is added to the heap a good turning should be given, and the new material thoroughly incorporated with the old.

Lifting Richardias.—These have been rejoicing out in the open border all the summer, and although growth was very slow and rather weak during June, July, and the first half of August, since then they have more than made amends and are now strong healthy stuff. It will not do to drive off housing them any longer, as a few degrees of frost would result in crippling them for the season. We have been distinctly fortunate, indeed, in having been permitted to keep them out of doors so late as this, for in some seasons we get sharp frosts fully a month earlier.

As the plants have taken deep root, some little care will be necessary in lifting them, for the fleshy roots are tender and very easily injured. A digging fork with long tines will be required, indeed, we might say two of them, for large plants will need to be loosened all round, and two persons will be needed to lift them out. The loose soil may be removed by hand, and the small suckers, of which there are sure to be a few round the base of the stronger plants, should also be taken away.

The soil should consist in bulk of good fibrous loam, about a third of it being composed of leaf soil and dried horse droppings rubbed through a ½-in. mesh sieve. A sprinkling of coarse river sand may be added. The pots used will of course depend upon the size of the plants. For very large specimens a 10-in. pot may be required, although an 8-in. one will accommodate any ordinary plant, whilst the smaller ones by dint of a little squeezing will do very well in a 6-in. All the pots must be clean, and the drainage should be as good as the room allows. The most important point in potting is to see that the soil is well settled about the roots. As the balls are somewhat irregular in shape this is rather a difficult matter to do well. A large wooden label or a piece of thin lath should be used for working the soil down round the sides of the pots, and an occasional sharp tap upon the bench is of great service. Bearing in mind what thirsty subjects Richardias are, the pots should not be filled too full of soil. About a ½ in. of space is not a whit too much to allow. After potting, the plants will need especial care for a week or two until they recover themselves. Of course, lifting a plant now does not cause it to experience so severe a check as it does in the summer, when the atmosphere is so much drier and the sun such a deal brighter, but still it will be needful to shade the plants even from the October sun, which would cause them to flag. A pit or frame can easily be shaded and kept close, and the plants are not far from the glass, hence such a position is one of the best that can be given them. Do not commit the same mistake made by so very many people, some of whom ought to know better—viz., deluging the plants with water immediately after potting. If the soil at the time of potting was in a proper condition it will contain enough of water for the time being, and until this has gone, more need not be supplied from the watering-can. A light dewing over with the syringe will help to refresh the plants, and if given in the middle of a bright day will have all dried up before nightfall.

Berried Solanums.—It can now be seen which plants are worth potting up. Those which have set only a few berries or none at all being worthless. The berried plants may be lifted and potted up at once. A 6 in. pot will be quite large enough, and if the plants can be got into a 5-in. size so much the better, as the value of the plant for decorative purposes increases, as the pot it occupies becomes smaller. A little more leaf soil should be mixed with the compost than was given to the Richardias, and firm potting is highly important. After potting, the plants may receive the same treatment as the Richardias, although if it is possible to give them the stimulus of a slightly higher temperature for a couple of weeks, they will pick up all the quicker.

Heating Apparatus.—In greenhouses there is no artificial heat throughout the summer, but the need will be here ere long, for damp days and nights are almost as injurious as cold ones. The fire should be set going at once, in order to give the apparatus a good testing, and in view of defective joints or splits showing themselves they must be made good. There are very few houses now in which the old-fashioned flues are to be seen. If any of our readers, however, should chance to be so situated it may be well to remind them that mortar is very liable to crack away from the joints at times, and if any of these crevices are present when the fire is lighted during some cold night the house will soon be filled with sulphurous fumes that will do almost as much harm to the plants as the frost.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Clipping Yews.—It is not too late to clip your Yews, *Amygdalus*, although the sooner they are seen to the better. The trees look better when the trimming is done with a knife, although where appearance is not of such importance, the shears will be found to be more expeditious.

Pot Roses.—You may leave your pot Roses out of-doors until they are wanted for forcing without fear, *F. W. B.* While frost will not do the plants any harm it will be very likely to split or chip the pots. Towards the end of the month, therefore, the plants may be plunged deeply in ashes—the rims of the pots may be at least an inch below the surface. The plants may then be easily lifted in as they are required.

Suckers on a Filbert.—The suckers which you speak of as crowding the centre of the old Filbert tree, *G. Eltham*, are of no use for fruiting. They may be cut clean off close to the bottom, or broken out by a twist. Although they are of no value on the tree they will be of service away from it, for this kind of material makes capital plant stakes.

A good hedge Plant.—The Myrobella Pelum is one of the best hedge plants obtainable. You will be able to get it at a reasonable rate from any respectable nurseryman, *Arthur.*

Wallflowers may be planted in their flowering quarters as soon as you can get the chance now, *T., Trentham*—in fact, the sooner the better.

Leaking Pipes.—Instead of having the split in the pipes bound round with an iron band and caulked with red lead and tow, it will be better to make a clean job of it, and have a new length of piping put in. This will not cost very much more than the first mentioned plan, *Argus*, and will admit of a far neater job being made of it.

Fading tuberous Begonias.—Do not force the stems of your tuberous Begonias, *W.*, leave them to their own inclinations, or the tubers will suffer. The tubers keep well through the winter in the pots, but if you wish you may knock them out, shake away the old soil, and store the tubers in sand. The latter method certainly has the advantage of economising space.

Boarding Houses for Plants.—*Reader* has recently noticed a paragraph in a weekly contemporary to the effect that in certain parts upon the Continent there are established boarding houses for plants. Amateur gardeners who are called away from home for several days together, either on business or on holidays, can have their plants taken to these houses and cared for in their absence by skilled gardeners, for a trifle. This is much better than standing the plants in water or leaving them to take care of themselves, the result of such treatment usually being that the poor plants, if not killed outright, are spoilt for the time being. *Reader* writes feelingly, for on returning from a recent holiday he found the majority of his pot plants dead, although he had arranged with a neighbour to come in occasionally and look after them. Here is a good line for local florists and nurserymen with glasshouses.

Clerodendron fallax.—This pretty plant has been splendid in my conservatory for the last three weeks but now the greater part of the flowers has fallen, and the plant has lost the greater part of its leaves. Is it of any use for another year, or it is necessary to raise plants from seed each year?—*W. B. Royston.*

Seedlings raised each year usually give the most satisfaction, although the old plants may be turned to very good account if properly looked after. You may withhold water from yours, and thus keep it through the winter. Start it into growth early next spring, and give it plenty of heat. Cuttings may be taken when the shoots are 2 in. or 3 in. long. They root readily if placed in sandy soil with a nice bottom heat.

A VISIT TO DUNTREATH CASTLE.

Being in Glasgow and having a day to spare, I thought I could not do better than take a run down to see Duntreath Castle, one of the country seats of Sir Archibald Edmonstone. I had not for years visited this ancient residence of the Edmonstone family, which some five years ago the present Baronet restored, considerably enlarging and beautifying the Duntreath of former days, and giving place to an entirely new order of things; for with the exception of the old tower of the castle, there are comparatively few of the old land marks in the valley remaining; but Dumguac and Dumgoine Hills still stand sentry, and add materially to the beauty of the landscape.

Taking train by the Blane Valley Railway to Blanefield, the weather being all that could be desired on this lovely August morning, I arrived at the station after about an hour's journey.

On leaving the platform one is confronted by a private approach to the demesne, this having been made only recently and shortening the distance to the castle by about a mile and a half, which was a pleasant surprise, as the old turnpike road which leads to the principal entrance necessitated a considerable detour, besides depriving one of the lovely walk which now goes along the valley by the side of the stream from which the district takes its name.

I had not proceeded far on my road when I met Mr. Brough the head gardener, and on introducing myself and explaining the nature of my visit, he accorded me a very hearty welcome, remarking at the same time in a jocular strain that he was surprised that people from the south would come hunting for practical and up-to-date horticulture in a wild "Hieland Glen."

No time was wasted, for after a few remarks as to the natural beauty of the surrounding district, we passed on by the pond, which, at a turn of the drive, one comes upon quite unexpectedly. "This I found was teeming with trout, and the many water fowls which were sporting upon it, made one regret Mr. Brough was not the gamekeeper instead of the head gardener. To the rear of the pond the ground rises quickly, and with Sir Archibald's consent this has been thickly planted principally with Spruce Firs as shelter for the water fowl and also with the object of entirely changing the character of the landscape.

The hour being early when we got to the Castle enabled us to make a thorough inspection of the immediate surroundings without in any way interfering with the privacy of the family, which was at the time resident there, besides giving me more time to take notes for future reference.

The Flower Garden

Extends round two sides of the Castle, and the flower beds which are numerous and exceedingly well filled with plants, have a most telling effect, the arrangement being most pleasing to the eye (see illustration). There are some very fine examples of carpet bedding an scroll work, two of which were most noticeable having the family Coat of Arms as a design, I also noted eight very telling beds of Pelargonium, Henry Jacoby, and Flower of Spring mixed, edged with Lobelia speciosa, the latter planted thickly and resting gracefully on the grass, while Pelargonium Henry Jacoby flowered most profusely with very large trusses of blooms.

Another four beds which made a very pleasing combination, were made up of Hyacinthus candicans and Gladiolus brenchleyensis intermixed, with a ground work of pink Saponaria, edged with yellow Violas. Other examples were several beds of Lobelia cardinalis, and Red Orache, large beds of Carnations, Mrs. Muir and Raby Castle mixed, margined with Mimulus Harrisonii. As supports for the Carnations, Mr. Brough uses galvanised wire cut in lengths, twisted by some process which does away with all tying, the flower spike being twisted round this spiral wire; the idea is a good one, as the wire being so like the gray grass of the Carnation it is only noticeable on a minute examination. Another very effective bed which took the eye contained subtropical plants, with many of the Ricinus and Lavatera arborea 8 ft high. These were growing on a ground work of Red Orache which was kept pinched, and again margined by Scrophularia nodosa variegata, the whole finished off with an edging of Lobelia, Crystal Palace Compacta. Marguerites are extensively used both in beds and borders, one very novel telling arrangement in a long ribbon border, being a mixture of Marguerites and dwarf scarlet Scabious planted alternately.

As space will not permit of my noting here separately, all the features of this beautiful retreat, I must pass on to the other objects of interest

The Flower Garden, Duntreath Castle, Stirlingshire.

which my guide had kindly volunteered to show me, but as we left the lawn garden he pointed out a bed of Carnations that had taken ¾ cwt. of his wire stakes to support the blossoms that were regularly distributed over it. Wending our way by the woodland walk to the gardens proper, which are situated at a higher elevation than the Castle, the prospect is very grand, the whole being surrounded by an amphitheatre of hills, conical in form, which gives the impression that they are the result of some volcanic upheaval. One of these Dumguac, or "Cuckoo Hill," overshadowing the Castle, is clad with Oak and Fir to its very summit.

Passing through the garden gate we are again introduced to flower gardening, the lawn on either side of the pathway having large raised beds of Marguerites, each of which is 100 ft. in circumference and in the centre is placed fine specimen Yuccas; these are circled with Gladiolus brenchleyensis and Lobelia cardinalis, thickly planted to a radius of 5 ft. from the centre, the remainder of the bed being a mass of white Marguerites edged with Beet and yellow Violas. Other correspondingly large beds were filled with distinct varieties of dwarf Antirrhinums from a very fine strain of seed obtained from Messrs. R. B. Laird & Sons, Edinburgh, as was also a very fine large flowered white Candytuft which covered a large oval bed from amongst which shot up hundreds of spikes of Gladiolus brenchleyensis.

GLASS HOUSES.

Entering the glass houses, which are modern, the principal range being span-roofed, I noticed that the greater part was occupied by Vines and Peaches, there being four vineries and two Peach houses giving evidence that their requirements are thoroughly understood by those in charge, the Peaches being perfect in size and colour, and a magnificent crop. Proceeding through the vineries I was struck with the very heavy crops, also with the fruit, which was large, both in bunch and berry, and finishing well; but Mr. Brough assured me that the crop was no heavier than that carried for the past four years. The vine roots not yet being in full possession of the borders, Mr. Brough gives good surface dressings of both chemical and organic manures, his object in cropping to such an extent being to try and induce a more vigorous root action, which to all appearance he is attaining, as the borders were permeated with fibrous roots.

The conservatory was gay with Liliums and the usual autumn display, and in the Palm house I noticed several fine specimens of Kentia helmoreana and K. fosteriana 10 ft. to 12 ft. in height, all the picture of health; while looking round, one did not require to be told that only the best decorative sorts were kept. Along the roof was trained a very dark coloured variety of Bougainvillea glabra, and suspended from the roof there was a nice collection of Cattleyas, chiefly autumn flowering, which had thrown up numerous strong sheaths. In a house leading from this was a very fine collection of Crotons, Dracaenas, and such plants as are most serviceable for table decoration, this being a leading feature at the Castle.

Two wide span-roofed frames were full of Tomatos (the variety being Stirling Castle) carrying heavy crops, a third being full of Tuberoses grown in boxes. A Melon house that had furnished its crop was being used for forcing Tuberoses. Being favourite flowers of Sir Archibald and Her Ladyship they have to be grown in quantity for the autumn months when the family is resident, Mr. Brough assuring us that he always planted over 2,000 bulbs.

After going through the other houses and frames which were filled with miscellaneous lots of occupants, and which showed that every available space had to be utilised to provide the amount of flowers, etc., for the Castle, one could not but be struck with the admirable arrangement in all the different houses visited; also the clean and healthy appearance of the plants, which spoke volumes as to the care and attention bestowed upon them by my guide and his assistants.

KITCHEN GARDEN, ETC.

The same might also be said of the kitchen garden, which we next visited, as tidiness and order, prevailed everywhere; and here again we found the space heavily taxed to keep up the supplies required for such a large establishment, every available inch of the ground being cropped and double cropped.

Stone fruits such as Plums and Cherries in particular do remarkably well here, but Mr. Brough informed us he never had a full crop of Apples and Pears, the bulk of the varieties planted not being suitable to the district, but this fault is being remedied. We now approached on the upper level of the garden, the house of our guide, and which is in itself an object to admire, being clad with Clematis and Roses in great profusion, with a lovely sloping lawn in front, the uninterrupted view all round being something that strikes the visitor for the first time as being truly Scotch, surrounded as it is by such a picturesque landscape, backed by the commanding Fir-clad summits of the hills.

There are many more objects of interest at this beautiful retreat that one could write upon had time and space permitted, but trains, like time, wait for no man; therefore we had reluctantly to make arrangements for our return, and after thanking Mr. and Mrs. Brough for their courtesy and hospitality, deeply impressed and charmed with what we had seen at Duntreath, we resumed our journey northwards.—*J.H.M.*

FRUIT AND VEGETABLE CROPS IN EAST DEVON.

THE past season has been a very trying one for the above, especially where the water supply was short, and fortunate was the gardener who had a good supply and labour to put it on.

FRUIT.

I will take the Apple first, as no doubt it is the most useful fruit grown for one and all. I am sorry to say they are not nearly so plentiful as we were led to hope at the flowering time. I think the hot dry weather during April, and May had someting to do with this, as the young fruit dropped off wholesale soon after the setting period, and the maggot played sad havoc with the remaining crop; specially was this the case in orchards. The following are the best with me:—Kerry Pippin, King of Pippins, Ribston Pippin, Scarlet Nonpareil, Early Nonpareil, Court of Wick, Cox's Orange Pippin, and Lord Burghley.

Pears in general are carrying good crops such as Marie Louise, Beurré Bosc, Beurré Diel, Beurré Hardy, Pitmaston Duchess, Hessel, Duchesse d'Augoulême, Van Mons, Leon Leclerc, Huyshe's Prince of Wales, and Fondante d' Autômne. Strawberries were an excellent crop here. President, Noble, Sir Joseph Paxton, Royal Sovereign and Eleanor all carried extra fine fruit. I ought to add they were well watered and mulched. Gooseberries and Currants, were very heavy crops, with the exception of Black Currants, a quantity of which dropped off owing to the continued drought. Raspberries were also a good crop, Superlative being the best and holding on the longest. Apricots were a poor crop, as they did not set well. Cherries against an east wall carried good crops; also Morellos on a north wall. Peaches and Nectarines on our east wall were not so satisfactory as I could have wished; some of the trees carried heavy crops, while others close by were very scanty, owing, I think, to the cold east wind that was prevalent when the trees were in flower, which evidently had disastrous effect on some varieties more than others.

VEGETABLES.

Vegetables were at a minimum as soon as the effects of the dry weather was felt. The early Peas were very good, Exonian and Veitch's Early Marrow being well filled; also Duke of Albany sown at the same date (January 31st) but the mid season crops were the worst I ever had. The little yellow thrip smothered the bine and crippled the growths, and several long rows were worthless in spite of a thorough soaking of water twice a week. The later crops looked promising in August, but the month of September was far too wet and dull for them; the pods have not swelled up at all nicely. Cauliflowers were and are now very good. Sutton's Michaelmas White Broccoli are excellent just now. Lettuces were very scarce during June and July, as well as good Turnips. Onions were the best crop I have had during the past five years. Broad and Runner Beans have done well here in spite of dry weather; so has Carrots, Beet, Parsnips, &c. Potatos are not such good crops as last year, in garden or field. Early ones were good, but later crops, after the rain towards the end of August, began to grow out; especially is this the case with Magnum Bonum. All the Brassica crops look clean and healthy now.—*Bicton.*

COLLECTIONS OF DUTCH BULBS.

MR. BENJAMIN SODDY, seed merchant and bulb importer, 243, Walworth Road, London, S.E., sends us two boxes of bulbs as samples of what he has in stock, and with which he is supplying his customers. The seven-shilling box contained twelve single named Hyacinths of the first size, including such standard varieties as Charles Dickens, La Grandesse, Mont Blanc, Queen of Hyacinths, Lady Clinton, etc. It also contained twelve Hyacinths of the second size in mixture; and judging by their appearance many of them would flower handsomely, being plump and solid. Here also were four dozen corms of four named varieties of Crocus, such as Large Golden Yellow, striped Crocus Sir Walter Scott, purple Crocus purpurea grandiflora, and white Crocus Theba, all of the first size and in excellent condition. Thus there were six dozen bulbs in the box, and Mr. Soddy assures us they were in no way specially selected.

The five-shilling box contained a collection of 270 bulbs, and would possibly meet the requirements of a larger number of people having small gardens. The "B" collection is forwarded carriage paid, and we should think constitutes very good value for the money. The great variety of flowers obtainable from these bulbs in their season certainly makes a bid to please the taste of a wide circle of flower lovers. The box contained twelve Hyacinths, choice mixed, twelve mixed Daffodils, twenty-five Golden Yellow Crocuses, twelve mixed double Tulips, fifty choice mixed Crocuses, six Pheasant's Eye Narcissus, six sweet-scented, double white Narcissus, twelve choice mixed single Tulips, twenty-five finest mixed Spanish Iris, twelve Star of Bethlehem, twenty-five Winter Aconites, twelve Scilla sibirica, twelve Muscari botryoides, twenty-five Snowdrops, twelve Turban Ranunculus, and twelve finest mixed single Anemones. As will be seen, all of the above are perfectly hardy, and may be planted out permanently in various parts of the garden, where they should continue to thrive and increase from year to year, with a moderate amount of attention such as the interested amateur who loves his garden is well able to give. The Ranunculus and Anemones would perhaps take more attention than the rest to get them thoroughly established, but the great bulk of the bulbs are easily manageable.

HERBACEOUS PLANTS FOR EXHIBITION.

THE discussion between *Coila* and *Plantsman*, that has been carried on for the last few weeks in the columns of THE GARDENING WORLD, seems to have really centred around the inclusion or non-inclusion of Lilies in a group of hardy herbaceous plants. On p. 43, *Coila*, in reply to *Plantsman*, says that, "one reason why he objects to the inclusion of Lilies in hardy herbaceous collections is that in most cases they are grown in pots and flowered under glass." This, of course, is true enough, as far as it goes—Lilies are grown in this way in enormous numbers—but the inference that it is a common practice amongst cultivators, who are in the habit of exhibiting collections of hardy herbaceous flowers, to obtain their material from pot plants is, I think, distinctly unfair to these men who are, on the whole, honest and straightforward. There are black sheep in every flock, but horticulture claims, if anything, less than the ordinary number of such undesirables.

In the same article *Coila* goes on to say "who can tell whether they (the Lilies) have been treated as pot plants or cut from the open border"; and a little further down says it is annoying, etc. to see such flowers "when it is perfectly well-known that they have been flowered under glass." Now if we accept the first statement that it is impossible to tell how the flowers have been obtained, it is manifest that only an ocular demonstration could furnish the information, and in the event of such evidence being forthcoming I am inclined to think that decisive action would be taken by any floral committee. I see no reason why Liliums should be excluded, although, if they are to be, a clause should be inserted to that effect in the schedule. In addition to the Liliums mentioned by *Plantsman* on p. 28, I should vote for L. Hansoni one of the prettiest species we have. Probably the price asked for it is prohibitive, although the beauty of the reddish orange flowers is sufficient to compensate for this. L. Dalhansoni is also well worthy of attention.

Passing on to some of the subjects mentioned hy *Plantsman* I find Statice latifolia and S. Gmelini, both of them almost indispensible. Gypsophila paniculata spoken of by *A. P.* in a recent issue is one of the few herbaceous plants that I should imagine would find a place in almost any collection towards the latter end of the summer. I am surprised that none of your other correspondents have mentioned it. Bocconia cordata is very telling as a hack row subject, and the tall growing perennial Phloxes are a host in themselves. Several hunches in different colours may well find room in a fair sized exhibit. Given a fair season Phloxes are not only some of the showiest suhjects that can be placed upon the exhihition hoards during July and August, but they are of the greatest value in the garden. During the early part of July, too, it will be possible to cut a few bunches of Delphiniums, than which there is no statelier flower for the show table. Centranthus ruber, the Red Valerian, must not be forgotten. The white form of it is not so telling as the type, hut may well be grown for the sake of variety. Galega officinalis is a charming plant, and the form compacta is an improvement upon it in every way.

Tropaeolum polyphyllum has not been mentioned. If grown in a warm dry spot it flowers most profusely and always attracts a deal of admiration. Some of the Verbascums are eminently suited for a place in the back row. V. olympicum with its huge candelahra-like inflorescence of large yellow flowers can scarcely be passed over. V. nigrum, which is scarcely so tall and is darker in hue is another pretty species, for the mention of which no apology need be made. Of the members of the genus Campanula there are several that claim our attention. C. latifolia, and its white form, C. l. alba, C. persicaefolia, C. p. alba, C. p. alba fl. pl., and C. pyramidalis must all be included in a fairly representative list, in addition to all those plants that have been mentioned hy your various correspondents.—*Bucks.*

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE tenth anniversary dinner of this thriving society was held on the 7th inst., at the Holhorn Restaurant, London, under the presidency of W. J. Nutting, Esq., supported by 107 members and others mostly connected with the gardening profession in some way or other. Amongst others present we noted Sir Clarence Smith, Messrs. James H. Veitch, W. Y. Baker, Baker, Jun., Nathan Cole, Joseph Wheeler, A. F. Barron, H. J. Laing, G. J. Ingram, H. B. May, Geo. Wythes, R. Cannell, J. G. Veitch, W. G. Cummins, James Hudson (treasurer), W. Co'lins, (secretary) 9, Martindale Road, Balham, S.W., and others.

After the toast, "Her Most Gracious Majesty The Queen," was duly proposed by the chairman and loyally rendered, the chairman rose later on and proposed the toast of the evening, "The United Horticultural Benefit and Provident Society," which he had great pleasure in doing, and congratulated the memhers on its continued success. As the annual report was placed before everyone present, it was quite unnecessary for him to detain them by going into all the details of the same as they could peruse it at their leisure. The society was started in 1865, and five years later consisted of only forty-two members. Now, it had a membership of 651. Since the dinner last year there had been an addition of seventy members, leaving a nett gain of fifty after the lapse of eighteen and the death of two. For some years after the establishment of the society, the invested funds were very small, but now they exceeded £10,000 as could he seen by reference to the halance sheet. The society was still open to receive more memhers, and he appealed to all concerned to assist in this matter; for notwithstanding its great success the society was still unsatisfied. The speaker in the name of the society acknowledged the assistance which had been rendered by the press. As proofs of the deserving nature of the institution upon the claim of gardeners, he said that in looking through the books of the secretary, he had observed that one old gentleman of seventy had received £82 10s. from the funds of the society, although the said gentleman had only paid £57 6s. 9d. into them.

The society had another good claim upon the generosity of its supporters, inasmuch as it had a convalescent fund by which those memhers requiring its aid could be sent away to recruit their health at a convalescent home. This fund had been originated by their good friend Mr. Sherwood, who had continued his donation of five guineas towards it. The weekly deposit of 6d. was a small matter in consideration of the fact that it secured 12s. weekly in case of sickness; and a weekly payment of 9d. would secure 18s. under similar circumstances. Before concluding he said that the secretary was always begging in the good cause, and always ready to receive the names of new honorary members. He would couple this toast with the name of Mr. James Hudson.

The latter in rising congratulated the chairman for the terse way in which he had laid the claims of the society before those assembled. He believed in the motto that "Union is Strength," and was of opinion that by the aid they rendered to gardeners, they assisted in relieving both the Gardeners' Royal Benevolent Institution and the Royal Gardeners' Orphan Fund. These remarks, followed by the statement that the society had been able to raise the allowances to sick members without increasing the premium, elicited warm applause. The great success of the society dated from 1884.

Mr. Nathan Cole proposed the "Honorary and Life Members and Visitors," and said that the honorary members deserved this recognition, inasmuch as the society was very largely dependent upon their generosity for its present high position; and that they did this without any chance whatever of receiving benefit. The society had on its list distinguished honorary members, and they and the life members had joined the society because they saw that it was on a sound basis. He remembered the first dinner and was greatly pleased with the continued success of the annual festive gathering. He coupled with the toast, the names of Sir Clarence Smith and James H. Veitch, Esq.

Sir Clarence Smith in rising, explained in a humorous way that his speech would he brief in accordance with those who had preceded him. He was pleased to be an honorary member, and took that advantage to speak in favour of the society. Concerning the invested funds, he said that they were well looked after by able and competent trustees who took care that the investments were made upon perfectly reliable, safe and profitahle stocks. Their value in fact continued to increase. If he were a gardener he would certainly belong to such an excellent institution. James Herhert Veitch, Esq., said that it had given him great pleasure to come once more before them. He was an honorary member, but was surprised that such members had not increased more rapidly than they did. If the society continued to treat all members as it did, the number of honorary supporters was bound to increase. Gardeners deserved more support on the ground that our gardening reputation was due to their skill and ability.

H. B. May, Esq., proposed "The Chairman." The society had been fortunate in securing the services of such a man as Mr. Nutting on this occasion. The latter had long evinced a kindly feeling towards the society. In the horticultural world he was known as the most kind and generous of men. In a brief speech the chairman thanked all for the kind way in which they had received him, and before sitting down he had the pleasing announcement to make that Mr. May had consented to preside at the anniversary dinner next year.

Mr. Joseph Wheeler proposed "The Press," which had taken a great interest in the society, and had given notices which helped greatly in forwarding the interests and success of the society. The press was a powerful organ, and the horticultural press had lent the greatest amount of assistance. He coupled with the toast the name of Mr. Geo. Gordon. He was pleased that the society had now taken its proper place in aiding the wants and claims of its members. The United Horticultural had been the first to admit horticultural journalists to the benefits offered to other members. It was the duty of the press, therefore, to assist the society and its horticultural members, as well as instruct them.

Mr. W. Collins proposed "Thanks to Donors of Fruits and Flowers," coupled with the name of Mr. Harry J. Laing, who briefly returned thanks for the compliment accorded him. With some more songs, musical and other entertainment carried on under the direction of Madame Marie Belval, the programme was almost concluded, when the chairman rose and proposed "The Secretaries" of all the three thriving horticultural help and charity institutions—namely, Mr. W. Collins, Mr. A. F. Barron, and Mr. G. J. Ingram, all of whom were present. Mr. Ingram replied on hehalf of the Gardeners' Royal Benevolent Institution; Mr. Barron on behalf of the Royal Gardeners' Orphan Fund; and Mr. Collins for the United Horticultural Benefit and Provident Society. The singing of "Auld Lang Syne" brought a pleasant and highly-enjoyable evening to a close.

LECTURES AT THE FRUIT SHOW.

(*Continued from p.* 93).

THE CIDER AND PERRY INDUSTRY.

A MOST exhaustive paper on this subject had heen prepared by Mr. C. W. Radcliffe Cooke, M.P. for Friday, October 2nd. Mr. George Bunyard again presided, Sir Trevor Lawrence being kept away by ill health. The attendance was fair, but not so good as on the preceding day.

In his opening remarks Mr. Radcliffe Cooke rapidly sketched the past history of cider and perry making as an industry, referring to its former important popularity, and the period of decadence which immediately succeeded it. In Herefordshire, his native county, the industry had found one of its chief centres, a fact that was attested by the multitudes of old trees, many of which were in hearing still. The orchards of Herefordshire in past centuries had covered enormous areas, and Dr. Beale, who wrote in the 17th century, describes them as heing a pattern for all England. Evelyn, who lived later on in the 17th century than Dr. Beale, speaks of the whole of Hereford as being one vast orchard. The quality of Herefordshire cider was also famous, for it was said that Charles I., and such of his friends as accompanied him, protested their preference for the cider of the county to the best wines of the day. During the French war the industry declined, owing, doubtless, in great measure, to the thin, doctored stuff which was spread abroad in great quantities instead of the genuine. Still, the soil and the climate were the same, and the orchards were there, although perhaps in many cases in a state of neglect, and there was no reason why the industry should not be revived. Indeed, he regarded it now as being the only agricultural pursuit capable of development to an almost unlimited extent, and one that was not endangered by foreign competion—the only one in fact that looked hopeful.

The chief cider producing counties, continued the lecturer, are Devon, Hereford, Somerset, Worcester, and Gloucester. The acreage of orchards in these counties in 1894 was 115,045; and in 1895, 116,192; being an advance in one year of 1,147 acres. Cider is also manufactured in Cornwall, Dorset, and S. Wales. The whole area under orchards in this part of the country was 140,000 acres, when, if we subtract one fifth of this amount as an allowance for orchards planted with other views than that of cider making, we get a net area of 112,000 acres. The yield of cider per acre is variously estimated; some putting it at 200 gallons, the price per gallon to the producer being 3d. This he thought was too low, and 300 gallons per acre, at 5d. per gallon, would be somewhat nearer the mark. This would work out at a total of about £700,000 annually. In former times it was common for one farmer to sell fifty hogsheads at ten guineas each, from 100 to 110 gallons going to each hogshead.

Mr. Radcliffe Cooke then turned the attention of his audience to the making, proper, of cider. Cider, he said, was the expressed and fermented juice of the Apple; and perry the expressed and fermented juice of the Pear. Perhaps his audience might think it was scarcely necessary for him to tell them this, but there were very many people who did not know what perry was, amongst them heing an M.P. of his acquaintance who had recently pleaded ignorance upon the subject. Not all varieties of Apples were suitable for the manufacture of cider. A good cider Apple was too astringent, and had too much tannin in its composition to be palatahle for dessert. The *modus operandi* was briefly touched upon hy saying that the fruit was crushed hy rollers, the pulp passed through hair or Manilla cloths, and afterwards allowed to ferment. The last named process is the most difficult in the whole of the manufacture, as the quality suffers if fermentation is either delayed or continued for too long.

Two systems of manufacture have sprung out of the various endeavours to obviate this difficulty. The first is the more natural one, the fermentation being checked when it had gone far enough, the bottled off liquor retaining much of its natural sweetness, with a very low alcoholic percentage. By the second method the liquor was fermented nearly to "dryness," the whole of the sugar being converted into alcohol. Thiswasthe easier method, but both have thetr votaries.

He recommended cider to all as a natural, pleasant, and refreshing drink of low alcoholic strength. Dry cider would contain about ten per cent. of alcohol, but ordinary sweet cider rarely contains as much as four per cent. The latter, therefore, he considered to be a temperance drink, and preferable to all so-called temperance drinks, as it contained less alcohol. (A voice, No, No). The lecturer then went on to detail the medicinal value of cider, which, by all accounts, uncommonly resembles a box of patent pills; in that it is a remedy for all the ills to which flesh is heir. It was good for gout, because the malic acid it contained, did not form precipitates of lime or chalk, as did the tartaric acid of wine. It was good for cholera and diarrhoea, and according to an article recently appearing in the *Lancet*, it is possessed of the faculty of prolonging, and yet intensifying digestion. The people of Hereford were among the longest livers in the country, of course, because they drink so much cider. Here the lecturer proceeded to emphasize his remarks by taking a draught of the wondrous elixir himself.

Proceeding, the value of cider Apples was stated to be from £5 to 30s. per ton, whilst good varieties will fetch from 5s. to 6s. per cwt. Perry made from some varieties of Pears, as, for instance, the Longman, was almost indistinguishable from cider.

With regard to the threatening nature of American competition, Mr. Radcliffe Cooke believes it to be pure "bluff." English cider was of better quality than American, and he adduced cases of where the imported stuff had been refused when it was substituted for English. He had obtained the latest returns from the Board of Trade about this matter, and they certainly did not tend to show that the import trade was on the increase. In 1893, America sent us 537,000 gallons, and we received about 20,000 gallons from other sources; 1894, 409,000 gallons came from America; in 1895, 579,000 gallons, and in 1896, up to August 21st, 246,881 gallons. A comparison of these figures would tell its own tale.

Meanwhile, he should strenuously advise the renovation of the orchards, as many of them were in a bad state. Forty years ago, French orchards were in a deplorable condition, but the state came to the assistance of cultivators. The eradication of insect pests was another important point. Greasing the trees in autumn, and spraying them in spring, should be practised extensively, although it was of not the slightest use for one cultivator to do it, if his neighbours did not. There must be concerted action. In Tasmania, laws were passed to compel cultivators to take the necessary steps to keep their orchards clean; also in Germany, where inspectors were sent round every two or three years, and the delinquents fined heavily. It would be well if like measures were taken in England.

Instruction in the science underlying the practice of cider making should also be given, and he should recommend the establishment of two fruit farms, stocked with the necessary plant; one in Hereford, and the other on the borders of Devon and Somerset. At present, the question of distribution was a serious drawback, for railway rates generally were so heavy that they cost the consumer from 4d. to 5d. per gallon. He thought that the state should acquire the canals, and work them to the public advantage.

Mr. Radcliffe Cooke concluded a most interesting lecture by inveighing very strongly against adulteration. He would have all adulterated stuff declared upon a label attached to the bottles.

In the discussion that followed, Mr. Watkins, and Mr. Gaymer, both well-known in the cider industry, added their testimony to the value of the lecture, and gave some interesting facts of their own experience. In answer to a question by Mr. A. Dean, the lecturer said that cider was not at present an excisable article. Mr. Dean also condemned the sweeping assertions that had been made as to the presence of alcohol in aerated waters, as they were totally erroneous.

PLEROMA ELEGANS.

This, although a native of Brazil, and often treated as a stove plant, succeeds better in a warm greenhouse; and during the summer months, well established plants are better in the open air. This is one of the most beautiful of tender stove and greenhouse plants, known. Its large glossy purple flowers are of a colour possibly unequalled by anything among the many beautiful shrubby plants in cultivation. Introduced in 1842, it was for a long time a very popular plant with exhibitors in the palmy days of specimen plant growing. Its culture is very simple, as it roots as easily as a Pelargonium from half-ripened shoots during July. The cuttings succeed best inserted singly in small pots well drained and filled with a mixture of peat, loam, and sand, passed through a fine sieve. Cover with a bell glass, keep moist and shaded; and an ordinary hot bed is the most suitable place for the operation. Here they will root in a few weeks; after which remove the bell glass, and pinch out the points of the shoots to induce side growths, and subject them to greenhouse treatment during the winter. The following summer place out of doors, where they will be shaded from the mid-day sun. As they grow, give when required a shift into larger pots, using a mixture of fibrous peat, good yellow loam and coarse silver sand. Plants in from 8-in. to 10-in. pots are large enough for general purposes, and with a view to this, a stock of fresh plants should be propagated every other year at the least. With this treatment they are generally pretty free from insect pests, and will bloom freely from nearly every shoot. A nice well-grown plant of this is, when in flower, second to none of a similar character in cultivation.—*W.B.G.*

GARDENING MISCELLANY.

PEAR BEURRE HARDY.

I was pleased to see your able correspondent, "Mr. Stogdon," writing so highly of this variety. I, too, can vouch for its fine flavour. I have one tree on the Cordon principle in the open, which has carried an excellent crop of very fine fruit that was in use the third week in September. I don't know its origin, though, if my memory serves me right, I have heard we are indebted to the French for its introduction, as we are for a host of other good varieties.—*Bicton.*

BEGONIA GRACILIS MARTIANA.

A correspondent sends us a flowering spray of this old fashioned Begonia, the typical form of which was originally introduced from Mexico in 1829. He received it from Scotland and considers it well worth growing, and with that we agree. The flowers are produced in small clusters all along the stem, and a large proportion of them being open at the same time, they are very effective. The colour is a rich rose fading towards the centre of the flower. The green stems are slender, upright, green, and bear a cluster of small bulbils in the axil of each leaf, by which the plant may be propagated to any extent. The bulbils are so small that they may be sown like seed, and the plantlets grown to flowering size. The variety B. g. martiana differs from the type in having much larger and more showy flowers. The leaves are small, bright green and shining, and add to the gracefulness of the plant.

SOME GOOD DECORATIVE DAHLIAS.

Cactus Dahlias have been taken up by Dahlia growers so enthusiastically of late, and we have, as a result, so many charming varieties from which to pick and choose that a reconsideration of the points which should belong to a true Cactus variety was necessary. In consequence of this many varieties have been relegated to what is known as the "decorative" section. This class of flowers lacks the narrow pointed, and involute or revolute floret of the true Cactus form, but is possessed of no mean share of beauty and usefulness. A boxful of decorative Dahlias recently forwarded us by Messrs. Townsend Bros., Bloxham, Oxon, well merits a word of commendation. Several forms, including rosy-magenta, orange-buff, and pale amaranth flowers, were of considerable merit. Naturally, the season is too far advanced to expect very large blooms, especially when we take into consideration its unfavourable character, but still in point of size the blooms were fair. The varieties in question are stated to be very free flowering, and of fixed character, having been thoroughly tested for three years. A somewhat striking single form accompanied them, the petals of which are white, edged with old gold.

ORCHID PEAT.

The character and quality of Orchid peat is determined by the amount of fibre it contains. Various plants other than Orchids are potted in peat of a variable nature, but that for Orchids must leave little room for variation, otherwise there would be a great waste of material by the picking out of the fibre. A very fine sample has been sent us by Messrs. Wood & Son, Wood Green, London. It consisted of a cube whose side was 4½ in., and this seemed to have been cut by a knife or other sharp instrument, for the sides were perpendicular and the angles quite sharp. The whole piece consisted of an interlacing mass of fibres, mostly Bracken roots, so much in request for this kind of work. When this is broken up, there cannot in the nature of things be much waste, that is, the loose material when the roots are shaken out must be small in quantity. The lightness of the mass also furnished evidence of the small quantity of earthy matter present.

BEGONIAS AT LEIGHTON BUZZARD.

Until quite recently a fine display of tuberous Begonias might have been seen at Holmeside, Leighton Buzzard, the residence of Edward Edwards, Esq., who grows many thousands of them. In the garden behind the house were some thousands of double varieties. Some excellent samples of selected ones grown under glass we have also seen. The single varieties were grown in a field in front of the house, quite close to the main thoroughfare leading to Woburn. Many of the varieties grown here might very well be considered as approaching perfection, each according to its kind. Flowers of a great variety of types might have been seen—flat, perfectly circular, serrated, fringed, crimped, and beautifully wavy, as well as the smooth-edged types. Richly-coloured flowers varied from pure white to the deepest velvety-crimson and nearly black. Wayfarers going to and from the old market town had no difficulty in getting a full view of this gorgeous display of tuberous Begonias set out by Mr. Edwards.

AN ELECTRIC FARM.

Though experiments in the growth of vegetables have been conducted at several of the experiment stations in the United States, the first farmer to turn it to practical account was Mr. Thomas Fleming, of Jones River, New Jersey. His farm consists of fifty acres of land lying on either side of a stream flowing into the river. He dammed the stream at three points and put in turbine wheels, by which the electricity was generated. From the power house moveable cables ran to the greenhouse and other points on the farm. Electric motors attached to the cables worked a plough which turned over six furrows at a time. The plough was procured from Vienna. Rakes, harrows, reapers, and mowers are worked by these motors, which receive the current from overhead and ground wires which run in all directions over the farm,

Sowing and the spreading of fertilisers are effected in the same way. Wire netting, heavily charged with electricity, is dragged over the ground and between rows of plants, so that the ground is kept clean of weeds in this way. Horses are not required at all. The greenhouse is kept lighted at night by electricity, and by the sun during the day. Amber globes to the lamps prevent injury to the plants. Other houses are also lighted by this means. Wires buried at a depth of 2 in. in the soil, supply a stimulus to the growth of the plants, independently of the lamps

Lettuce, Spinach, Radishes, and other subjects are raised in this way, and are said to be matured in half the time. The Radishes attain a large size. Flowers had their petals injured by the light at first; but the glare of the lamps was toned down and softened till perfectly harmless. Nevertheless, the flowers are said to last for a shorter period of time than those reared in the ordinary way, though they are larger, more brilliant, and answer the purpose of decoration under artificial light during the evening.

As soon as the seed is sown, the current is turned on the underground wires, and germination started, and the process of hastening carried on till the crop is ready for harvesting. The production is 50 per cent. greater than under ordinary circumstances. Cabbages have been produced 2 ft. in diameter, Lettuces 3 ft. high, and egg fruits six pounds in weight. The daily working of the farm in this way costs less than the board of four horses. The initial cost of the machinery, etc., was £5,000.

SOCIETIES.

ROYAL HORTICULTURAL.

THE principal features of the meeting on Tuesday last, were Orchids, Chrysanthemums, Dahlias, Ferns, perennial Asters and fruit.

One of the most striking and attractive features of the meeting was a huge plant of Vanda sanderiana bearing eleven huge trusses of bloom, each truss having eight to twelve flowers. The taller stems were 2 ft. to 3 ft. long, and the bottom filled up with young ones. The plant was originally introduced by Messrs. Hugh Low & Co., Clapton, who sold it to Gurney Fowler, Esq. (gardener, Mr. Davis), South Woodford, who has now flowered it for the second time. A Gold Medal was accorded this superb exhibit, the biggest plant in the country.

Messrs. J. Veitch & Sons, Chelsea, staged a fine collection of Orchids, amongst which we noted a group of Cattleya labiata, also nice pieces of C. dowiana aurea, C. Mantinii, C. wendlandiana, Laeliocattleya Eunomia and L. Nysa, the two latter being showy bigeneric hybrids. The Cypripediums here were also very fine, and included large pieces of C. oenanthum superbum, C. insigne montanum, and C. Charlesworthii. A large piece of Dendrobium glomeratum was well-flowered (Silver Flora Medal).

Messrs. B. S. Williams & Son, Upper Holloway, set up a collection of Orchids neatly furnished with Palms and Ferns. Vanda Lowii was, perhaps, the most interesting on account of its two forms of flowers. Fine also were Vanda tricolor superba, Cattleya labiata, Oncidium Forbesi, O. ornithorhynchum album, Cypripedium punctatum violaceum, and several others (Silver Banksian Medal).

Messrs. F. Sander & Co., also staged a mixed collection of Orchids, including showy pieces of Vanda caerulea, Cattleya labiata, Laeliocattleya the Hon. Mrs. Astor, Habenaria Susannae, and a large well-flowered piece of Dendrobium aureum. Graceful though not very showy was the panicled Epidendrum profusum, with its small creamy and purple flowers (Silver-gilt Banksian Medal).

Messrs. Hugh Low & Co., Clapton, set up a collection of Orchids, including five pieces of Cypripedium Charlesworthi, one of which named C. C. Low's var., had a dorsal sepal of enormous size and other segments in proportion. Cattleya labiata and C. dowiana aurea were also shown, the latter being very fine (Silver-gilt Banksian Medal).

E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Wilnslow, Cheshire showed the beautiful C. labiata Mrs. E. Ashworth. Odontoglossum Uro-Skinneri album was exhibited by De B. Crawshay, Esq. (gardener Mr. S. Cooke), Rosefield, Sevenoaks. Cattleya dowiana Wheatley's var., was shown by Frederick Wheatley, Esq., Ringmore, Teignmouth, Devon.

Cattleya Countess of Derby, C. Princess of Wales, and C. bicolor caerulea were exhibited by Thos. Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, Manchester (Silver Banksian Medal). The beautiful orange-flowered Comparettia speciosa was exhibited by A. H. Smee, Esq. (gardener, Mr. G. W. Cummins), The Grange, Wallington. A cultural commendation was accorded to J. C. Ramsden, Esq., J.P. (gardener, Mr. A. Nash), Shamley Green, for a fine piece of Vanda caerulea.

A Silver Flora Medal was accorded to C. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming, for a collection of hybrid Cattleyas and Laelias. Laeliocattleya T. W. Bond, Cattleya Triumph, C. Jupiter and C. Fabia were very bold and distinct forms.

Messrs. Barr & Son, King Street, Covent Garden, sent a very nice group of hardy cut flowers considering the time of year, including Chrysanthemums, perennial Asters, Gladioli, Aconitum autumnale Astrantia major, etc., in first class condition (Bronze Flora Medal).

A collection of perennial Asters, sent by Mr. E. Beckett, gardener to the Rt. Hon. H. A. Aldenham, Aldenham House, Elstree, was one of the most noteworthy displays in the hall. The collection was most comprehensive, all the leading forms of horticultural merit being on view. A. cordifolius elegans, A. c. Diana, A. diffusus horizontalis Coombe Fishacre, A. puniceus pulchellus, A. vimineus, A. Amellus bessarabicus, A. Novi-Belgii densus, and A. Andromeda are a few of the best (Silver Gilt Banksian).

Four superbly coloured specimens of the Knap Hill Scarlet Oak were forthcoming from Mr. Anthony Waterer, Woking.

A miscellaneous group of cut flowers and ferns was set up by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., Chrysanthemums, Phœbus, Red Warrior, and Rena Dula, the last named a new variety, were well shown here; also Nerine corusca major and N. corusca Mr. F. Fell (Bronze Banksian Medal).

Chrysanthemums were but sparsely represented. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, had a couple of dozen large blooms, amongst which excellent samples of Queen of Buffs, Thomas Wilkins, Phoebus, and Reine d'Angleterre were to be seen (Bronze Banksian Medal).

Cut Roses were well shown by Messrs. Frank Cant & Co., Colchester, many of the blooms giving no evidence of the fact that the ordinary Rose season has now gone far from us. Souvenir de la Malmaison, Climbing Niphetos, Captain Hayward, Gustave Regis, and Mrs. R. G. Sharman Crawford, were some of the finest samples (Silver Banksian Medal).

Dahlias made yet another effort to outlast themselves, and the collection sent up by Messrs. J. Cheal & Sons, Crawley, Sussex, contained a quantity of first-class material. Such Cactus varieties as Kentish Invicta, Earl of Pembroke, Mrs. Turner, Cannell's Velvet, and Delicata, were grand samples. Pompon and single sorts were also good, and a couple of dozen fine blooms of show and fancy sorts were included (Silver Flora Medal).

Seedling Pernettyas and Spiraea Anthony Waterer were shown by Mr. Anthony Waterer, and some superb trusses of flowers of the ever-popular Cannas were contributed by Messrs. H. Cannell & Sons, Swanley, Kent. A plant of Chrysanthemum Vice-Admiral N. Kashnakoff and ten other large blooms likewise came from the same firm. Hardy cut flowers were shown by Messrs Young & Dobinson, Holmesdale Nurseries, Stevenage, Herts.

A group of small perennial Asters in pots was sent by Mr. Hudson, gardener to the Messrs. de Rothschild, Gunnersbury House, Acton (Bronze Flora Medal).

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, staged a superb batch of Adiantum farleyense. The plants were characterised by a robustness and vigour, but too seldom seen. A basketful of the pretty winter-flowering Begonia Gloire de Lorraine was also exhibited by Mr. May (Silver Banksian Medal).

Mr. Geo. Prince, Longworth, Farringdon, Berks, showed an ornamental stand of cut Roses, the blooms being in excellent condition.

Mr. Robt. Owen, Maidenhead, had cut Chrysanthemums; and Mr. Charles Turner, Slough, a few bunches of Pompon and Cactus Dahlias.

Fruit and vegetables occupied a good portion of the table space, for although the exhibits were not numerous several of them were of great size.

The most important of these, both with regard to size and the quality of the material composing it was undoubtedly contributed by Mr. Empson, gardener to Mrs. Wingfield, Ampthill House, Bucks, for which a Gold Medal was deservedly awarded by the committee. Grapes, Apples, Pears, Melons, Medlars, Capsicums, and nuts of all sorts were represented in strong force. Some gigantic specimens of Sutton's Autumn Mammoth Cauliflower, Ailsa Craig, and Jubilee Onions appeared amongst the vegetables to which were added Tomatos, Carrots, Turnips, Brussels Sprouts, and Potatos, the whole forming one of the finest exhibits of fruit and vegetables ever seen within the walls of the Drill Hall.

A Silver Gilt Knightian Medal was awarded to Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford, for 150 dishes of fine Apples and Pears. Of the former Golden Noble, Peasgood's Nonsuch, Lane's Prince Albert, and King of the Pippins, were excellent samples; whilst Beurré Diel, Pitmaston Duchess, Beurré Clairgeau, and Durondeau, were some of the best Pears.

For the special prizes offered by Messrs. J. Veitch & Sons, at each meeting for the best flavoured Apple, and the best flavoured Pear, there were a goodly number of competitors. In the Apple class, Mr. G. Wythes was placed first with Cox's Orange Pippin; Mr. Herrin, Dropmore taking a like position in the Pear class with Doyenné du Comice.

Mr. Maker, gardener to A. Waterhouse, Esq., Yattenden Court, Newbury, showed a collection of seedling Grapes.

Mr. Jas. Hudson, received a Cultural Commendation for a fine basket of Apple Newtown Pippin, obtained from dwarf trees worked on the Paradise stock, and planted on grass land in 1894.

The same exhibitor also was awarded a Cultural Commendation "for dishes of six varieties of late Peas, the pods of all of them being remarkably well-filled.

Obituary.

MR. WILLIAM PATERSON, head gardener for more than forty years to Her Majesty at Balmoral, died at Daisy Cottage, Balmoral, on Monday, the 5th inst., at the age of seventy-two. He was born at Mortlach, near Dufftown, Banffshire, in 1824. His father rented a small farm there, and when his son was sixteen years of age apprenticed him to Mr. Christie, a nurseryman in Fochabers, where he acquired much of the knowledge of his profession, especially in regard to the culture, propagation and management generally, of nursery stock. Sometime afterwards he removed to Aberdeen, and joined the staff of Messrs. Roy & Son, who were noted nurserymen in those days. Here he greatly increased his knowledge during the two years of his stay. His next appointment was as head gardener to the Duke of Leeds at Old Mar Lodge, Braemar, where he stayed for two seasons. He was then appointed head gardener to Sir Robert Gordon, who occupied the old castle at Balmoral, having it on lease from the then Earl of Fife. Sir Robert died a few days after Mr. Paterson's appointment, and Her Majesty first leased and subsequently purchased Balmoral. Mr. Paterson first went to Balmoral on November 22nd, 1847, and was retained till the following year when he was formerly appointed gardener to The Queen. This position he held till 1892, when failing health induced him to retire. Her Majesty granted him a pension together with the pretty Daisy Cottage situated near the dairy at Balmoral. Here he lived in comfort during the declining years of his life.

Mr. Paterson, during his long period of service at Balmoral, discharged his duties in the gardens most faithfully, and his Royal mistress was not slow to appreciate his unflagging zeal and earnest attention to his charge. He had a wide knowledge of the various branches of his profession, and exhibited a considerable amount of skill in applying this knowledge to the requirements at Balmoral. In the matter of floral decorations he was admitted to have admirable taste, and could make a bouquet or decorate a table with anyone. During the last few weeks of his illness, Her Majesty frequently called at Daisy Cottage, making kind enquires for her old servant. Her Royal Highness Princess Henry of Battenberg, often visited on the same errand. Needless to say these evidences of solicitous care on the part of the Royal Family, for an old servant, were highly appreciated, more particularly by the invalid himself. These and other acts of kindness are only instances of the qualities which have endeared The Queen to her subjects on Deeside.

Mr. Paterson was an elder of Crathie Free Church. He is survived by his widow, one son, and three daughters, all grown up. His son is Lieutenant Paterson, of the Gordon Highlanders Volunteers, Aberdeen, and the well-known crack shot. The deceased was buried at Crathie Churchyard, Balmoral.

MR. PETER WHITTON, a well-known and much respected Perthshire gardener, died October 5th, in the 76th year of his age. He served the Smythes, of Methven, near Perth, for nearly fifty years, as head gardener. He was held in high esteem by his employers, who trusted him as a faithful friend. Mr. Whitton was a thorough all round gardener, a member of the Royal Scottish Arboricultural Society, and had a keen interest in all Arboricultural matters. This is strongly evinced at Methven by the fine collection of Coniferae planted by Mr. Whitton, which have grown into specimens over 60 ft. high, during his lifetime, and are the admiration of all who visit this place. Many of the specimens were raised from cuttings by Mr. Whitton. The Royal Scottish Arboricultural Society visited this grand old seat some years ago, when with remarkable alacrity the deceased gave answers on all arboreal subjects, in the grounds and park. This year the kitchen

garden attains its centenary, and it is remarkable that during that period there have been only three head gardeners at Methven. In the sixties, Mr. Whitton planted many interesting Conifers, which are now objects of great beauty, the main feature being an avenue of Cedrus Deodara, commonly called the "Simla Walk," from the fact that the plants were raised on the place from seeds sent home from India by Mrs. Smythe's cousin, the late Lord Elgin (then Viceroy of India). The deceased gentleman took an interest in all the affairs of the parish which tended to the good of his neighbours. His funeral was attended by many head gardeners from throughout Perthshire, and other counties. It spoke volumes for the respect in which Mr. Whitton was held by the family he so long and faithfully served, that Colonel Smythe went to the funeral, October 8th, as chief mourner. Of Mr. Whitton's five sons, two followed gardening. Mr. James is the popular superintendent of Glasgow public parks, and the other is superintendent of a large Tea plantation. Mr. James Jackson is appointed successor.—*M. Temple, Carron, N.B.*

Baron Sir Ferdinand von Mueller.—This famous Australian explorer and botanist died at Melbourne, Australia, on the 8th inst., at the age of 71. The titles alone of Baron Sir Ferdinand von Mueller, K.C.M.G., M.D., Ph.D., F.R.S., will give an indication of his attainments. He has been Government Botanist of the colony of Victoria since 1852.

He was born at Rostock, Germany, in 1825, and became an enthusiastic botanical student before he was out of his teens. By the time he was 21 he was suffering from phthisis, and his doctors advised him to emigrate to a warm climate at once, as the only chance of saving his life. The young botanist emigrated to Australia where he lived exactly half a century, and is believed never to have revisited the northern hemisphere. He wrote about 100 books and publications on botany, which emanated from the government printing press at Melbourne. He was universally credited for being the most distinguished botanist in the southern hemisphere.

Sir Ferdinand was a great traveller, and while in pursuit of his favourite science, is believed to have covered about 27,000 miles of the Australian continent, on foot and on horseback. He was attached as botanist to the expedition led by Mr. A. C Gregory, who explored tropical Australia in 1855—56. He was one of the first to climb the Australian Alps, and the plants he discovered in those regions, and described, created a vast amount of interest in European scientific circles. One very important incident of his career was the discovery of the fever-preventing qualities of the Australian Blue Gum (Eucalyptus globulus). It was on his advice that extensive plantations of this tree were made in the malarial districts of Italy and other parts of South Europe as well as America, with the well-known beneficial results.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Pear Tree Infested.—*F. H.*: Your tree is very badly infested with Eriocampa limacina, the Slug-worm. If the fruit has been gathered you could not do better than syringe the tree with hellebore powder in water You might repeat the operation after two days, if some of the grubs are still alive. This should have been done on the first appearance of the pest provided there are no fruits on the tree as the hellebore powder is poisonous, at least, some of the kinds sold under that name. Before syringing, lay a coating of quicklime over the ground beneath the trees, so that the grubs which fall down may light upon it, and thereby get destroyed. Some of the grubs have no doubt left the tree before this time and gone into the ground. It would be a good plan, therefore, to take off 4 in. of the soil during winter, and replace it with fresh material. The old soil should be carted away and buried deeply or burned. Another plan would be to mix it with half its bulk of gas lime to destroy the pupae in the soil. After a couple of months this mixture might be spread on vegetable ground before digging. It will act as a fertiliser.

Vines in Pots.—*Novice*: Under good cultural treatment such as you mention, pot vines should last a number of years. As to how many years it all depends on circumstances. If you force them hard and take over-heavy crops from them you will soon exhaust them; but that would be bad cultural treatment for vines intended to last a number of years. Fairly good crops may be taken from vines in 14 in. pots, provided you feed them well, crop moderately and accord them good cultural treatment generally. When the vines begin to show weakness, they may be repotted into a larger size just as the buds begin to push in spring. The crocks and loose soil may be shaken away, but take care not to injure the young roots. Use yellow loam of a substantial nature, and as growth proceeds give plenty of weak liquid manure. You may pursue this treatment till the vines refuse to answer your purpose, when you had best get young ones, and commence again.

Chrysanthemums.—*J. M.*: You will see something relating to the hastening of late varieties, and retarding early ones in another column, and which we think would fit your case. We advise you to make notes on your own account, however, so that you may be able to give your varieties the proper treatment the next year.

Wireworms in Border.—*Novice*: We do not like the idea of poisoning a border with a weed-killing solution; and it must not be adopted if there are living roots of anything useful in it. On the other hand, we doubt if it would have much effect upon the wireworms before getting dissipated in the soil. They are probably not eating much just now, and would be descending the soil as the temperature sinks. Very strong solutions of various insecticides have been used with little effect upon wireworms. Probably the best plan would be to have the border dug over twice at intervals of a month or two, and while this is being done a boy or two should be set to pick up the wireworms. Then in spring traps consisting of pieces of Potato and Carrot fixed on to the end of a piece of stick might be inserted in the soil at a depth of 3 in. or thereby, and at intervals all over it. By examining the traps every day, the numbers of the pest could not fail to be reduced. As the grubs live for at least three years in the soil, it would be worth all this trouble in getting rid of them. Are you sure the grubs are wireworms? They are usually deep yellow. Leather Jackets, on the contrary, are of a dirty slaty-gray.

Pot Lilies.—*Lilium lancifolium rubrum*: A toolhouse is all very well for shelter, but we should expose the plants to light and plenty of air, at the same time protecting them from rain. As soon as the stems are quite ripened and dead the bulbs may be taken out of the old soil and repotted. Remove all decaying matter from the bulbs, but do not dry them off, as this is quite unnecessary. Make up a compost consisting of fibrous loam and peat in equal parts, with a good sprinkling of clean sharp sand to keep the soil open. Some nodules of charcoal may also be added. Crock the pots carefully, and insert the bulbs near the bottom of the pots. A little sand beneath and around the bulbs will be an advantage. The pots should only be half filled with soil at present, leaving the rest for top dressing of rich compost as the stems lengthen in spring and summer. Stand the pots where they will not be under drip, and give no water till the young stems begin to push up. When the flower buds make their appearance feed with weak liquid manure. The plants must have plenty of light and air when growing.

Names of Plants.—*E.W.M*: 1, Nerium Oleander double variety; 2, Mimulus (Diplacus) glutinosus; 3, Gypsophila repens; 4, Euonymus latifolius.—*R.L.*: 1, Adiantum cuneatum Pacotti; 2, Blechnum occidentale; 3, Selaginella Martensii var.; 4, Selaginella kraussiana; 5, Zebrinia pendula variegata (usually called Tradescantia); 6, Oplismenus Burmanni variegatus (or Panicum variegatum of gardens); 7, Retinospora plumosa aurea; 8, Retinospora plumosa; 9, Retinospora squarrosa.—*John Trotter*: 1, Aster Novi-Belgii laevigatus; 2, Aster Novi-Belgii var.; 3, Aster Novi-Belgii; 4, Poterium officinale.—*F. H.*: 1, Uredo compositarum on leaf of Tussilago (the red knobs are flower buds); 2, Arenaria peploides; 3, Cakile maritima; 4, Eriocampa limacina (see separate note).—*Bicton*: Begonia gracilis martiana.—*Geo. Hutchinson*; 1, Eulalia japonica variegata; 2, Asplenium lucidum; 3, 4, 5, and 9, are Crotons we do not recognise; 6, Croton pictum; 7, 10, 11, and 12, are garden forms of Dracaena, we do not recognise; 8, Dracaena concinna; 13, Begonia manicata maculata.

Communications received.—Thos. Cockerill.—W. P. R.—William Oliver, next week.—Omega.—L. Linden.—A. E. S.—W. O.—J. J. J.—A. J.—A. M.—R. S.—T. B.—W. R.—S. W.—J. Williams.—L Y.—Louis.—Ami.—T. Benson.—A. J. G.—P. N.—Rob.—S. T. T.—Sidney R.—Ex.—B. G.

TRADE CATALOGUES RECEIVED.

Dicksons & Co., 1, Waterloo Place, Edinburgh.—List of Roses, Carnations, Pinks and Tufted Pansies for 1896-97; also Select Catalogue of Fruit Trees.

LONDON SEED TRADE.

October 13th, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 39, Seed Market, Mark Lane, report a firm market for Clover seeds. Finest English Red Clover is in short supply. Alsike continues to advance. White Clover and Trefoil steady. Rape seed scarce.

COVENT GARDEN MARKET

October 14th, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs.	25 0	27 6
Grapes, per lb.	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	3 0
Asters, doz. bches	3 0	6 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Carnations, doz. bchs.	4 0	8 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	4 0	6 0
Gladiolii, doz. spikes	1 0	3 0
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	3 0	6 0
Lilac, White (French) per bnch.	4 0	5 0
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyretbrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	4 0	6 0
Pink Roses, doz.	1 0	2 0
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays ...	2 6	4 0
Tuberoses, doz. blooms ...	0 3	0 4
Primula, double, doz. sprays	0 6	0 6
Violets (French) per doz. bnches.	1 6	
Violets (English) per doz. bnches.	1 6	2 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, per doz.	9 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope. per doz.	4 0	6 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Mignonette	4 0	6 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet,	2 0	4 0
Solanums, per doz.	12 0	15 0

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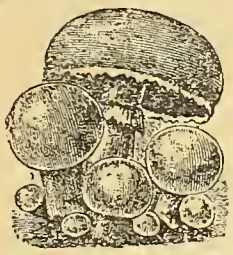

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, OCTOBER 24th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, October 26th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

TUESDAY, October 27th.—Royal Horticultural Society meeting of committees at 12 o'clock. Watford Chrysanthemum Show. Great Annual Sale of Nursery Stock at Tottenham Hale Nurseries by Messrs. Protheroe & Morris. Sales of Dutch Bulbs by Messrs. Protheroe & Morris. and Mr. J. C. Stevens.

WEDNESDAY, October 28th.—Steyning Chrysanthemum Show (2 days).
Torquay Autumn Show. Secon day's Sale at Tottenham Hale Nurseries. Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

THURSDAY, October 29th.—Last day's Sale at Tottenham Hale Nurseries. Smoking Concert at Anderton's Hotel, Fleet Street, E.C., in aid of the funds of the National Chrysanthemum Society's Jubilee Celebration. Annual Sale of Nursery Stock at Hollamby's Nurseries, Groombridge, by Messrs. Protheroe & Morris. Sales of Japan Lilies and Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, October 30th.—Exmouth Chrysanthemum Show.
Battersea Chrysanthemum Show (2 days). Second day's Sale at Hollamby's Nurseries. Sale of the "Cedar Grange" of Orchids by Messrs. Protheroe & Morris. Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

THE COMING CHRYSANTHEMUM TOURNAMENT.—From various sources we glean information of a cheerful character anent the advance of the exhibition season of the favourite autumn flower. The plants for weeks past have been full of promise, and in every direction we hear of preparations being made that give the impression of the first sound of a coming fray, half suppressed by the intervening distance, but still distinctly audible. The relatively weak competition in the cut flower classes that took place at the October show of the National Chrysanthemum Society give rise to suggestions that the season was late, and that intending exhibitors at the Jubilee Celebration were reserving or economising their strength for November 3rd. Doubtlessly there was a certain amount of truth in both the theories advanced; but we have a strong presentiment that there will neither be lack of competition nor of splendid examples of the cultivator's art in all its various phases when the day and the hour arrives.

Though the Jubilee Celebration will continue over four days there will practically be two distinct exhibitions of two days' duration each. For exhibitors this cannot be otherwise than a distinct indication of hard work for a whole week on end, or longer. British pluck and endurance, however, are well exemplified in the plodding and industrious gardener and grower. Very few, we imagine, will rest satisfied with the first competition, but will go forward in the hope of doing even better in the contest to take place on the third day of the celebration. While the first two days are in progress, preparations will be continued in all the leading trade and private establishments to supply the munitions of war for the second two days. Those who intend staging in the large classes on both occasions must have large resources in the way of plants behind them, from which to cut first-class blooms or select the best plants for groups. Many will no doubt be perplexed and in doubt as to which blooms they may cut for the first exhibition,

and keep in reserve for the second. Those who have grown very large collections for the express purpose of exhibition, will, however, find the Jubilee Celebration but a small tax upon their resources, except in so far that the two shows come so closely upon the heels of one another that a later set of flowers have no time to get fully developed before they are required. This means that however many blooms or plants may be required, they must be equally advanced on the first day, or nearly so.

That the blooms will be large and unusually fine, we think there is little reason to doubt; for those plants or collections we have already seen and the buds borne by them are full of promise. The cultivators themselves are confident of the quality of their plants, and such close observers are not easily deceived in this respect. The judges will no doubt have some difficult work in determining which exhibits are the most meritorious.

Potato Tercentenary Celebration.—Three hundred years have gone by since the Potato was first introduced to British soil, and it seems most appropriate that the celebration of this event should take place in Ireland, where for many years the Potato has assumed the character almost of a nationnl plant, and is certainly of national importance to the "sister isle." Nevertheless the Potato is of great and growing importance both in England and Scotland, where broad acres are grown in order to supply the large and growing cities and towns into which the people of the land continue to crowd.

The celebration in Ireland is to take place in Dublin on December 9th and 10th next, and is to be carried out under the auspices of the Irish Gardeners' Association. The programme of the celebration states that the introduction of the Potato in Ireland is associated with the name of Sir Walter Raleigh, and in celebrating its tercentenary the association is about to do so as a befitting memorial to Sir Walter, as well as "to place on record the exceptional and remarkable progress that has been made in its subsequent cultivation." The association wishes also "to attract the notice and command the special attention of all those interested in the cultivation and preservation of this the most important of our national foods." The soil and climate of Ireland are well adapted for the cultivation of the Potato in all respects, perhaps, with the exception of the humid nature of the atmosphere, which in unusually moist seasons fosters the spread of the dreaded Potato disease, and on such occasions reduces the poorer inhabitants to the verge of famine. In view of such occurrences it would be well to encourage the cultivation of some other crop not liable to disease, so as to be in a measure prepared for any failure of the Potato harvest. In view of such occurrences it is possible that the noble tuber, as an article of diet, may be too popular. The crop has again been abundant, and we are not surprised that a plant which so readily responds to the cultivator's art should meet with a great amount of popular flavour. In view of this celebration the abundant Potato harvest will enable the growers to make a thoroughly representative display at Dublin, and at the same time afford an excellent opportunity for comparing the respective merits of the hundreds of varieties in cultivation. It is also proposed to make the Congress instructive and educational as well as interesting.

There will be no competition as at an ordinary exhibition, and no prizes awarded. In order to make the exhibition as complete as possible, every grower of Potatos is invited to send collections or specimens. It is also desired that every collection should be accompanied with the fullest information possible with regard to the character of the soil, exposure, and the physical conditions of the localities in which such collections may have been grown. The committee of the Irish Gardeners' Association invite exhibitors to make the collections from each district as complete as possible in order that all the varieties cultivated may be brought together for comparison, accompanied with their names and synonyms, local and otherwise.

Exhibitors must give notice of their intentions, stating the number of varieties to be brought forward and the amount of space required, not later than December 1st to the secretary, Mr. Thomas Shaw, Potato Conference, Rotunda Rooms, Dublin. The committee trust, however, that applications for space be sent as soon as possible to prevent any disappointment that may arise through lack of space or otherwise. Those who stage their own exhibits may do so on the morning of December 9th, so as to be ready for the inspection of the committee by 12 noon. All boxes or packages forwarded must be addressed to the secretary, at the address above given, on or before December 8th. The Congress is expected to attract the attention of Potato growers and all concerned in various parts of the world.

Six thousand people passed through the Chrysanthemum house at Battersea Park on Sunday last (the opening day to the public), in order to inspect the flowers.

Gardeners' Royal Benevolent Institution.—The committee of the Sandringham Horticultural Society, through Mr. A. MacKellar, have sent a donation of £5 5s. in aid of the funds of this institution.

Mr. William Miller, for the last three years foreman in the gardens, Auchterarder House, Auchterarder, Perthshire, has been appointed head gardener to Colonel Halley, Ruthven Towers, Auchterarder.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, October 27th in the Drill Hall, James Street, Westminster, one to four p.m. A paper on "Chrysanthemums" by Mr. W. H. Lees will be read at three o'clock.

Royal Gardeners' Orphan Fund.—The funds of this charitable institution were augmented last week by the receipt of 10gs. from the proceeds of the Canterbury hospital and charity fete; 5gs. from the proceeds of the Sandringham Horticultural Society; and 5gs. from Baron Sontellinho (A. Tate) of Portugal.

Woolton Gardeners' Mutual Improvement Society.—The usual fortnightly meeting of this society was held on Thursday of last week at the Mechanic's Institute, Mr. Jellicoe presiding. Mr. J. Glover, Gateacre Grange, read an excellent paper on "Cottage Gardens." The essayist by long experience has proved himself fully qualified to deal with this and kindred subjects, having been secretary and prime mover of the Gateacre Cottage Gardening Society for twenty-five years, with the result that the cottage gardens have reached a high position whether judged from beauty or utility. The essayist advised a quarter of an acre as suitable for size, the land to be well drained, the locality being composed of a heavy soil. Double digging was recommended in preference to trenching for the first time; the under portion being brought to the surface on subsequent seasons. Fruits, flowers, and vegetables should be grown in proportion of one of the two first named to three of vegetables. In treating of the latter, plenty of space was advised, which would result in heavier and finer crops. The draining should be done by the owner which could be treated properly in large areas. A discussion followed in which Messrs. Lawrence, Todd, and Waterman took part. Votes of thanks to the essayist and chairman concluded the proceedings.

The American Institute Fair which has just now come to a close has been held at the Madison Square Garden, New York, and has lasted for three weeks. Chrysanthemums have been the special feature of the display from October 19th.

A terriffic thunderstorm swept over Beccles, Suffolk, on Wednesday morning the 14th inst. There was a deluge of rain, and it is stated that hail bigger than Walnuts fell. A flour mill at Weston was struck by lightning and burned to the ground.

Grape Vine in Old Kent Road.—In the heart of this crowded thoroughfare and near the Old Kent Road Station, 124 fine bunches of excellent Grapes were gathered from an old vine a few weeks ago. The vine branches out from a main stem, and the Grapes were brought to maturity in the natural way.

Lord Rothschild has consented to preside at the 58th Anniversary Festival of the Gardeners' Royal Benevolent Institution, which will take place on a date to be fixed by his Lordship in June, 1897. We trust that the festival in aid of the funds of such an excellent charity to be held during the month in which the Queen, who is the Patroness of the Institution, if spared, celebrates the 60th year of her reign, will be most successful.

Canterbury Hospital and Charity Fete. — Great success attended the variety of entertainments organised at Canterbury recently in aid of the local and other charities. The proceeds have just been allocated, and distributed to the recipients by the honorary treasurer, Mr. C. W. Greenwood, 48, St. George's Street. The Canterbury Hospital received £60; the Royal Agricultural Benevolent Institution, 10gs.; the Royal Gardeners' Orphan Fund, 10gs.; and other charities have been the recipients of similar amounts.

Distribution of Worm-eating Slugs.—The editor of the "Journal of Malacology" is still desirous of obtaining living specimens of worm-eating slugs (*Testacellae*), so as to add to the records he has of the distribution of these animals in the British Isles, and which he hopes to be soon in a position to publish. He takes this opportunity of thanking his correspondents for the trouble they have taken in procuring him examples of slugs, and of expressing his gratitude to those editors who so kindly made known his wants last year. All communications must be addressed to Wilfred Mark Webb, "Ellerie," Crescent Road, Brentwood, Essex.

Royal Horticultural Society of Ireland.—A meeting of the council of this society was held at 61, Dawson Street on the 12th inst. Final arrangements were made for the Chrysanthemum and fruit show to be held at Ballsbridge on November 4th and 5th. There will be an exhibition of photographs of flowers and garden scenes, shown by means of a powerful limelight lantern during the evening of the first day. Letters were read from Lord Edward Pelham Clinton, K.C.B., intimating that Her Majesty The Queen would be graciously pleased to send a collection of fruit to the show.

The Worshipful Company of Gardeners.—The members of the Court of the Worshipful Company of Gardeners, with a few personal friends, were entertained by the Master, Mr. N. N. Sherwood, at a Banquet at the Trocadero on Wednesday evening. Among those present were Gen. Sir William Olpherts, Mr. E. F. Fitch, C.C. (Upper Warden) Sir William Farmer (Renter Warden), Rev. W. Wilks (Past Master), Lt.-Col. George Lambert (Past Master), and Mr. R. Gofton-Salmond, Clerk. The loyal toasts having been given from the Chair, Mr. Warden Fitch proposed the "Army, Navy, and Reserve Forces," which was responded to by Gen. Sir William Olpherts and Col. T. Davies Sewell. The toast of the Company, coupled with the health of the Master, was proposed by Mr. Harry J. Veitch, and was received with much enthusiasm, as was also the health of the Clerk, proposed by Col. Lambert. The dinner was excellent and well served. The health of Mr. Lyons (a Member of the Court), and "Success to the Trocadero" was proposed by the Chairman and duly responded to. A pleasing selection of music by Miss Grainger Kerr, Mr. Trefelyn David, Mr. George Schneider, and Mr. C. Russell enlivened the proceedings. At a Court Meeting held previous to the banquet, it was decided to offer the freedom of the company to the Hon. Alicia Amherst, in recognition of her work entitled "The History of Gardening in England."

Dunmow Root Show.—The annual root, poultry and dairy show was held at Great Dunmow, on the 13th inst., and was well attended. Prizes to the value of nearly £50 were offered and competition was very keen. The Dunmow Flitch Committee subscribed £10 to the funds.

Leamington Spa, Warwick and District Chrysanthemum Show will be held in the Winter Hall, on the 19th and 20th November. The Countess of Warwick will open the show on the first day, and Mrs. Smith-Ryland on the second. A sum of £100 is offered in prizes and the show promises to be a success.

Early frost.—Last Sunday night and early on Monday morning a relatively severe frost set in over London and the suburbs. The frost gave way after daylight and rain began to fall; but Tropaeolums, Salvias, and other tender subjects already showed that mischief had been done.

The Bridal Veil with which the Queen of Italy has presented her future daughter-in-law, the Princess Hélène of Montenegro, is a veritable work of art, the design of Orange blossoms and leaves upon it being exquisitely carried out. The Queen of Italy bought it for a fabulous sum from the Venetian ladies who intended to present it themselves.

Devon and Exeter Gardeners' Association.—This thriving gardeners' society seems determined to be in good time with their arrangements. The holding of a spring show has been a great success, and the schedule already published announces that an exhibition of spring-flowering bulbs and plants will be held on Wednesday, 17th March, 1897, in the Royal Public Rooms, Exeter.

Gold Medal from Chrysanthemum Society of America.—We are requested to announce that the Chrysanthemum Society of America desire to offer a special prize of a Gold Medal to the National Chrysanthemum Society to be competed for at the forthcoming Jubilee Show. In the event of its acceptance, the American Gold Medal value £5 is to be awarded to the best twelve commercial blooms, one variety from any source to be considered from an American point of view, viz., and exhibited in a vase (to be provided by the exhibitor) with not less than 18 in. of stem, of a pleasing, saleable colour, with size and substance also to be considered. Further information can be obtained of Mr. Rd. Dean, Hon. Sec., National Chrysanthemum Society.

Death of Dr. Trimen.—We regret to announce the death of Dr. Henry Trimen, M.B. Lond., on October 16th, at Peradeniya, Ceylon, in the fifty-third year of his age. The state of his health had been causing his friends great uneasiness for some time past, and he gradually sank in spite of the best medical attention. Dr. Trimen went from the Botanical Department of the British Museum, a few years ago, to assume the directorship of the Royal Botanical Gardens, Peradeniya, Ceylon, as successor to the late Dr. Thwaites. We announced the appointment of Mr. J. C. Willis, as director in succession to Dr. Trimen, on p. 69, as well as the safe arrival at Ceylon of the same gentleman on p. 101.

Superstitions of the Ash.—There is an article on this subject by Mr. George Paxton in the October number of *Knowledge*. He says it is to be called the Tree of Superstition, because wherever it grows it is intimately connected with superstitions, mythological lore, and legends without end. In ancient Scandinavian mythology we have the following:—"Igdrasil, the Ash tree of existence, has its roots deep down in the kingdom of Hela, or death; its trunk reaches heavens high, and spreads its boughs over the whole universe. At the foot in the death kingdom sat three Nornas (Fates)—the Past, Present Future—watering its roots from the sacred well. Its boughs with their buddings and disleafings—events—things suffered—things done—catastrophies. On the summit is perched an eagle, who watches the course of all earthly affairs, assisted by a squirrel who employed his time in descending and ascending to examine into and report upon what was happening beneath." We may add that the Scandinavian names of these imaginary beings were Urd, Vernandi and Skuld—the present, past, and future. They are known as the three fates. Urd survives in modern English in the word weird. They were the three weird sisters of Shakespeare, or the three witches in the tale of Macbeth. The tree is a native of Britain from Land's End to John o' Groats, and in old Celtic literature many of the superstitions concerning this tree are recorded.

A late show of Dahlias.—Under the auspices of the gardening society at Charing, Ashford, Kent, a Dahlia show was held on the 12th inst. The entries were very numerous except in the gardeners' class in which quality was good, but competitors few. Mr. H. Cackett took the lead in the gardeners' class; Mr. Elvy was first amongst amateurs; and Mr. Gardner was first in the cottagers' class.

British Produce Supply Association.—In reference to the efforts of the Right Hon. the Earl of Winchilsea and Nottingham, to establish local depots for garden and farm produce, as mentioned in our last, we may state that a store has been established at Winchilsea House, Long Acre, W.C., under the title of the British Produce Supply Association, Limited. Amongst other articles of British produce supplied to customers we note English fruit in tins and bottles; country made jams, dessert and cooking Apples and Pears, hothouse Grapes, nuts, Cobs, Walnuts and Tomatos.

The Duke and Duchess of Bedford, while driving from Cairnsmore House, Kirkcudbrightshire on the 19th inst., to join a shooting party, were thrown from their carriage and injured. While passing down the avenue, the horses bolted, and by a jolt of the carriage the Duke was thrown to the ground, getting his ankle sprained. He is the well-known proprietor of Covent Garden Market. The horses next came into contact with a tree and the Duchess was thrown against it, getting cut about the face and lower limbs. Medical aid was procured from Newton Stewart, and it was found that the Duchess who was the more badly hurt, was is no serious danger. The horses continued their wild career, and in passing over a narrow bridge, which they failed to clear, one of them was thrown over it and killed, while the other was much cut.

Great Success in Horticultural Showing.—Mr. Boston, of the Manor Farm Nurseries, Carthorpe, has this season been extremely successful in showing. He has exhibited at no less than eighteen shows and has won easily 167 first prizes and seconds. This south country Rose grower has distinguished himself very much since he left Sheffield. Mr. Boston gives all credit to Mr. H. J. Griffin, who has worked wonders, gaining 167 first prizes; he has the art of showing in a nutshell. I myself have gone in largely for showing this season, and have met a stranger at the shows who has got his name up well in the north and has not allowed me to have a first look in at all. He is not quite twenty-one, I understand, and feel sure will come greatly to the front. Mr. Boston speaks of him as a first-class gardener and a good all-round hand.—*L. Barron, The Nurseries, Bedale.*

Shirley Gardeners' Mutual Improvement Association.—The first meeting of the half session opened with a good attendance of the members presided over by the president, and was held on the 19th inst., at the Parish Room, Shirley, Southampton. Mr. J. Miles, The Gardens, Portswood House, gave a paper entitled "Pruning Hardy Fruit Trees for Pleasure and Profit," and all the details of this most important operation were fully discussed by him in a short, but intelligent and practical manner, and was further made intelligible by humorous specimens of good and bad pruning taken from trees growing in the neighbourhood. The object of pruning a tree being chiefly to obtain a moderate crop every year instead of an occasional heavy crop, and secondly to keep the trees within certain bounds, every method should be taken to secure these results, and amongst them Mr. Miles recommended root-pruning as a most efficient aid, and the operation was fully described; but in the after discussion one member objected to the care advised in root-pruning; choppping off the roots with a spade he had found to answer very well? A most cordial vote of thanks was accorded to Mr. Miles, and also to the president and the exhibitors at the close of the discussion. The two Certificates offered for four dishes of Apples, and four of Pears, were secured by Mr. H. Curtis, gardener to Mr. W. F. G. Spranger, and Mr. F. Batlett, gardener to Mr. Andrew Barlow; and Mr. W. G. Bushell, gardener to Mrs. Keates, Rownham House, was V. H. C. for Pears, and Mr. H. Curtis, H.C., for Pears. There was a fine Chrysanthemum sport, "Golden Ball" shown by Mr. J. Bagden, gardener to Sir Melville Chamberlain, which was given a Certificate.—*H. J. H.*

A Vegetarian Infirmary is established in the village of Loughton, Epping Forest.

The other Side of the Question.—Messrs. D. M. Ferry & Co., seed merchants, of Detroit, U.S.A., have applied for an injunction to restrain the secretary of agriculture and any or all of his assistants from executing the free distribution of seed ordered by Congress. It is claimed that the sale of 5,000,000 packets of seed, or a money value of $20,000 is thereby lost to the firm. Naturally any self-respecting seed merchant feels a desire to kick.

The American Carnation Society held a meeting at Cleveland, U.S.A., recently to determine the official scale of points to be used in judging seedlings. The hundred marks which constituted the maximum of points were apportioned as follows:—Calyx, 20; size, 15; stem, 15; substance, 10; form, 15; fragrance, 10; plant, 15. There was an animated discussion as to what should constitute the points on a plant, and finally it was decided to instruct the judges to take into account habit, health, freedom of bloom and general commercial adaptability.

Kent County Farm Fruit Society.—A highly meritorious display of fruit was made by this society in the Corn Exchange, Maidstone, on the 13th and 14th inst. The show was largely patronised by the gardeners of the county, and much appreciated by the public of which there was a large attendance. There were thirteen classes for fruit, and six for home-made jam. Competition was very close in the fruit classes. Apples were most numerous, a great number of varieties being represented. Culinary varieties attracted the greatest amount of attention on account of their great size and fine appearance. Dessert varieties were also represented by good samples of the best British Apples in cultivation.

Hydrangeas in the West of England.—Even in the vicinity of London the common Hydrangea cannot be grown in the open air with any degree of success, except in summer. It does splendidly on the west and south coast of England, where the winter is usually mild and equable. The flowers without any special attention or treatment being given them develop beautiful pink, white, porcelain and blue tints, not only upon the same plant, but even on the same truss. During the past summer a splendid specimen was to be seen at Burncoose, Perranwell, Cornwall, and which bore 725 trusses of its beautiful flowers. It has been in this position for the past thirty-five years, with scarcely any attention but a dressing of leaf mould.

Sandringham Horticultural Show.—Owing to the financial success that attended the recent Sandringham Estate Horticultural Society's Exhibition in Sandringham Park, which was visited by the Princess of Wales, Princess Victoria of Wales, and Prince and Princess Charles of Denmark, the Committee has been enabled to hold a substantial sum in reserve, and, in addition, has just distributed over £56 to public institutions, namely £20 to the West Norfolk and Lynn Hospital, 10 gs. to the Royal Agricultural Benevolent Institution, and 5 gs. each to the Royal Gardeners' Orphan Fund, the Hunstanton Convalescent Home, the Norwich Eye Infirmary, and the Eastern Counties Asylum for Idiots, Colchester.

The Beauties of Flowers.—At the twelfth annual convention of the Society of American Florists, Prof. L. H. Bailey, of Massachusetts, delivered an illustrated lecture on this subject, and said that there were three classes of admiration of beauty—a sort of scientific love of flowers, by men who love them for their structure. Another was found in the public school where the pupils accepted the teacher's opinion—a sort of gushing beauty. The third was intermediate between these two, inasmuch as it was an intelligent appreciation of beauty which was the only basis upon which the florist's business could work. All pleasing combinations of colour fall into five classes or harmonies: (1) Contrasted harmony, one colour with black, white, or gray. (2) Dominant harmony, tints and shades of one colour. (3) Analogous harmony, closely related hues of colour. (4) Complimentary harmony, opposite hues of colour. (5) Perfected harmony, analogous tones plus the complimentary of their effect. He then, in concluding his remarks, said that "the beauties of any flower may be obscured or enhanced by association with others. In groups, each should help all and all each."

NATIONAL CHRYSANTHEMUM SOCIETY.

We are requested to state in reference to the Great Jubilee Exhibition which opens at the Royal Aquarium, on Tuesday, Nov. 3rd, with a second competition on Thursday, Nov. 5th, that all entries for either show, must be sent in to the Secretary Mr. R. Dean, Ranelagh Road, Ealing, by Friday, October 30th, to enable the large amount of clerical work to be got through in time. Everything must be staged ready for the judges by 10.30 a.m. on the mornings of Nov. 3rd and 5th. All plants shown on Nov. 3rd, with the exception of the trained specimens in classes II. and III.; all fruit and vegetables; also all miscellaneous exhibits must remain until the evening of Friday, Nov. 6th. Cut flowers and table decorations can be removed at 10.30 p.m. on the evening of Wednesday, November 4th.

Strangers exhibiting for the first time are informed that cards for naming cut flowers, and pins for securely fastening the same to the stands can be had at the flower show office in the Aquarium on the morning of each show. The tables and other parts of the building will be roped off while the judges are making their awards, and only those privileged to be present while the judging is proceeding can be admitted within the enclosures. Exhibitors are requested to make themselves thoroughly acquainted with the "Regulations for Exhibitors," on pages 55 and 56 of the Schedules of prizes.

The Jubilee banquet will take place in the Whitehall Rooms of the Hotel Metropole, at 6.30, on the evening of November 3rd., Sir Edwin Saunders, the President, in the chair. Tickets one guinea each, which can be had of the Secretary.

On Thursday, November 5th, the exhibition will be largely renewed, as competition will take place in thirty-four additional classes; and immediately after the awards are made both on November 3rd, and November 5th, a catalogue of the exhibits will be issued with the names of the prize winners. This will be on sale in the building.

At 7 p.m. on the evening of the 5th, a conference meeting will take place in the library, Mr. T. W. Sanders in the chair, when papers will be read by Mr. George Gordon, on "The types of the Chrysanthemum and their characteristics," with suggestions as to the adoption of a fuller classification; by Mr. Norman Davis, on "The points of quality, or properties of the various types as exhibition flowers, and the values to be apportioned to each"; and by C. E. Shea, Esq., on "Setting up blooms for exhibition, and the principles upon which an effective arrangement of a stand is based."

The Secretary of the National Chrysanthemum Society offers admission tickets at a considerable reduction in price to parties of not less than twelve persons, members of affiliated societies; and some of the main lines of railways, are affording special facilities for reaching London.

PLANTS RECENTLY CERTIFICATED.

The undermentioned subjects received certificates according to merit from the Royal Horticultural Society on the 13th inst.

Orchid Committee.

Cattleya Triumph. *Nov. hyb.*—This hybrid was raised from C. speciosissima crossed with the pollen of C. lawrenceana. The sepals are soft rosy-pink, the petals brighter, and the lip as pale as the sepals, with the exception of a small purple, transverse blotch at the base of the orbicular lamina. The tube is curved like C. lawrenceana, and the throat is creamy-white. It is a showy and beautiful Cattleya with soft colours and very distinct. First-class Certificate. Chas. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming.

Cattleya Jupiter. *Nov. hyb.*—In this case C. lawrenceana was the seed parent, and C. gigas sanderiana the pollen bearer. The sepals are soft pink, and the petals large and several shades darker. The lamina is orbicular and rich purple, with two white eye-like spots at the base. The curved tube shows the influence of the seed parent, the colour that of the pollen bearer. Award of Merit. C. L. N. Ingram, Esq.

Cattleya Eclipse. *Nov. hyb.*—Here the parents were C. maxima and C. Skinneri, the latter being the pollen bearer. The sepals and ovate-oblong petals are deep rose. The lip is marbled with purple deepening to crimson in the tube, the colours being due to C. maxima; there is also a broad white margin to it. Altogether it is a very distinct Cattleya. Award of Merit. C. L. N. Ingram Esq.

Cattleya Apollo. *Nov. hyb.*—This is a remarkably distinct and beautiful Cattleya, as might be expected from the parents, C. Mossiae and C. Acklandiae. The latter was the pollen parent and determines to a large extent the form of the flower. The sepals are pale purple, thinly mottled with dark purple. The petals are elliptic and mottled or lined with deep purple towards the edges of the upper half. The lip has an open tube, clasping the column at the base only. The large, nearly flat lip is rich purple with an orange blotch in front of the column. A First-class Certificate was accorded this handsome Cattleya. Messrs. J. Veitch & Sons, Chelsea.

Cattleya dowiana Wheatley's var. *Nov. var.*—The sepals and elliptic petals of this handsome variety are creamy-white. The huge lip on the contrary is rich crimson upwards, but all the side area is golden; it is also striped with crimson and gold along the centre to the base. First-class Certificate. Frederick Wheatley, Ringmore, Teignmouth, Devon.

Cattleya labiata Mrs. E. Ashworth, *Nov. var.*—The sepals and petals of this charming variety are pure white, and the lip is similar in hue, with the exception of a large bluish-purple blotch in the centre, and a yellow throat. First-class Certificate, E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Wilmslow, Cheshire.

Comparettia speciosa.—The flowers of this rare and beautiful species are borne on long, arching racemes. The upper sepal and the petals are small, ovate and soft orange. The large lip is reniform, and of a rich orange. The twice curved spur is yellow and 1½ in. long. The species was originally introduced from Ecuador in 1878. Award of Merit. A. H. Smee, Esq., (gardener, Mr. G. W. Cummins), The Grange, "My Garden," Wallington.

Cypripedium Charlesworthii Low's var. *Nov. var.*—The huge dorsal sepal measures 3⅜ in. across, and is the characteristic feature of this splendid variety. It forms three quarters of a circle, is nearly flat and of a rosy-purple hue. The petals are netted with brown; and the lip is of a glossy brown. Award of Merit. It was exhibited by Messrs. Hugh Low & Co., Clapton, but passed into the collection of R. I. Measures, Esq., Camberwell, before it left the Drill Hall.

Floral Committee.

Pteris Childsii.—The fronds of this handsome Fern are pinnate, pinnatisect, and quadrifid at the base. The pinnae are oblong and cut nearly to the midrib into lance-shaped, deeply serrate segments, that continue to grow after the rest of the frond is mature. When fully developed, the fronds are massive and dark green with lighter coloured young segments. This Fern has a future before it for decorative purposes. First-class Certificate. Mr. T. Childs, New Eltham, Kent.

Salvia splendens grandiflora.—The flowers of this splendid variety are larger and borne in more massive racemes than those of the type. Bracts, calyx, and corolla are of a rich orange-scarlet. The plants were grown in the open ground, lifted potted, and placed in a greenhouse about the beginning of September; and are now bushy and most floriferous specimens. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

Lobelia Gerardi.—This is evidently a hybrid between L. syphilitica and some other of the L. cardinalis type. The flowers are of a darker and richer blue, and more abundantly produced than in the case of either parent. The seeds were sown early this spring, and when suitable were planted in the open ground. Old roots would no doubt flower earlier, and prove showy long before this period of the year. Award of Merit. Sir Trevor Lawrence, Bart.

Asplenium Herbstii.—The fronds of this leathery-leaved, Asplenium are of a dark green, produced in tufts, dwarf and beautiful. They are pinnate, with oblong pinnae, except the terminal one which is large, triangular, and elongated. It will evidently prove useful for decorative work. Award of Merit. Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton.

Aglaonema Curtisii.—This species rises up with a stiff stem well clothed with oblong, leathery, dark green leaves, ornamented with gray or silvery bands. First-class Certificate. A fine plant exhibited by Messrs. Young & Dobinson, Holmesdale Nurseries, Stevenage, Herts, bore fourteen healthy and clean leaves.

Nerine Novelty.—The flowers of this beautiful variety are of large size with long, lanceolate segments, recurved at the tips. They are of a rich rose with scarlet midribs. The variety was the only one out of a large number which received any recognition. Award of Merit. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham.

Chrysanthemum Madame Gustave Henry.—For description of this fine Japanese variety (see p. 103). Award of Merit. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

Begonia metallica regina.—The leaves of this variety of a well-known species are irregularly and often very extensively variegated with creamy-white, and have pink veins. It is attractive, distinct, and new. Award of Merit. Baroness Burdett Coutts (gardener, Mr. Willard), Holly Lodge, Highgate, N.

Dahlia Miss Kathleen Goschen.—This single variety is white, with broad, crimson edges. Award of Merit. Messrs. J. Cheal & Sons, Crawley, Sussex.

Dahlia Miss Hudson.—Flowers single, with pink rays, tipped yellow, and a yellow zone round the disc. Award of Merit. Messrs. J. Cheal & Sons.

Dahlia Miss Kingsley Foster.—In this we have a large golden-yellow Cactus Dahlia, tinted with buff or approaching old gold. It is showy and very distinct. Award of Merit. Messrs. J. Cheal & Sons.

Dahlia Clarissa.—See p. 103. Award of Merit. Mr. C. Turner, Slough.

Dahlia Geraldine.—Flowers small, neat, bronzy when young, but only at the edges when fully developed. It is a pompon. Award of Merit. Mr. C. Turner.

Dahlia Ophelia.—This Cactus variety is of great size, with long, pointed, orange-red or scarlet florets. Award of Merit. Mr. C. Turner.

GLOXINIAS FROM STEVENAGE.

In the majority of cases Gloxinias are now taking their well-earned rest, but by making a late sowing of seed in April, plants may be obtained to keep up the supply of bloom till late in the autumn. Messrs. Young and Dobinson, Holmesdale Nurseries, Stevenage, Herts, are in the habit of making such a sowing with the result that they are able to have the showy Gloxinia in all its glory up to a very late season. They have recently forwarded a box of blooms of their prize strain as an earnest of what they can do in this way, and certainly the quality of their material is deserving of every commendation. The blooms are above average size, and of excellent substance, the colours being especially vivid, and comprising some charming shades of rose, crimson, and purple One rich rosy-crimson self especially captivated our fancy as an excellent type of bloom of medium size. If the habit of the plants is equal to the quality of the blooms, Messrs. Young and Dobinson's strain of Gloxinias is really first-class, and for late blooming the plants will prove particularly valuable.

VEGETABLE CALENDAR.

The excessive rains and mild weather of the past few weeks have brought up arrears in the growth of most of our winter crops, and full developments are now assured. This has been done so rapidly and with such a small amount of sunshine that most things are in a very succulent condition, and are not in the best state to stand a sudden change to cold frosty weather. With these conditions prevailing it may be advisable to lift all the Cauliflowers that are approaching a fair size and place them under temporary protection. By removing all but the upright growing leaves a great many can be packed closely in a small space. Broccoli is another crop likely to suffer from sudden changes; and the old plan of lifting and laying them with their heads to the north may, with advantage, be carried out, where the growth is extra strong and sappy.

Parsley.—There is generally a little difficulty in meeting a large demand for this during the winter months, so that every possible provision should be made to meet requirements. Any roots planted out in beds early in the season should now have the frames placed over them, to preserve the young

growths from sudden checks and snow storms that may now occur. Good strong transplanted roots may also be lifted with balls and put into 32 and 24 sized pots, potting them firmly and placing them behind a north wall for a fortnight to get established when they may be placed in any cool house until the crop is used. After this the pots can be introduced into gentle warmth and a useful spring crop will be obtained.

SPINACH.—It will be necessary to pass the hoe through this crop on every favourable occasion, to keep the surface open, as any approach to a pasty condition of the ground is very detrimental to this plant, and soon causes canker at the collar, or the plants assume a sickly yellow colour from which they seldom recover at this season of the year. All yellow leaves should be picked off as soon as possible to prevent the best leaves from becoming affected.

FORCING VEGETABLES.—Preparations for introducing several crops into warmth may now be made. Seakale for the earliest lot, should be lifted and placed in a cool position under a wall. This will give the roots a check, and make them more susceptible to the influence of a gentle heat when forcing commences. Asparagus intended for forcing should have the tops removed to throw the strength of any root action left into the crowns of the plants. Succession crops of Dwarf Beans must be sown at intervals, according to the accommodation there is for carrying them through. Some well-ripened seed of Ash-leaf Potatos may be started and grown in 10-inch pots. Good drainage should be given, and about four inches of soil in the bottom of the pots will be sufficient for a start, earthing up as the growth advances. A moderate temperature will be sufficient for a month after planting, but when six inches of growth has been made, extra warmth both at the roots and tops, will be an advantage. A few roots of Chicory can be introduced into any dark, warm place to assist in helping fill the salad bowl. These are best placed in large pots, six or so of roots in each pot. All the green leaves on the plants must be removed previously to introducing them, when the whole force will be centred in the new growths from the crown.—*J. R.*

THE ORCHID HOUSES.

EAST INDIA HOUSE.—To the dull, wet and foggy weather, which generally obtains during October and November, following on a bright summer, may I think be traced many diseases to which Orchids under cultivation are subject. Especially do I think this is the case with Phalaenopsis. Every thing has been favourable to luxuriant growth of the sphagnum moss, as the temperature can be kept up to the necessary height without having recourse to much firing. The atmosphere is naturally loaded to a greater extent with moisture than is requisite if you are to induce them to take a slight rest and keep them free from spot which soon makes its appearance with a low temperature, and a house charged with moisture during the dark days of November.

Where the moss has grown to such an extent that it reaches well up to the bottom leaves, it will be best if you go over such plants with a pair of shears, or a better plan still, perhaps, is to gently press the moss down and sprinkle some bits of crocks, which have been broken up fine, on the surface. This keeps it in position and well away from the collar of the plants.

SYRINGING.—Great care should now be exercised in all divisions, during dull and mild weather; very little will be required, but should it set in cold and frosty, and the heating of the pipes becomes greater, it will be necessary to damp the walls and paths more often, to, in some degree, counteract the drying and trying influences caused by such heating. With the approach of frost, all plants that are hanging from the roof should be lowered until they are quite a foot away from the glass. You only have to put your hand up near the glass during a cold night to find out the importance of this suggestion. The temperature should range from 65° to 68° at night with a rise of a few degrees during the day. What air is given should reach them through the bottom ventilators provided for that purpose immediately opposite the hot-water pipes.

CATTLEYA HOUSE.—Vanda caerulea helps to make this house gay during the dull season. It is generally admitted that this fine species does not require so much heat as do some kinds, yet I cannot help thinking but that we go a little too far sometimes in this cool treatment of a great many Orchids. I believe it is a fact that frost is not unknown in the Khasya Mountains, but the low temperature is of such short duration that no harm is done. A close, stuffy atmosphere is, I believe, death to them; plenty of heat with a constantly changing air is what they seem to delight in best; and where this can be afforded they make short sturdy growths which rarely, if ever, fail to produce plenty of flowers.—*C.*

FRUIT UNDER GLASS.

PEACH-HOUSES.—In the majority of establishments the term Peach-house is rather a misnomer at this season of the year, for the inevitable Chrysanthemums are rather more in evidence than anything else, and the "Mummist" is apt to bewail the tendency of the Peach-trees to hold their leaves to the detriment of his beloved plants. It will not do however, to rob Peter to pay Paul, and the leaves must on no account be forced off the trees, but left to fall naturally. If a judicious thinning out of the growths was given after the fruit was gathered it will have served not only to give the shoots that were left a better chance to finish off properly, but the Chrysanthemums will now feel the benefit of the increased light. Lights that were taken bodily off the house towards the close of the summer will now have been put back in their places where the houses have been filled with other plants, but plenty of air should still be given by opening the ventilators as widely as possible during favourable days.

LATE HOUSES, which have nothing in them besides the trees, may have a good washing with the syringe during the forthcoming week if the weather proves bright, but after the expiration of the month, fine days will most likely be conspicuous by their absence and there will be little opportunity of using the syringe. Fallen leaves will require to be swept up every day if the houses are to be kept tidy.

MELONS.—Late crops of these are not always satisfactory. The fruit is usually wanting more or less in flavour—this season it has been more rather than less, for October has been a comparatively sunless month. It will not be possible to give much air now, and advantage must be taken of every glimpse of sun to keep the temperature of the house up, whilst fire-heat will have to be freely indulged in. Less water will be required than formerly. As soon as the fruits have got well advanced they may be induced to ripen quickly by cutting the greater portion of the haulm away, and keeping the atmosphere dry. Even a few small fruits will add to the appearance of the dessert.

FIGS.—Here also the fruit is deteriorating greatly in flavour, and soon will not be worth eating. The water supply may be diminished to a great extent, and more fire-heat applied. A temperature of 60° to 65° Fahr., rising to 70° or 75° with sun-heat, should be maintained if possible.

FIGS IN POTS.—These will now be fast losing their leaves—some have already parted with them—and they must be allowed to sink gradually to rest. Very little, if any, water will be needed, and the plants should be placed in an unheated house or a shed, where they may remain until they are wanted for forcing.

VINES.—We have now got to the end, as it were, of the season, and soon another one will begin, for where early grapes are in request, the fag end of the year sees something more than a start made. Indeed, to all intents and purposes, November may be looked upon as the first month of the forcing year.

POT VINES.—These are usually depended upon to supply the first and earliest crop, as most gardeners dislike to subject their permanently planted vineries to the great strain of early forcing, as to do this would materially shorten their term of fruitfulness. The first lot of pot Vines are generally introduced into heat about the middle of November. Accordingly preparations for getting the house in readiness may be set on foot without delay. If the fermenting material used last season has been allowed to remain, it should now be cleared out. The walls and woodwork should be washed at the same time, and if it is feared that mealy bug is secreted in the corners they should be gone over with a long haired brush dipped inneat petroleum. Fermenting material may likewise be got in readiness for use when required. It should consist in staple of leaves, as these give a lasting heat. All material used for making up beds should be turned twice or thrice, and shaken out thoroughly at each turning before being used.

THE EARLY PERMANENT VINERY will now be ready for pruning, and this should be seen to in the course of the next week or two, so as to give an opportunity of getting the necessary cleaning seen to in good time.

LATE VINERIES, in which the grapes are still hanging will need a good deal of careful attention during such damp weather as we have been having of late. A sharp eye must be kept upon bad berries, for decay spreads with excessive rapidity now. A temperature of 60° Fahr. by night, and 70° by day, should be given, with plenty of air to carry off exhalations, which, if pent up would prove injurious. It will do no good to leave the bunches on the vines for very much longer, for after the beginning of November we have found that the Grapes keep better in bottles than they do if left upon the canes, and the vines themselves must surely benefit from being relieved of their load.

THE FLOWER GARDEN.

FALLING leaves form the one engrossing topic in this department now. The glories of highly-coloured foliage have not been so lavishly meted out to us this year, owing to the wet autumn, but the abundance of berries helps to make up for this, for Hollies, Aucubas, Thorns, etc., are making a brave show with their brilliantly-hued fruits.

GYNERIUM ARGENTEUM.—There is no more beautiful object in the autumn months than a good clump of the well-known Pampas Grass, bearing a few of the waving silver plumes. It seems a pity to rob the flower garden of such an ornament, but if these graceful panicles are expected to be of any service for indoor decoration presently, they must not be left out until the rain and the wind have worked their will upon them. Choose a fine day and cut some of them now. Of course if a few can be left so much the better.

CLEMATIS VITALBA.—A few nice sprays of this beautiful Clematis, with its masses of feathery stigmas, come in very handy for decorative purposes at Christmas time, and it will be well worth while to cut a supply of them at once before they are totally spoiled.

HYACINTHS.—These are at once some of the most useful, as well as the most popular, bulbs for spring flowering, and their planting may now be proceeded with. The summer inmates of the beds should be turned out of them without delay, as they have now outlived their usefulness. Almost any garden soil will suit Hyacinths, although, if it is very heavy, an addition of leaf soil and sand, or even sandy peat, will be of value. About 8 in. of space each way should be allowed good bulbs, and they may be buried 4 in. deep.

The particular system of planting to be adopted must have been well thought out beforehand. Very little can be said for the practice of leaving the making of such arrangements until the last minute, to be decided, it may be, by chance. Certainly the most effective method of employing Hyacinths is to plant in masses of one colour. The flower beds, however, must not be too large, otherwise the general appearance will be flat and far from pleasing. Where a number of small beds have been cut out to a design upon the grass, or even laid out with gravel paths, an excellent opportunity occurs, for the masses of each colour are large enough to show up strongly, but not so large as to appear monotonous. Beds cut out in grass, too, have the advantage of the soft green hue of the latter to act as a foil to the brilliant colour of the flowers, for which their own foliage is not sufficient, as by the time the Hyacinths are in bloom the grass is waking to life beneath the genial touch of spring.

RIBBON BORDERS may also be brought into play for the advocacy of another system of planting, which also has its votaries, viz, that of planting in long curving lines. The narrow borderings to shrubberies close to the mansion answer well to this kind of treatment. It may be necessary to remark, however, that strong bulbs of tall and vigorous varieties should only be employed in such a case. Miniature bulbs may look well enough in other positions, but in such a one as this they are absolutely lost, as they are dwarfed into insignificance by the towering shrubs behind them.—*A. S. G.*

HINTS FOR AMATEURS.

ALTHOUGH up to the time of writing we have been spared the blighting influences of frost, the long period of dull weather, and the all too frequent gales have between them worked out the story of havoc and desolation in their own way, and the flower garden looks exceedingly forlorn as the result. If the amateur gardener is a philosopher too, which is a not unlikely combination, he may find a modicum of comfort in the thought that he would not be able to appreciate the glow of spring and summer if it were not for the gloom of the latter part of October and November. Naturally it goes against the grain of the lover of flowers to disturb the beds in the flower garden until absolutely obliged, but it is now high time that the summer bedding plants were pulled out of it, and either thrown away, or if they are worth saving, lifted, potted up and taken care of. If left, and nature allowed them to drag out their weary existence for a week or two longer, they would only succeed in looking supremely miserable, when the garden really looks quite as well without them. The grass still keeps growing away briskly, and it will be necessary to go over it pretty frequently with the mowing machine until sharp frost sets in and puts a stop to its growth for the season. The leaves, too, are causing a deal of trouble, and although they will not hurt much if allowed to lie upon the grass for a few days the broom must be plied pretty vigorously upon the gravel paths. Wet and heavy leaves soon tread into a path in such weather as we have been enjoying (?) of late, when it becomes a matter of some difficulty to sweep them up properly.

Tricolor and variegated Pelargoniums are usually rather tender subjects and not a few of them die off during the winter. Consequently a good margin over and above the necessary stock must be allowed in view of the expected deaths. All old plants may therefore be saved, or at least such of them as are worth anything. Such pretty varieties as Creeds Seedling, Robert Fish, Mrs. Henry Cox, Mrs. Pollock, and Happy Thought are especially tender. Golden Harry Hiover, a great favourite for edging purposes, on account of its dwarf and compact habit boasts of a rather stronger constitution. This is foreshadowed to some extent by the evident firmness of its wood as compared with that of other varieties. The Flower of Spring type not only strikes very freely, but usually passes through the winter fairly well.

Gladioli.—These have died down very rapidly of late; indeed, the flowers themselves seemed unusually short lived this season. As the plants will not do any further good out of doors they may be lifted as soon as the foliage has all turned brown. Grasping the stems in one hand, the soil should be gently eased up with a light digging fork held in the other hand. The plants may thus be easily and quickly lifted. They may subsequently be laid in a dry shed to finish ripening off. If the foliage is still a little green at the time of lifting, it will be wise to lay the plants close together in a box, planting them as it were in moist sand. The corms will then dry off gradually. The stems and leaves may be allowed to remain attached to the corms until they are quite dead, after which they should be cut off with a pair of sharp shears.

Lifting Chrysanthemums.—Any bush plants that are growing in the open ground, and are just opening their buds may be lifted up if it is thought that they will not stand a fair chance of expanding their blooms properly if left outside. Some gardeners are very fond of the practice of planting a lot of bush Chrysanthemums out in the open ground, and allowing them to pass the whole of the summer there, simply lifting them in the autumn when they have developed their buds, or when frost threatens to supervene. By adopting this system the heavy task, and it is a heavy one during such summers as that of 1896, of keeping pot plants supplied with water is avoided. One or two waterings only are given the plants, which apart from this call for but little other attention.

In lifting, some little care is necessary. The soil should be loosened all round each plant by means of a digging fork before lifting the plants out is attempted. The loose soil may be rubbed off by the fingers, so as to reduce the balls to a medium size, *i.e.*, small enough to be accomodated in an 8 inch pot. It will not be possible to get much drainage in the bottom of the pots; neither, indeed, would it be required. Almost any soil may be employed, and we have seen very good results when only common garden soil was used, because none other was available. The great point is to see that, whatever the soil, it is worked well round about the roots by means of a thin lath.

It is not necessary to water the plants immediately after potting; but should they show signs of flagging, water should be given instantly. Proper shading is the chief consideration, and if the plants are shaded carefully they will not take much hurt. A few of the lower leaves may drop, but this will do no vital injury. If the plants can be placed in a house or pit in which they can be kept a little close for a day or two so much the better. Of course this system of cultivation would not do where very large blooms are in request, and it would not be possible to obtain them by this means, but as a method of supplying cut flower or decorative plants for the conservatory it is well worth a trial. We have adopted it on many occasions, and always with success.

Early Roman Hyacinths.—If a few of these can be got into bloom by the beginning of December they will be sure of a welcome, for white flowers are just then beginning to get scarce. A small batch may well be placed in a gentle heat now. Take care not to overwater the plants at the start. This precaution, combined with that of not forcing them too hard at first, will prevent disappointments in the flowering of the bulbs—always supposing the latter of fair quality. A temperature of about 50° Fahr. will be enough for a start. This may be gradually increased as time goes on.

Hyacinths in Glasses.—For those who have not the conveniences for growing Hyacinths in pots in the ordinary way water culture in properly constructed glasses offers a good deal of inducement. It may be asked why is it necessary to have a specially made glass; will not any pattern do? Although the glass used should be full of water the bulb should be placed in such a position that while its base comes very close to the fluid it does not actually touch it, otherwise decay will soon set in. It will thus be seen that a special kind of glass is necessary to allow of such a position being given the bulb. Soft rain water should be used. The glasses, if they have been lying by since last season, should be washed well out, and previous to being filled a small piece of charcoal placed in each. Lay the bulbs in the niche at the top of the glass, and then stand the glasses away for a few weeks in a cool dark cupboard. This favours the formation of roots just as it does in the case of those bulbs which are potted up and buried under ashes in the usual way.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Old Vines.—When vines get so worn out as to be past bearing, or the bunches are only small, and of poor quality, decidedly the best thing to do is to pull them out root and branch, remake the border, and replant with young stuff. We think you would find this the cheapest plan in the long run, *Sidney R.*, and we are positive that it would be the most satisfactory. The practice of cutting the long spurs back, with a view to inducing them to make young and strong breaks would scarcely answer; even if the shoots made their appearance the improvement would be temporary. If you do not want to pull the old plants out, you might try heading the old stumps back to within 3 ft. or 4 ft. of the ground next spring. They will be more likely to make a strong break or two then than if the spur pruning system were adopted. The strongest should be selected and taken up to form a young cane. The renovation of the border may be carried out subsequently, say during the following autumn. We have known this plan to have been adopted with success.

Box Edging.—You may set about planting your Box edging as soon as you like, *Rob.* Tread the ground firmly, and lay the line down carefully, pulling it perfectly taut. Then cut the trench, which may be from 6 in to 8 in. deep, according to the size of the Box, with a sharp spade. The roots of the plants should be turned inwards to the border or bed, for that will give the plants a better chance of growing. This will necessitate careful subsequent digging of the beds or borders. The spade must not be brought up close to the edging or the roots will be cut off, but from 4 in. to 6 in. should be allowed. The fact of having to make this space allowance causes some operators to lay the roots of the Box outwards towards the gravel, but we prefer the former method.

Adiantums Drying Off.—You need be in no great fear about your Maidenhair Ferns drying down now, *Sue.* Grown in a window, as yours are, or in a cool house, the plants always need a period of rest, which naturally comes when our outside plants are preparing for their winter sleep. The Ferns will start away all the better for the rest in the spring. Meanwhile diminish the water supply.

Pruning Pot Roses.—*S. T. T.* wishes to know when to prune his pot Roses.

Any time about the end of November or the beginning of December will do—just before they are placed into heat to start them. Hybrid perpetuals will do if left out of doors until then, as far as cold goes, but we should advise you to put them under shelter of some sort, or you will find that so much wet will not be producive of good, but will tend to make the soil sour and sodden.

Pruning Bougainvillea glabra.—*B. G.* has an old plant of this fine climber which was growing in a house of which he took possession during last summer. It has flowered a little, and has made a lot of growth. He wants to know if it needs pruning, and if so, when and how?

In order to get Bougainvillea glabra to do really well it needs to be closely pruned each year after growth is completed. The exact time will depend upon the condition of the wood, whether mature or not. As soon as it is hard and brown the knife may be set to work, and this will be some time during November or December. The younger growths should be spurred back to within an eye or two, just like Vines, leaving the thick main branches untouched. Young growths will break away freely from the spurs next spring, and will commence to flower about July and from that time onwards.

A Plague of Rabbits.—To prevent rabbits gnawing the bark of Hollies, Laburnums, or Apple trees, you will find that the following preparation will be most efficacious, *Ami*, if the main stems and the lower branches are annointed with it. A teaspoonful of assafoetida should be added to a gallon of liquid clay, *i.e.*, clay dried, crumbled up and mixed into a paste with water. Two or three applications may be required during the winter.

Rusted Wall Nails.—If the nails have not got too bad they may be turned to account and rendered fit for use by heating them red hot and then steeping them in a mixture of linseed oil and black lead. One pint of the oil should have added to it two ounces of crushed black lead.

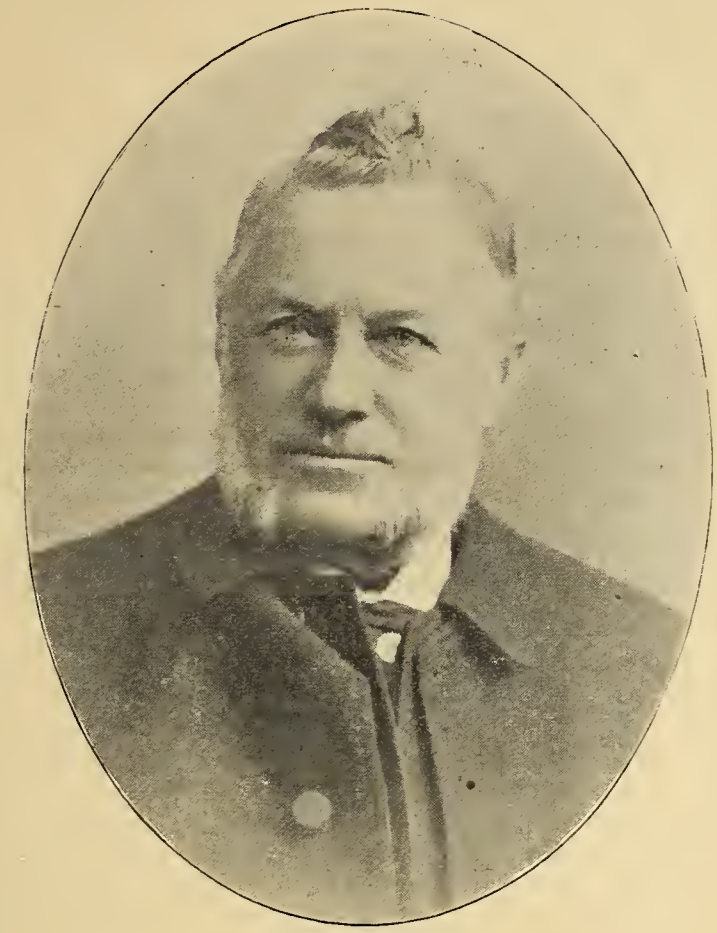
Manure for Potting.—We do not wonder that you found it a difficult matter to mix raw wet manure with potting soil, *Louis.* You must dry it first, and afterwards chop it up finely or rub it through a sieve. Cow manure may then be easily mixed with the soil, whereas it would be almost impossible to mix it properly if it were used raw. Horse droppings may be treated in a similar way.

Cleaning Pelargonium Cuttings.—Where pots or boxes have been used to insert the cuttings in, a great many dead leaves, and, perhaps, not a few yellow ones will be observed. Naturally the amateur who possesses tidy ideas will feel constrained to pick these leaves off. Now this is all very well in its way, but such tidiness is often the means of endangering the lives of the young cuttings before they have actually commenced to set up a separate existence. Unless the cuttings are well rooted they are very apt to become loosened whilst the refractory dead leaves are being removed, so it is well to be cautious in this respect.

Lobelia pumila.—Cuttings that were inserted in sandy soil, and the pots plunged in a hotbed at the beginning of last month, as advised in a previous column of "Hints," will have rooted well by this time. A shelf on a warm greenhouse is a capital place for them to pass the winter in. The watering can is the greatest enemy that Lobelias have during the winter, as if they are allowed to get wet, unless the temperature is higher than the one we are referring to, they will damp off almost wholesale.

MESSRS. PROTHEROE & MORRIS.

To our readers at large the name of this firm must be familiar in connection with the sales of Orchids, Lilies, and bulbs of all descriptions, as well as other subjects relating to horticulture. The headquarters of Messrs. Protheroe & Morris are at 67 and 68, Cheapside, London, E.C., but they have also a branch at Leytonstone. The firm was originated about seventy years ago; but before proceeding further we shall introduce to our readers the present members of the firm, personally and severally.



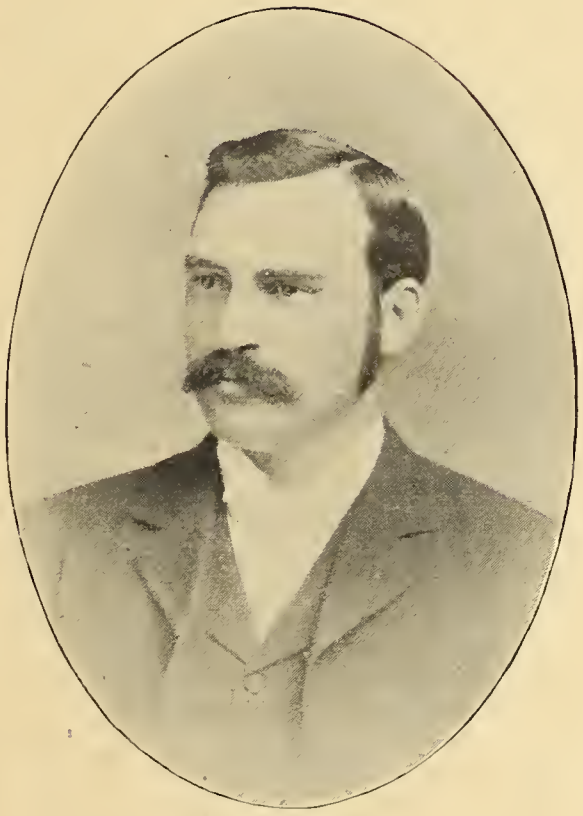
Mr. G. F. Morris, F.S.I.

Mr. W. H. Protheroe, F.S.I.

Mr. G. F. Morris.

The senior member of the firm is Mr. George Field Morris, F.S.I. (see illustration), who was born on September 2nd, 1831, and educated at Forest Place Academy, Leytonstone. His father was one of the two original partners of the firm. Early in life he evinced a natural taste as well as talent for drawing and music. At the age of fourteen, however, he entered the nursery business and made himself acquainted with the practical details of horticulture in its various departments. This experience no doubt served him in good stead in after years. As an auctioneer he conducted his first sale in the year 1860. Since then the business of the firm has been greatly extended, embracing Orchids. Mr. G. F. Morris opened a branch office at Leytonstone, as a land and estate agent and auctioneer, in 1870. Four years later, in conjunction with Mr. W. H. Protheroe he established a city office at 98, Gracechurch Street.

Mr. T. A. Morris.



Mr J. B. Slade.

Since then Mr. G. F. Morris has devoted himself to the development of this branch of the business; and has, in fact, been very extensively engaged in the laying out of estates for building purposes, and in disposing of them to buyers. He is also an adept at valuation, and much of this kind of work comes under his supervision and care.

Mr. W. H. Protheroe.

This gentleman is the head of the Horticultural Department of the firm, and the second of the two senior partners. Mr. William Henry Protheroe, F.S.I. (see portrait), was born in 1846, at Leytonstone, and is the only son of the late Mr. Alexander Protheroe, whose name we have frequent cause to mention. For some time in his early life, he was educated privately, but at the age of sixteen he was sent to complete his technical education at the Government Horticultural College, at Ghent, Belgium. The classic portion of his tuition enables him to wrestle with the jaw-breaking names with which Orchids and other plants have been encumbered by the botanist.

After studying for three years at Ghent, Mr. Protheroe returned to this country armed with his diploma and the highest honours the college could bestow on him. At twenty years of age he took the first step in the career which he has since pursued, becoming connected in business with his father; and on that gentleman's retirement, after thirty-eight years of active life, he took his father's place in the firm. This event took place in the beginning of 1873.

Mr. H. G. Morris.

Mr. Harold George Morris, F.S.I. (see portrait), is the only son of the senior partner Mr. G. F. Morris, and was born in 1865. After being educated at the Brewer's School in the City of London, he entered the office in 1882, ecame a partner in 1889, and conducted his first sale in the autumn of 1886, since which time he has given his entire attention to the horticultural department of the business, assisting Mr. Protheroe in the Orchid sales and taking an active interest in the development of the Lily and Bulb branch of this department.

Mr. H. G. Morris, F.S.I.

MR. J. B. SLADE.

Those who are in the habit of visiting the sale rooms at Cheapside will readily recognise Mr. James Benjamin Slade from the accompanying portrait (p. 121). He joined the firm in 1873, and became a partner in 1889. Mr. Slade has hitherto identified himself most with the House and Estate Agency department, and in conjunction with Mr. G. F. Morris has greatly extended this branch of the establishment. Frequent sales of property are held at the Mart, particularly land in plots. Sales are also held weekly, in various widely separated parts of the country; and very frequently several of these sales take place weekly.

Mr. Slade was born on December 12th, 1861, at Regent's Park, and educated at the Gospel Oak Schools, and later on at Leytonstone, where he is now, and has been for many years past a well-known figure. As long ago as 1871 he settled down in the district of Harrow Green, where he still resides, so that he has been a Leytonian for the past twenty-four years. At school he developed or displayed a great aptitude for figures, so that when Mr. G. F. Morris applied to Mr. Putman, the schoolmaster at Leytonstone for a sharp boy for his office, Mr. Slade was recommended. The latter rose to the position of managing clerk in less than ten years, thus justifying the good opinion of his schoolmaster. He is now a Fellow of the Royal Horticultural Society, and a Fellow of the Surveyors' Institute. He has been, and is, a particularly active and useful resident in this part of Essex, and figures largely in several local institutions. He became a candidate for the Wanstead Slip Ward on the new District Council, in November, 1894, and succeeded in taking the fourth place at the poll, though placed fifth at the recount. The contest was a severe one. In May, 1894, he was elected a member of the Wanstead School Board, being fifth on the list of nine successful candidates. His fellow members appointed him chairman of the Finance Committee; and he also occupies a similar position on the Leyton Urban District Council. He was also made one of the Poor Law Overseers for Cann Hall, during the same month. Outside of his connection with horticultural sales, Mr. Councillor J. B. Slade is well known. During the period of the bulb sales, he is much in evidence in the rostrum at Cheapside.

MR. T. A. MORRIS.

This member of the firm under notice was born in 1858, and educated at Northampton House, Denmark Hill, and the City of London School. Mr. T. A. Morris (see accompanying portrait) is the eldest son of Mr. T. A. Morris, formerly of Mile End, and a nephew of the two senior partners of the firm. His grandfather, Mr. H. Groom, of Clapham, was a celebrated Tulip grower and nurseryman. The subject of this note entered the office of Messrs. Protheroe & Morris in 1874, but subsequently entered the head office of the London and County Bank. In 1889 he rejoined Messrs. Protheroe & Morris, being admitted a partner of the firm. His duties are confined to the horticultural department of the business, and he is much in evidence at Cheapside during the sales.

EARLY HISTORY.

Mr. Alexander Protheroe and Mr. Thomas Morris, the fathers of the two senior partners of the firm of Messrs. Protheroe & Morris, commenced business as horticultural auctioneers and nurserymen about the year 1830 at Highbury. We have no data as to their doings in those early days, and can only suppose that the situation may best be expressed by the old adage, "*omne initium est difficile.*" A real forward movement was made in 1840, when the founders of the firm acquired the American Nurseries, at Leytonstone; because from this date the modern developments of the firm may be said to have commenced. For forty-one years the American Nurseries held a prominent position, but in 1885, on the death of Mr. Alexander Protheroe, they were broken up to make room for the residential needs of the thriving village of Leytonstone on the borders of Epping Forest.

An interesting relict of those early days is an "Auctioneer's Licence" taken out by Mr. Alexander Protheroe, on September 17th, 1834, in the sixth year of the reign of His Majesty King George IV. For this he paid £5, and had to renew it the following year. In a sale catalogue, dated Wednesday, April 30th, 1834, held at the Auction Mart, Bartholomew Lane (now Parr's Bank) we read, "Catalogue of one of the most rare and healthy collections of Dahlias, in pots, ever offered to the public, also a splendid assortment of plants in bloom." What is more, the prices realised were marked, and we note that the Dahlias fetched from 1s. to 6s. 3d. each, half-a crown being frequently obtained. Dahlia Albina and Queen of the Yellows were sold together and realised 12s. 6d., so that these varieties must have enjoyed a considerable repute in those early days. Striped and spotted varieties figured largely. Many of the names are quite legendary. Other subjects sold that day included blue Hydrangeas and the Double Crimson Primrose, which is even now comparatively rare. Carnations, Pinks, Paeonies, Roses, Dutch bulbs, &c., were sold on October 16th, 1834, and we note that the raiser's name preceeded every variety of florists' Carnation, Pink, and Picotee on the list. Periodical sales, as far as we have been able to follow them, were continued to December 16th of the same year.

Other branches continued to be added to the business, and we note a sale of nursery stock at Salisbury, as early as November 18th, 1835, by Messrs. Protheroe and Morris. Sales of nursery stock became very numerous in 1837. Dahlias seemed to be the Orchids of those days, however, judging by the frequency with which they figured at sales. Tulips also came into prominence now and again. On the dismantling of the American Nurseries in 1885, the sale of land in plots and otherwise at Leytonstone, the suburbs of London, and many other plants of the country, particularly at the seaside, became the main features of the business.

RECENT HISTORY.

In addition to the numerous sales which are held in their auction rooms, the firm conduct frequent sales of nursery stock and greenhouse plants in different parts of England. One great event in the horticultural world is the trade sale week in September of each year when the large sales of Heaths and greenhouse plants are held, and large numbers of the trade from different parts of the country come to London for the purpose of attending these auctions.

In all their sales the firm make a special point of personally attending to commissions which are sent by their customers who are unable to attend their auctions, and they rightly attribute a great deal of the success of their business to the careful attention given to the orders of these distant clients.

Another development of the horticultural department was inaugurated on the 10th of May last year, when the auction rooms were utilised for the first of a series of sales of horticultural properties of moderate size and insufficient to warrant the expense of a special district sale. Buyers and sellers alike have reason to be thankful to Messrs. Protheroe & Morris for supplying this hitherto crying want.

Needless to say with this extensive development of work it became absolutely necessary as a matter of policy to split up the business into departments. The horticultural department has occupied the premier position from the very inception of the firm, and is in the hands of Mr. W. H. Protheroe, assisted by Mr. Harold George Morris and Mr. T. A. Morris. The estate agency department, on the contrary, is in the hands of Mr. George Field Morris, assisted by Mr. James Benjamin Slade, whom he originally secured as office boy from the school at Leytonstone, as above mentioned. During the autumn months, however, when the horticultural sales sometimes number twenty per week, Mr. G. F. Morris and Mr. Slade forsake the landed interest and come to Cheapside to assist their overworked colleagues in this department.

From September to Christmas, last year, the sales of Lilies, Dutch and other bulbs averaged about twenty tons per week. From October to April the Japanese Lilies are in season, and are received direct from Japan to the extent of nearly a million bulbs.

ORCHIDS.

Between the years 1873 and 1883, the business of the firm increased with leaps and bounds, so that it became necessary to acquire extensive premises for the exhibition and sale of horticultural produce. In the latter year the firm acquired their present spacious room situated at 67, and 68, Cheapside. Mr. Protheroe was assured by the leading plant importers that, if he opened sale rooms in this neighbourhood, success was certain. The opening of the new quarters was inaugurated by a large sale of imported Orchids, the result proving a success to the new venture. The B. Sale Room with an entrance from Queen Street was secured in 1892, and is frequently used for sales of pictures, engravings, curios, cigars, &c.

As the imported Orchid, in appearance is far from being a thing of beauty, presenting to the uneducated eye something like a dried Cabbage stick, it occurred to Mr. Protheroe to introduce in these sales a small number of Orchids in full bloom, thereby giving illustrations of the remarkable beauty that can be obtained from such unpromising pseudobulbs. In all probability, many who have acquired valuable collections, would never have thought of doing so, if they had not seen these established Orchids in all their gorgeous beauty.

Orchid sales are held every Friday, and nearly every Tuesday at certain times of the year, as may be gleaned from our announcements of the sales, and frequent reports of interesting or valuable Orchids that come under the hammer. Consignments of these beautiful and fashionable flowers come from the four quarters of the world, through the agency of a large number of collectors and growers. To a large extent the nurserymen and importers of this country are the intermediaries through whose hands the vast consignments of Orchids reach the sale rooms at Cheapside.

Private collections of Orchids are frequently sold on the establishment where they are grown, and such sales often last for several consecutive days. Some sensational prices are occasionally realised for some rare and beautiful specimen. Some years ago when the Downside collection was sold, Cypripedium Stonei platytaenium fetched 310 gs. It was originally purchased for £60, and the prevalent opinion now is that the some plant would realise nearly £1,000. It turned up recently at the Temple Show of the Royal Horticultural Society. The collection of the late Mr. Hardy, of Manchester, realised £8,000, one plant alone fetching 260 gs. A Sheffield collection last April was sold for £3,950, including one plant that fetched 140 gs.

Those prices are prohibitive except to those with the deepest pockets and largest purses. Our readers, who may be in town, might do worse than call in at the sale rooms at Cheapside when the sale of Orchids is in progress. Valuable and beautiful species and varieties, at very reasonable rates, may be obtained at the rooms almost at any time of the year; but those who desire to get together the nucleus of a collection, or even to add to an already existing one, at a very cheap rate, could not do better than visit the sale rooms when the London season is over, and everyone practically has gone for a holiday, say during the late summer months.

Every day the pavement of Cheapside is crowded with thousands of people on business or pleasure intent, and the street with an equally dense multitude of vehicles, yet comparatively few are aware of the fact that down a quiet passage, about midday between "Sir John's" clock and the top of Queen's Street, they can every Friday and often on Tuesdays, if so disposed, regale their faculties of sight and smell with the gorgeous forms and exquisite fragrance of those weird yet beautiful tropical products known as Orchids.

LECTURES AT THE FRUIT SHOW.

(*Concluded from p.* 108).

STORING, PRESERVING, AND UTILISATION OF FRUIT.

This most important phase of the fruit question was discussed on Saturday, October 3rd, in a most practical paper by Mr. John Watkins, Pomona Farm Nurseries, Hereford, Philip Crowley, Esq., F.L.S., occupying the chair. The splendid fruit that had been forthcoming at the show held during the last three days was, said Mr. Watkins, conclusive evidence that for quality British grown fruit was amongst the best in the world. Why then, it might be asked, should the foreigner be allowed to capture our markets? We can grow fruit, it is true, but this is not the only point. How to make money of the fruit after it is grown is the question, and a difficult one, for there were several good cultivators that had failed to make both ends meet. In order to make fruit-growing pay the markets had to be watched very closely, and a careful account also taken of the reports of foreign produce. The cultivator would then be able to judge of the best time to put his fruit upon the market.

The time of gathering would largely be decided, not only by the season, but by the state of the market. Early soft-fleshed Apples such as Ecklinville Seedling and Lord Suffield should be gathered before they are quite ripe, and marketed as soon as possible. These would then be disposed of before foreign fruit glutted the market. Mid-season sorts might also be picked, and sold with the early ones, or allowed to hang on the trees as long as possible, gathered and kept with the later ones until after the foreign ones had been disposed of when a much better price would be obtained. As an instance of what we might expect this year in the way of American Apples, Mr. Watkins stated there were one and a half millions of barrels of good fruit in Canada waiting to be shipped, and England was looked upon as the best market.

It should be borne in mind that late Apples will not keep fresh and plump for long if gathered before they are ripe. In a hot season much of the fruit gets grubby and falls from the trees, thus deceiving growers as to the forwardness of the crop. He advised the marketing of windfalls at frequent intervals. He also recommended a thinning of the fruit before it had reached its full size, the thinnings also being sold. The remainder of the crop would be much improved thereby, and would fetch more money than would have been obtained if no thinning had been given, and, moreover, the trees would be greatly relieved. The experience of twenty-five years had convinced him that fruit need not be dry when gathered, a little dampness did not affect its keeping qualities, provided it was not stored in such thick layers as to cause it to heat.

In gathering, great care was necessary, and it should be remembered that fruit is very easily bruised. Shallow baskets, holding only a single layer were the best receptacles to use for the best fruit. The practice of tying a bag round the body of the operator for the purpose of holding the fruit was a bad one. Long light ladders would be required in dealing with tall standards, whilst for tall bushes or short standards three light ladders fastened at the top by hinges to a triangular piece of iron admitted of the fruit being easily gathered without the trees being damaged. Mr. Watkins exhibited a model of this apparatus by way of illustration.

The essayist then went on to consider the question of storehouses. For high class fruit a properly constructed house was necessary, a good model one being in Messrs. Geo. Bunyard & Co.'s establishment. This was built of wood, and had a thatched roof, with arrangements at the apex for ventilating. It was furnished with double doors and windows, and he believed cost £30. His own storehouse had been an old "silo." In order to keep Apples properly, a low uniform temperature was necessary—just above, but not below, freezing point was best. A damp atmosphere was also desirable. For the first three or four weeks after gathering, Apples should be freely ventilated, but after this they would keep better if light and air were excluded. Double walls, doors, and windows were excellent contrivances for excluding frost. If by any chance the fruit was frozen it should be allowed to thaw gradually in the dark, and must on no account be handled; for every place where it was touched whilst in this condition decay would subsequently set in. A very useful kind of storing had lately been patented by Mr. Orr, of Bedford, which would doubtless come largely into use.

In marketing, it was needful, continued the essayist, to study the varieties somewhat. It was no use to send anything but good fruit to Covent Garden, although some of the coarser sorts as Catshead, found a ready sale in other parts. Cox's Orange Pippin again was more eagerly sought after in London than it was farther north, where its merits were not so well known; Whiting Pippin commanded a good sale in Birmingham, but was not known much elsewhere.

On the subject of grading, Mr. Watkins was most emphatic. He believed the practice of this was one of the secrets of the success of the foreign trade, and if English growers wished to make fruit growing pay they must do likewise. If the fruit was mixed, or not graded, only a third-rate price would be received for it; whereas by sorting it into first, second, and third qualities; first-class, second-class, and third-class prices would be received respectively. As an instance of this he remembered seeing boxes of selected fruits of Peasgood's Nonsuch sell at 4s. 6d. and 5s. a box, and this to dealers, whilst ungraded fruit only fetched as much per bushel.

Third-class Apples could easily be disposed of for jam making, and thousands of tons annually were utilised thus for sale in some of the more thickly populated districts.

In addition to "grading," every grower should "brand" his fruit, and in packing should learn to pack attractively but fairly. The practice of "topping up" as it was commonly called, *i.e.*, putting the best fruit at the top, was entirely out of date, although a cynic had confidentially informed him that a grower who did not "top up" deserved to be canonised.

If barrels or boxes were used for packing purposes they should be uniform in size and weight, also the fruit they contained. In packing in barrels the fruit was gently forced into the barrel so that no room for "play" was given. The material known as "wood wool" was very suitable for wrapping the fruit up in. Firm packing was essential. It might be of service if he quoted the resolution recently passed by the American Shippers' Association with regard to first-grade Apples. These were required to be free from worms or defacement of skin, of good and normal colour, uniform size, and shapely form.

The Rev. P. Clementi-Smith, F.R.H.S., stated that in Canada the general plan was to loosen the rings of the barrels when packing, and to tighten them up when full. Mr. Roupell also added to the discussion, fully endorsing Mr. Watkins' remarks anent grading and packing. He had had 10° of frost in his fruit room on occasion, but as he had taken care not to touch the fruit whilst frozen, but little harm had been done. He also spoke of finding in his boyhood's days, samples of Mannington Pearmain Apple in the grassy furrows of the orchards, the fruit being little, if any, the worse for lying out under the snow all the winter.

A vote of thanks to Mr. Watkins was proposed by the chairman, and being carried unanimously, the series of lectures came to a close.

GAS LIME NOT A CURE FOR CLUBBING.

Some time ago I ventured in your columns to question the efficacy of gas lime as a cure for clubbing. In every instance in which I have found it had been used, all the plot had been treated alike and not a patch left undone for comparison. I have before me a report of experiments conducted by the Lancashire County Council at Aughton, near Ormskirk, for the clubroot and other diseases and insects. "As much has been written" the report says "concerning the cure of land infested with the Anbury Fungus (Plasmodiophora Brassicae) by special dressings, acid or alkaline, or other germ destroyers, we made experiments on a piece of land very badly infested and placed at the disposal of the class by Mr. John Prescott, Brookfield Farm, Aughton. Plots of one perch each were marked out on the fallow land, and the dressings applied at the rate of 5 cwt. per acre, except superphosphates, which were *pro rata* 10 cwt. per acre and lime and gas lime unmeasured, but a good dressing. The applications were as follows—dressed on the 24th April, the soluble salts dissolved and spread by a watering can.

Plot A.—Superphosphate, 26 per cent. soluble.
,, B.—Sulphate of copper.
,, C.—Superphosphate.
,, D.—Saltpetre (nitrate of potash).
,, E.—Chloride of lime.
,, F.—Sulphate of iron.
,, G.—Borate soda (borax).
,, H.—Soda (sub-carbonate).
,, I.—Carbonate of ammonia.
,, K.—Alum.
,, L.—Nil (witness plot).
,, M.—Lime.
,, N.—Gas Lime.
,, O.—Nil (witness plot).

The land was turned over by the plough, manured in the ordinary manner, and drilled up and planted and sown with Cauliflower (late and early), Brussels Sprouts, Swedes, and early Cabbage, in separate drills, running lengthwise through the dressed breadths.

"On the 9th July, a demonstration was held and the result appeared very dubious. The Brussels Sprouts and early Cauliflowers on plots A to F and also on M alone showed any symptoms of vigour Borax (plot G) seemed to be a plant poison. The Swedes on it died soon after sprouting, and the other plants were pining. The final demonstration was held on the 26th September and all details may be spared, as the result showed that not one of the dressings achieved the purpose of its intention, as a cure of badly infected land, whatever might be their respective virtues as preventives. Every plant examined was clubbed and the general yield miserable."

Gas lime it will be seen made not the slightest difference, and those who contend that it is a cure for clubbing, cannot have given it a comparative trial, and have simply related what they have read or heard in its favour.—*W. P. R.*

COLTNESS, WISHAW, N.B.

With the accompaniment of a Scotch blizzard without, methought it not an unfitting time to make a few notes of this charming place as far as under cover is concerned, or, to speak in garden parlance, all that is to be seen under glass, all of which is, of course, under the culture and direction of that amiable and courteous dispenser of that talent in his profession with which he is possessed, Mr. Graham.

On Thursday the 8th inst., my, for the nonce, business proclivities, betook me to this charming residence, the abode of James Houldsworth, Esq., situated on the upper verge of Wishaw, N.B. A somewhat imposing entrance gate and a not unbecoming lodge greeted me on my entrance to a drive which seemed the best part of half a mile before the gardener's cottage hove in sight. As hinted at in my opening remark, the weather was such, that a great temptation was thrown in my way to take a closer inspection of all that is to be seen there in the wealth of houses, that is at Mr. Graham's command, and of which he makes the best possible use. The wind without was blowing half a gale, the rain with which it was associated, together with the frigidity of the atmosphere, making agreeable travelling for the time being, quite out of the question; and so I took a few notes of those things with which Coltness abounds, and at sight of which I oftimes marvelled, taking into consideration the atmosphere with which this district is infested, and the comparative absence of sunshine that according to Mr. Graham, his fair place is blessed with.

Following up the instructions received as to the whereabouts of the gentleman of whom I was in quest, I plunged into the Melon pits, there to perceive the object of my search, bared up to the elbows at work as the Scotch gardener knows how to do with a will.

The first thing that met my eye here, was a plant of Tecoma Smithii in bloom, the first one I have seen flowered so well, revealing a truss of flowers not unlike the Java Rhododendron in form, the foliage such as will vie almost with Grevillea robusta for decorative properties. This fact considered, therefore, it can assuredly be said to be a distinct desideratum as an advancement on the uses to which the old Grevillea is put, on account of the bloom. The pit, I may say, is a spacious one in two compartments, taken up chiefly with some well-grown Cinerarias just coming out of the bud—early forsooth—for the exigencies of Mr. Graham's employers are such that a wealth of bloom is required early, on account of their migration soon after the advent of the new year.

A lovely house of richly-coloured Crotons, splendidly furnished from pot to tip, meets the eye as the way is led to a neat little span-roofed house about 18 ft. by 12 ft. In an adjoining house the eye is dazzled with a veritable blaze of Clerodendron fallax, well-trussed in 48-size pots, for the seed of which, I was informed, friends from far and near make constant demands. Immediately following these gorgeous flowers came a mass of splendidly-bloomed Primula obconica, flanked with a well-flowered strain of P. sinensis. Clean and full of buds was a large batch of Gardenia floribunda for which there is a great request for buttonhole work.

And now for the early vineries, in some of which were being arranged at my visit, a healthy mass of well-budded Chrysanthemums, which by the way are not grown here for exhibition purposes, but are managed so as to give the greatest amount of bloom in the shortest possible time. Though such is the case, many of the latest introductions in the Chry-

santhemum world were *en evidence*, and all were full of promise. As to the later vineries at present in bearing, these contained well-finished examples of such varieties as Gros Colmar, Gros Maroc, Madresfield Court, Mrs. Pearson, Foster's Seedling, and other Grapes that would not be put to the blush at any exhibition in the kingdom. The modesty of my *chaperon* was such that he was quite mute in going through the various revelations of his skilful work with me, but I was soon convinced that the art of doing Grapes well was known to Mr. Graham. He, however, did point out to me the result of working Gros Colmar on the Muscat, and the outcome was improved flavour, stronger growth, and luxuriant foliage, the latter indeed being most striking in the extreme richness of its colourings at this season, together with the enormous size of the leaves.

And now came the most effective training of Lapageria rosea and L. r. alba in an adjoining massive house of ornate structure that ever it has been my lot to see. The plants that were plunged in the border, had made extraordinary growth, especially the white variety, and were with perfect neatness trained to a wire trellis which formed a flat roof overhead, the mass of blooms just protruding through the meshes of the trellis, forming such a charming floral canopy that one could not easily forget. Of course the collection of stove and new and rare plants of every description is legion at this charming place, a description of which might become monotonous to many of your readers, who probably might lack the convenience of growing such. I would, however, fain conclude with a reference to the Orchard House trees which were still in partial bearing, and looked the picture of health and scientific treatment. The Peach houses were perforce passed over hurriedly, but I was assured both from Mr. Graham and my personal observation that they had borne heavy crops. I may add that there is one grievance to contend against at Coltness, and that is the difficulty to keep some of the houses sufficiently cool in the summer, most of which are built of iron by the same constructor as at Kew. It occured to me that extremely picturesque as such houses are, there are other considerations from the practical grower's point of view. Having been so courteously escorted through the glass, I was suffered to depart not without regret, although the rain, but not the wind, had by this time partially subsided. In passing through a side walk, I noticed some diagonal beds just going over, in some of which were to be seen that gem of Marigolds, "Legion of Honour," to which Mr. Graham paid a high tribute for bedding purposes.—*Albert F. Upstone.*

FRUIT AND VEGETABLES IN DERBYSHIRE.

The crops in this part have not been very good this year. Strawberries were the lightest crop we have had for years. The sorts grown were Noble, Royal Sovereign, President, James Veitch, Latest of All, and Waterloo. The first and last bore the best crops. Waterloo is a great favourite here. Apples were under average; the best sorts were Bismarck, Lane's Prince Albert, Hawthornden, Mank's Codlin, and Lord Suffield. Of Pears, there were none; although the trees were covered with bloom, very little fruit set and birds damaged it all in a young state. Gooseberries, and Red, White, and Black Currants were very poor crops. Morello Cherries have been a very heavy crop, likewise Plums.

Early Peas were very good. The first to come into use being Lightning (Carters'). I gathered the first dish June 9th. Chelsea Gem and American Wonder sown on the same date came into use ten days later, closely followed by Carter's Daisy. This Pea I consider to be the finest dwarf variety grown, and one that I shall grow largely another year. With me it grows about 2 ft. high and the pods hang in pairs from top to bottom, with an average of nine peas to the pod. Mid-season Peas were a failure; they never grew after they were rodded. Late Peas are very good. Dwarf beans have been very good; Runner and Broad Beans have been very poor. The only kind of Spinach I grow is Perpetual; it is what I call the poor gardener's friend, as anyone short of room need only sow once a year. From a sowing made last April I hope to be able to pick from it until next May. The only Lettuce that did not run to seed with me this dry season was All the Year Round.

Cauliflowers have been very fine; Cabbages have likewise done well. Ellam's Early, Little Pixie, and Sutton's Little Gem (the latter is truly a little Gem, it can be planted 6 in. apart) are the sorts that I find do the best. Onions are a good crop, but I am afraid they will not keep well. Carrots are very poor; Beet and Parsnips good.

Potatos have been a splendid crop. I commenced lifting Sharpe's Victor outside in May. Myatt's, Ringleader, and Snowdrop followed in rotation. Windsor Castle was a very good crop, but fully half of the tubers were diseased. Schoolmaster was good, and very little deseased. The more I see of Holborn Abundance the more I like it. Another splendid Potato sent by the same firm is The Cannon (Carter's); it is a splendid Potato, being disease-resisting, a good cooker and a heavy cropper. Prime Minister is another grand variety. Supreme is a very fine Potato, and good cropper, but always keeps badly after it is lifted with me. Magnum Bonum I have grown for three years, but it has never paid for planting, so I have discarded it. This year I got 7 lbs. of Satisfaction (Sutton's), and I have lifted 179 lbs. from it, very few being diseased. Edgecote Purple is another grand variety, being very free from disease and a capital keeper.—*Thos. Cockerill, Wirksworth, Derbyshire.*

THE CHANNEL ISLANDS REVISITED.

(*Continued from p. 86.*)

The Caves at Le Corbiere.

The Great Western Hotel, at which I usually make

Mr. T. B. Bacon.

my headquarters during my rambles in and around Jersey, is conveniently situated, overlooking the Jubilee Gardens at the head of Esplanade, and from thence one fine day a merry party was organised for a trip to the Corbière. Needless to say we were indebted to mine host's thoughtful organisation for much of the day's pleasure. The annexed photograph is an excellent portrait of my good friend to whom I refer, viz., Mr. T. B. Bacon, the Maître d'Hôtel.

The gardens, by-the-bye, in verdure clad, form a restful object for the eye amongst a crowd of stone and granite buildings, within easy reach of the terminus of the Western Railway Company. Now the Jersey railways are an institution, and although to some of us who are accustomed to the precision of the main lines of Great Britain the appointment of the Jersey railways may appear prehistoric, yet the lines distinctly serve a public service, and without them locomotion would be far less easy. Away round St. Aubin's Bay runs our train, and at Port Marque, with its quaint little signal box we get a glimpse of the Quenvais Golf Club ground, and further in the distance Blanche Banques. As the train ascends the steep incline beyond St. Aubin's town, curving to the right and to the left, the rugged beauty of the scenery on either side of the line is magnificent. The hill side is dotted with tethered herds of the smooth-coated Jersey cattle, tended by the veritable Jersey milkmaid familiar to us in the pictorial posters around grimy London. With the changing autumn foliage, rich in gold and purple tints, we have before us an ideal picture, such as Millais—and we are near his birthplace now—was wont to admire and appreciate. Another important land mark is St. Peter's Barracks; and finally we reach Le Corbière. Descending the rugged face of the cliffs and rocks, we reach below the entrance to the main cave, which is some 260 ft. in length, and its lowest elevation about 12 ft., whilst parts of the roof are 60 ft. overhead. This is known as "The Pirates' Cave." Another chamber has recently been discovered running inland to an indefinite extent, for as yet this latter subterranean passage has been unexplored. The precise situation of these caves is in the charming and rugged bay of La Rosier, and Mr. Geo. Misson, of the Corbière Hôtel, who acted as guide, philosopher, and friend, deserves the thanks of the public for his enterprise in making the caves accessible to the tourist. The caverns were formally thrown open on the anniversary of Her Majesty's birthday in 1894, and the National Anthem, for the first time in history, was sung in "The Pirates' Cave." As mentioned above, the principal attraction is the pirates' cave. Tradition has it that from here the captain and his band would go forth with huge beacons, which would lure to destruction craft that might be threading their way through the rock-bound channels which surround the coast. It is refreshing to learn that the captain of this precious *crew* was put to death two centuries ago at St. Aubin's, the then capital of the island, and our authority for this is *La Petite Journal*, of Paris. Mr. Misson tells a stiring narrative of the way in which he discovered this cave. It was a mere chance that brought him there, and, struck with the grandeur of the spot he, with the native love of adventure, contemplated crossing the intervening water by swimming; but that was a trifle too cool, and returning to the charge on another day our modern Crusoe built himself a raft, and probably for the first time after an interval of two centuries the human foot once more trod the rocky floor of the pirates' cave.

The walls consist of numerous segments of rock and stone of a red-brown colour, whilst the main support of the roof is naturally formed by a pillar of massive solidity; the roof is rugged with basalt and reflects in phantom-fashion the improvised line of lamps with which Mr. Misson lights the caves. In the sides there is a curious mollusk formation, and the rich colouring of these curious caves is remarkable. A pair of swallows have found a home in the cleft of the centre pillar already referred to and their annual broods are an object of interest to our guide.

The "smugglers' cave" lies rather more to the west in the direction of the light-house, and this up to within a few years ago was used for purposes of defrauding the revenue. Spirits, silks, and tea are said to be the articles mostly smuggled, and in order to remove them under cover of night, most extraordinary means were adopted by the daring contrabandists. A coffin was requisitioned, and the nightly prowls of these erring sons of the sea gave rise to the superstition that the neighbourhood was haunted by spirits of another kind. Be that as it may, however, the existence of these caves, the picturesque surroundings, and the history which belongs to them forms an interesting diversion for the tired and jaded worker who seeks these climes for rest and recreation.

One thing remains to be said and that is a word of commendation to Mr. and Mrs. Misson for their catering at Le Corbière Hôtel at which the party were entertained to tea. With a cheery good-night, and good-luck to the caves, we returned to our train *en route* for St. Helier once more.—*Gyp.*

THE LATE MR. WHITTON.

No doubt the article in your obituary by Mr. Temple regarding the late Mr. Peter Whitton will be read by many of his old people with regret. As one who served under him, I can speak from experience, and I am sure that many as well as the writer have lost in him a kind and warm-hearted friend. He was always delighted to do anything for those he found diligent and anxious. Being a thorough all-round grand old gardener, he could not bear to see anything done except in a workman-like manner. This quality in any man is a good one, and its impression has not failed to leave its mark on many of those who had the lot to serve under him at Methven. The

Simla Walk he was naturally proud of, as the plants were his own raising, as Mr. Temple says. He might well be so, for it is given to few to see plants reared and planted by their own hands, in such perfection as these are and have been for years. While everything under his charge was thoroughly done, his chief pride lay with his vines, quite magnificent crops being taken each year for a long period. Always clean, and yet never scraped nor painted, these vines, I believe, are in good health yet.

His death is all the sadder as it is only about six weeks since Mrs. Whitton died, having died at the end of August. For his sons it is especially sad, and much sympathy is felt for them. As for myself, I shall always remember him as a warm-hearted friend, and one for whom I entertained the highest respect; and I am sure many of those, who served under him, hold him still in their memory with the same feeling.—*Perthshire.*

PRESENTATION TO A NURSERYMAN.

A LARGE gathering of members and friends of the Hawick Working Men's Horticultural Society met in the Tower Hotel, Hawick, on Saturday, the 10th inst., to hold a "social," and present Mr. John Forbes, Buccleuch Nurseries, with a handsome reading lamp. Mr. John Kershaw, president of the society, ably filled the chair. After the usual toasts had been done justice to, the chairman, in an eloquent speech, sketched the rise and progress of the society, which was founded six years ago by a few enthusiastic allotment holders, and now boasted of more pounds than shillings when they started, giving great praise to the energetic secretary and treasurer, Mr. Geo. Mitchell, who, he said, had done much to make the society what it now was. He called on Mr. A. Taylor to make the presentation.

Mr. Taylor, on rising, said it gave him great pleasure to be present. As they all knew the history of the society, he did not require to remind them of its phenomenal success, not only in regard to the annual exhibition, but also to the great influence it has had in removing many of the weedy and trashy things from the gardens, and encouraging articles of higher merit, no small share of that credit being due to Mr. Forbes. The splendid exhibits he placed before them at their shows must have had a great influence in educating their minds to a higher and nobler conception of things horticultural. Mr. Forbes was a man of whom they all felt proud; he had gained honours over the length and breadth of the land, and was well known in the world of horticulture as a man who had made his mark. His nurseries were well worth visiting, and always brought to his mind the beautiful poem of John Palmer in which he says:—

"Ye bloom in the palace, ye bloom in the hall;
Ye bloom on the top of the mouldering wall;
Ye bloom in the cottage, the cottager's pride—
The window looks cold with no flowers by its side—
Ye twine up the trellis; ye bloom in our bowers;
Ye carpet creation, ye beautiful flowers.

* * *

Wildings of nature or cultured with care,
Ye are beautiful, beautiful, everywhere."

He then handed over to Mr. Forbes the beautiful lamp, which had a suitable inscription on the base.

Mr. Forbes, on rising to reply, was received with loud applause, the whole company rising and singing lustily "for he's a jolly good fellow." After the enthusiasm had somewhat abated, Mr. Forbes said:—"I am very much obliged to Mr. Taylor for the kind words he has given expression to, and for the hearty manner in which you endorsed them. I do not wish to assume any undue modesty or humility, but I must say that the praise you have so generously lavished upon me is altogether extravagant, and quite beyond any services rendered by me to your society, to say nothing of the costly and handsome gift you have been so good as present me with. I must, however, give you credit for honesty and sincerity, and can only account for your liberal sentiment, by giving you credit also for very generous and charitable views toward myself and my small services.

Words, gentlemen, are always considered and really are a very cheap way of evidencing gratitude and defraying debts, but I must say that you are not content with this mode of expression. You have been profuse in kind words, but you follow them up by a thorough and tangible mark of your gratitude in the shape of this handsome and useful reading lamp, which I doubly value as being the spontaneous, and I understand, the unanimous act of the society, of which I have much pleasure in accepting, and which I shall use in the hope that it will shed light on many topics that have hitherto been dark; and that it will ever remind me of a circle of friends who have the goodness and magnamity to put the most iberal and charitable construction on small services rendered to them.

But, Mr. Chairman, if I had done all you give me credit for, I consider I would not be doing a jot too much service to horticulture, and especially horticulture as applied to working men's shows. I contend, and am sure you will agree with me, that there is no more useful or enobling recreation, that working men can employ their spare time with, than their gardens. I need not remind you how many of your own acquaintances would spend their time loafing on the street, or spending their earnings in the public house, had they no flowers to love or garden to cultivate, and cultivate so well that they do more than the equivalent for making two blades grow where only one grew before, in that every blade so grown is immensely better than it would otherwise be. They thus confer a great benefit on their intellect and morals as well as on the resources of their household; and they also confer a great benefit on the whole horticultural world. It is an indisputable and well recognised fact that it is the enthusiastic amateur we have to thank not only for raising very many of our best fruits, flowers, and vegetables, but also for preserving many of them from extinction when lost to gardeners and even nurserymen. I again thank you for your handsome gift; I will be proud to use it, and show it to my friends as a token of your goodness, liberality, and generosity."

A few pleasant hours were spent with songs and sentiment. Mr. Forbes proposed success to the "Hawick Working Men's Horticultural Society," which was replied to by Mr. John Dewar in a most appropriate manner. "Auld Lang Syne" was sung in a way as only Scotchmen can sing it, after which the company had to give way to "Forbes Mc Kenzie."

FALKLAND PARK.

SOMETHING of interest may be seen at any season of the year in the gardens of T. McMeekin, Esq., Falkland Park, South Norwood Hill. We had occasion to make a hurried inspection of the houses recently, and noted some seasonable flowers as well as some that are never out of season.

Entering the vineries we noted a houseful of vines supposed to be sixty to eighty years old. They were intended to be destroyed before now, but as they continued to bear good crops of fruit they have been allowed to remain. The varieties are Black Hamburgh, Mill Hill Hamburgh, and Muscat of Alexandria, all bearing good bunches and berries. Another vinery planted twelve months ago last May contains some young vines which have made growths 14 ft. long, during the past season. The varieties are Black Hamburgh, Foster's Seedling and Madresfield Court. Passing through the kitchen garden, we noted a standard Pear tree, the branches of which were being broken down by the weight of fruit. There were about three dozen fruits on one branch, forming practically one bunch. A large breadth of Onions which had been reared under glass in spring and planted out, had given excellent results. The bulbs of The Record, Ailsa Craig, and Cranston's Excelsior were of enormous size.

One of the conservatories, forming part of the long range of houses, was brightened with a display of single and double tuberous Begonias, in a great variety of beautiful colours. Where this house abuts on the rockeries built of tufa on either side of the walk, the glass partition has been removed on the right hand side exposing the greenery and flowers on the rockery, which we consider an improvement.

The Cattleyas were beginning to be lively in one of the Orchid houses, and included C. dowiana aurea, C. gigas, and C. gaskelliana. Of the first named there was a magnificent variety, richly striped with orange and crimson along the centre. Of C. gaskelliana beautiful light-coloured varieties were numerous. Odontoglossum grande measured seven inches across the petals. The dark orange blotch in the throat of C. Eldorado was very conspicuous. C. Harrisoniae was also flowering. The flat sepals and petals and dark lip of Laelia pumila prestans were very pretty. The Cymbidiums here had commenced to move thus early in the season, including the dark C. lowianum, Prewitt's var. C. lowianum itself was throwing up nine spikes of bloom on one plant.

Another house was largely occupied with Cypripediums, a considerable number of which were in bloom. Amongst them was a fine piece of C. chamberlainianum, which has flowered continuously for the past twelve months, six to eight flowers being open at one time. Other hybrids included C. villosocalosum, C. hornianum, C. arthurianum, C. crossianum, and C. Cythera. The beautiful C. Charlesworthii, had commenced its long season of flowering. Oncidium Papilio majus seems always in season. Some of the natural hybrids between Catasetum macrocarpum and C. Bungerothii have found their way here. Vanda sanderiana was in bloom and close beside it was an unusually strong piece of Saccolabium bellinum having three flower scapes on a stem 9 in. high. A curiosity in its way was Dendrobium chrysanthum with all of its flowers deformed, some of them being semi-double. Several of the Cattleyas carried a bloom each that was deficient in the number of petals, which were united with the lip or the dorsal sepal, and in cases were apparently entirely absent. There is no gauging of these vagaries amongst Orchids.

The stove contained some excellent examples of culture under Mr. A. Wright's care. Anthurium warocqueanum carried leaves about 3 ft. 6 in. long, and 16 in. wide. A specimen of Cocos weddeliana had a head of leaves on a clean stem 4 ft. high. The beautiful Aristolochia elegans was still in bloom, the markings of the flowers being intricate and fantastic. In this house was a quantity of Cattleya dowiana aurea, suspended from the roof and about to flower. One plant bore a flower sheath, half of which was like a true leaf.

The intermediate house contained a great quantity and variety of Achimenes in full bloom and very showy. Plants of Clerodendron fallax, raised from seed, carried large panicles of scarlet flowers. Gloxinias still kept up a good display. A tall piece of Begonia President Carnot was very showy on account of its heavy, pendulous cymes of soft orange-red flowers and fruits. The pretty Saintpaulia ionantha, with blue flowers like Violets, was very floriferous. A little further on we came upon a houseful of seedling Cannas, in full bloom and including some fine varieties.

A long corridor, with a cool greenhouse temperature connects the whole range of seven houses together, and is not the least interesting feature of the establishment, as it contains more or less bloom all the year round. The climbers are a decided feature of it including some fine Lapagerias. The flowers of one plant were to be seen through the open doorway of a Fern-grotto, and suspended from the roof of the latter. In the corridor itself was one of the largest plants of Fuchsia triphylla we have seen; it was loaded with blossom. Datura sanguinea had flowered all the summer and autumn, its huge trumpet flowers being very conspicuous. Other handsome and floriferous subjects were Solanum jasminoides, Begonia fuchsioides, a pale variety, Pleroma macrantha, Plumbago capensis, Cestrum elegans, and Begonia metallica, a healthy piece, 3 ft. high.

The nucleus of a collection of British Ferns has been got together here, including Athyrium Filix-foemina plumosum elegans, and other forms of the Lady Fern. The varieties of the common Polypody were numerous, including such beautiful forms as P. vulgare omnilacerum, P. v. cornubiense, P. v. cristatum, and P. v. Hillmani. The latter is forked from the very base of the frond. Another very beautiful form is P. v. pulchellum, the pinnules of which are even more deeply divided than those of P. v. omnilacerum.

GARDENING MISCELLANY.

ABUTILON MEGAPOTAMICUM.

TRAINED against the low wall supporting the T-range at Kew, and facing due south, is a fine specimen of this vastly pretty and rather curious looking Abutilon that has been flowering with exceptional freedom for some time past. The flowers, which are rather small, are single and axillary, and are

produced along the whole length of the wood of the current season's growth. The calyx, which is much inflated and rich red brown in colour, is prominently five-ribbed, and overlaps the yellow corolla to a considerable extent, so that the whole flower bears some resemblance to that of a Clerodendron. The calyx teeth are subulate and acuminate, and the bunch of purple brown anthers protruding from the corolla adds yet a further charm. The leaves are small and sagittate-lanceolate in shape. The plant is a native of the Rio Grande, from whence it was brought about the year 1864.

ROSA INDICA SANGUINEA.

An oblong bed cut out of the grass at the southern end of the Palm house at Kew is filled with this delightful little Rose. The plants are busby little specimens some 18 in. or 2 ft. in height, with small reddish-brown leaves that of themselves are distinctly ornamental. The flowers are semi-double, a deep cerise in hue, and about 1½ in. in diameter—a good size when the abundance with which the flowers are produced is considered. As a dwarf hedding plant for small beds it would be difficult to surpass it.

ABUTILON GOLDEN FLEECE.

One of the most conspicuous objects in the greenhouse at Kew at the present time, is undoubtedly a grand specimen of Abutilon Golden Fleece that is surprisingly full of flower. Coming into the house by the southern entrance a sheen of gold hanging from the roof a little way down the house greets the visitor. The plant in question although but a young one, is strong and vigorous, and the large yellow flowers are produced in great abundance. Assuredly the name of Golden Fleece bestowed upon it is not an inapt one. The only thing that can be urged against the utilisation of Abutilons is a certain stiffness of habit, for most of them do not readily take on a subpendent form, but in this case the effect is excellent.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Catalogue of Trees and Shrubs—*Omega*: There is such a catalogue or rather a hand-list such as you name. It is entitled "Hand-list of Trees and Shrubs grown in Arboretum, Royal Gardens, Kew, London." It is in two parts, the second of which has just been published. Part I is 8d.; Part II, 1s. Postage would have to be paid in addition we believe. The list is lengthy and reliable in the matter of nomenclature. The two parts include all the hardy trees and shrubs grown in the gardens. Apply to the Curator, Royal Gardens, Kew, London.

Minerals and Flowers.—*Rubens*: Withamite may be red or yellow; crucite may be grayish or reddish, and may possibly be nearly matched by Lilium testaceum; red tourmaline would be difficult to match. Sapan-wood would nearly be matched by the upper petals of Viola Vernon Lee. Toon-wood (not Toom-wood) is very similar in hue, being red-brown. Cam-wood is red. but we do not know the particular shade; and Bar-wood is identical with it. Lima-wood approaches Sapan-wood very closely in colour, but is finer. Chestnut-red is often met with in Odontoglossum crispum, and O. luteo-purpureum. The red colour of Chay-root varies immensely, pale or dark, according to treatment; sometimes it is chocolate or black. Chica red may be matched by some varieties of Azalea indica. Andarac, realgar or red orpiment is brilliant red and may be matched by some of the garden Dahlias. Liver-red occurs in the Peach Tomato, The Victoria Heartsease is the name of a strain of Pansies, the individuals of which may vary in colour to any extent.

Oval Flower Bed.—*W. O.*: Flower beds described as oval, vary slightly in shape, and we see no reason for adhering strictly to one particular outline provided the situation, where it is located, permits of or calls for its being different from the usual run. We may say, however, that the sketch, with which you furnished us, was not exactly oval as this term is generally accepted. It should taper or be rounded off equally at both ends; but the later should not be quite so sharp or narrow as that which you sketched. If made just a trifle wider at either end, it would have been exact.

Pamplet on Judging.—*Judge*: There is a pamphlet of the kind you name, entitled "Rules for Judging and Suggestions to Schedule-makers, Judges, and Exhibitors." It was issued last December, by the Royal Horticultural Society, 117, Victoria Street, Westminster, London, S.W. It supplies hints to judges as to the relative value in points, both of fruits and vegetables. It may be obtained of the secretary at the above address. Price 1s. 1d. post free.

Names of Plants.—*Constant Reader*: Dendrobium Foelschi, a native of Australia.—*W. O.*: The Conifer is Sequoia sempervirens, not a Taxodium according to the best modern botanists.—*J. C.*: 1, Salvia rutilans; 2, Salvia involucrata Bethelli; 3, Salvia patens,—*H. W.*: 1, Cattleya labiata var.; 2, Oncidium incurvum; 3, Odontoglossum lindleyanum mirandum; 4, Cattleya bowringiana: 5, Cypripedium barbatum crossianum.—*T. R.*: Gleditschia triacanthos; 2, Crataegus coccinea; 3, Crataegus punctata; 4, Mueblenbeckia complexa; 5, Cotoneaster Simonsii; 6, Symphoricarpus racemosus.—*J. M. L.*: 1, Aster diffusus horizontalis; 2, Aster Amellus bessarabicus; 3, Aster cordifolus.—*A. McP.*: 1, Litobrochia vespertilionis; 2, Nephrodium decompositum glabellum; 3, Nephrodium cicutarium; 4, Asplenium bulbiferum minus; 5, Selaginella uncinata; 6, Polypodium subauriculatum.—*J. S.*: 1, Cupressus nutkaenis; 2, Retinospora obtusa; 3, the Norway Maple (Acer platanoides) quite usual for it to turn yellow in autumn.—*Omega*: The Rigid Sunflower (Heliantbus rigidus var.) apparently, but flowers are insufficient for determination.—*A. W. S. F.*: 1, Ophiopogon Jaburan variegatus; 2, Reineckea carnea variegata; 3, Phrynium variegatum; 4, Asplenium bulbiferum fabianum; 5, Nephrolepis exaltata; 6, Davallia birta.—*Robert Lindsay*: 1, Colletia spinosa variegata; 2, Crataegus tanacetifolia; the Tomato is affected with Cladosporium fulvum.

Celery leaf spotted.—*Omega*: The spots are caused by the grubs of the Celery Fly. The second brood has been numerous, but the young grubs have been checked by the cold and wet weather, so that most of them have died early. The rotting of the heart of the plants may be due to various causes, such as a continually wet and saturated condition of the soil, to soil getting into the centre, or to injury from the Celery-stem fly. The real cause must be found out on the spot and by an exact knowledge of the conditions under which the plants have been grown, cultural treatment, etc.

Angle for Fruit Houses.—*Omega*. For mid-season and late work you could not do better than set up the roof at an angle of 45°. For very early work a much sharper angle would be necessary such as 50° or 55°.

Lilium giganteum leaf.—*M. M.*: The seedlings must be very strong indeed if the blade of the leaf measures 18 in. by 16 in., and we think they should flower next year, or some of them, if they continue to make the same progress. When the flower stems commence to develop, you will have to take off the lights to give them room. We should be pleased to learn how you succeed in your locality.

The Victoria Plum.—*M. M.*: The failure of the Victoria Plum to ripen its fruit did occur in your county, but much further inland, and possibly at a higher elevation, but not at a great altitude, as it was in a valley. We always considered your locality much warmer and the crops earlier. We are surprised, however, that it should ripen with you on a standard. The warm, sheltered situation must be held accountable for the result. We are even more surprised that the fruit should have ripened at an elevation of 800 ft., in the neighbourhood of Ballater. At Blackshiels, south of Edinburgh, in the cold summer of 1888, we noticed fruits of this Plum which had only attained half their usual size by the end of September, and did not make further progress. Blackshiels lies at an elevation of 800 ft., being at the same altitude as the top of Arthur's Seat, Edinburgh.

Names of Fruit.—*J. J. J.*: Pears 1, Chaumontel; 2, 4, and 10, Beurré Diel; 3, Duchesse d'Angoulême; 5, Belle de Bruxelles; 6, Catillac; 7, Gansel's Bergamot; 8, Jersey Gratioli; 9, Marechal de la Cour; 11, Black Achan; 12, Bergamote d'Esperen; 13, Souvenir du Congrès; 14, Apple, Pine Apple Russet; 15, Pear, Althorp Crassane. All were good samples, separately wrapped in tissue paper, packed with wood wool, and arrived safely.—*A. J.*: 1, King of the Pippins; 2, Warner's King; 3, and 8, Emperor Alexander; 4, and 7, not known; 5, Beauty of Kent; 6, Gloria Mundi. All well packed with wood wool and paper.—*X. Y.. Z.*: 1, Marechal de la Cour; 2, Bergamote d'Esperen.

Communications received.—J.L., next week.—A. Methven.—Briggs & Sons.—The Studio.—A. E. Stubbs. — M. — L.A. — T. Jobnson.—B.—Exton.—F.J.G.—P.L.A.—W. East.

TRADE CATALOGUES RECEIVED.

James Grieve & Sons, Redbraes Nursery, Broughton Road, Edinburgh.—Catalogue of Bulbs, Seeds, Florists' Flowers, Hardy Herbaceous Plants, &c.

Will Tayler, Osborn Nursery, Hampton, Middlesex.—Descriptive list of Select Roses; also Descriptive List of Fruit Trees.

P. Lambert, Trier, Rheinprovinz, Germany.—Descriptive Catalogue of Roses.

Thos. Rivers & Son, Sawbridgeworth, Herts.—Catalogue of Fruit-trees and Roses.

LONDON SEED TRADE.

October 20th, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 39, Seed Market, Mark Lane, report a firm market for Clover seeds. Rape seed is dearer. Mustard seed being in short supply realises higher figures. Rye-grasses steady.

COVENT GARDEN MARKET

October 21st, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bnshel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs.	25 0	27 6
Grapes, per lb.	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	3 0
Asters, doz. bches	3 0	6 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	4 0	6 0
Gladiolii, doz. spikes	1 0	3 0
Hyacinths (Roman) doz. sprays	0 8	1 0
Lilium lancifolium, doz. blooms	1 0	2 0
Lilium longiflorum per doz.	4 0	7 0
Lilac, White (French) per bnch.	4 0	5 0
Lily of the Valley doz. sprays	1 0	2 6
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Mimosa, per bnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	4 0	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Red Roses, doz. bchs	4 0	6 0
Pink Roses, doz.	1 0	2 0
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays	2 6	4 0
Tuberoses, doz. blooms	0 3	0 4
Primula, double, doz. sprays	0 6	0 6
Violets (French) per doz. bnches.	1 6	
Violets (English) per doz. bnches.	1 6	2 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Asters, doz. pots ...	3 0	6 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, in var. doz	6 0	24 0
Erica, per doz.	9 0	15 0
Erica Hymalis, per doz.	12 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet,	2 0	4 0
Solanums, per doz.	12 0	15 0

Agricultural Economist.

An Illustrated Monthly Magazine of 52 pages and cover Exponent of scientific and high-farming; advocate of co-operation in agriculture, in the supply of farm requisites and the sale of produce; organ of the Agricultural and Horticultural Association, the pioneer society for mutual supply of pure oilcakes, complete manures, reliable seeds and implements on wholesale terms. Specimen copy free. Subscription per annum, 5s. inclusive of postage. Single Copies 6d. each, through all Newsagents.—3, Agar Street, Strand, London, W.C.

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The Gardening World.
Edited by J. FRASER F.L.S.
SATURDAY, OCTOBER 31st, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 2nd.—Lambeth and Southwark Show (2 days).
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

TUESDAY, November 3rd.—First great show of the N.C.S. Jubilee Festivities at the Royal Aquarium (2 days)
R.H.S. of Southampton Chrysanthemum Show (2 days).
Chrysanthemum Shows at Penzance (2 days), Truro (2 days), Hereford (2 days), and Barnstaple (2 days).
Sales of Bulbs by Messrs. Protheroe & Morris. and Mr. J. C. Stevens.

WEDNESDAY, November 4th.—Chrysanthemum Shows at Market Harborough (2 days), Wolverhampton (2 days), Ascot (2 days), Hitchin (2 days), Bromley (2 days), Coventry (2 days), Dalston (2 days), and Ealing.
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

THURSDAY, November 5th.—Second great show of the N.C.S. Jubilee Festivities at the Royal Aquarium (2 days).
Publication of the GARDENING WORLD reports of shows, &c. to date.
Chrysanthemum Shows at Hanley (2 days), Stirling (2 days) Romford (2 days), Harrogate (2 days), and Windsor (2 days).
Devon and Exeter Society's Fruit and Chrysanthemum Show (2 days).
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, November 6th.—Altrincham, Bowdon, Sale and District Chrysanthemum Show (2 days).
Chrysanthemum Shows at Hinckley (2 days), Waterford, and Nottingham (2 days).
Sales of Bulbs and Orchids by Messrs. Protheroe & Morris & of Bulbs by Mr. J. C. Stevens.

SATURDAY, November 7th.—Crewe and District Chrysanthemum Show.

FRUIT AND ITS INSECT PESTS.—The past season, previous to August, was so dry that it was highly favourable to the development of many insect pests. A cry comes from the Eastern Counties that the losess to the fruit-growing industry, resulting from the ravages of insects, are causing great anxiety to all concerned in the profitable culture of the same. The burden of this evil falls most heavily upon those cottagers who depend largely upon the fruit harvest to pay their rent. The trouble is not a new one, but seems to have been growing for years past. Those situated in rural districts suffer most, by the fruits being so injured that they are unmarketable. To that may be added the fact that hardy fruits such as Apples and Pears are keeping badly this year, and the loss falls even more heavily than in average years. This latter source of loss is not confined to the Eastern Counties, but is reported from other sources, where it occasions no appreciable hardship whatever. Prices rule low when fruits are forced upon the markets hurriedly.

After the agitation that has been kept up concerning hardy fruit culture in this country, the means of prevention and remedies against insect pests, and other items relating thereto, one might readily be condoned for imagining that great improvements have been effected, and that much damage from insect pests was beyond the pale of possibility. Such is not the case, however, and notwitstanding the modern facilities for travel, and the many channels through which information of the most reliable nature can be conveyed, progress is slow, and the fruits of much labour more meagre than could have been anticipated at any time during the last decade. Much of the information disseminated reaches those who either cannot or will not adopt

any measures which may be suggested, the former being perhaps the larger body. Some may act upon advice received, while others scout the idea; so that what is everybody's business is nobody's. Combination and concerted action could adopt means to an end, and accomplish remedies where isolated action is doomed to failure. In Continental countries, and in America, remedies against insects and other pests are more universally adopted than in this country; and even in British colonies we have good instances of concerted action, which in this country we should hesitate to adopt for fear of infringing upon the liberties of the individual. It would, however, be highly advantageous for fruit growers generally, if they would voluntarily combine amongst themselves in any given district, to take joint action against the hordes of insect or fungoid pests that may be giving trouble to the community. For instance, wherever a district may be largely planted with fruit trees, it may be taken for granted that their particular pests and enemies will increase in a like ratio, owing to the increase of their food, unless artificial or other means are taken to keep them in check.

It might be a fair question to consider whether a great increase of birds or insects was the most hurtful to an orchard. It is admitted that birds are most troublesome only during the ripening period of fruits. They could, however, be kept at bay during that short period by the aid of a few boys scattered over the orchards. Insects could not be dealt with in the same fashion. It would, pay, however, to wage war against insects and fungi during the whole season, provided the means for carrying on operations were widely adopted in all fruit growing districts. The respective county councils might or should render assistance, both by precept and example, giving tangible aid to those who are most in need of of the same. Demonstrations might be might be given in every rural district; and what is more, the spraying apparatus, the fungicides and insecticides might be provided for by combination over a wide district so that cottagers and small growers, at least, might only have to provide, or pay for the labour involved in the spraying of their small plantations or plots of trees. That, surely, could be no great hardship considering the general advantage that would be secured to the community at large. Private enterprise might even provide the machinery and means wherewithal for combating insect pests, and be remunerated for the same by the owners of the fruit trees so treated. The need for such prevention or remedies would become more and more apparent to fruit growers, as the technical instruction committees of various county councils succeeded by their demonstrations in showing the utility of concerted and determined efforts to check or destroy insect and other pests. After a time, there is no reason why the enterprise initiated for the above purpose should not pay its own expenses and leave a margin of profit for those who provide the machinery, just as in the case of agricultural machinery for tillage or harvesting operations.

This is no local question, but one of national importance. Private establishments should be led to participate in the working out of such a scheme, and they could not fail to benefit by the same. Fruit growers for market are necessarily largely confined to a few counties such as are naturally adapted for fruit culture, both in the matter of soil and climate. Private establishments, on the other hand, are spread over every county, and the gardeners are expected to grow fruit whatever the local disadvantages may be. In fruit-growing counties, the owners of private gardens would find it an easy matter to combine with the market growers, or to take action on their own reponsibility, which would accomplish the same results in the end. Isolated gardens could be as easily managed, inasmuch as there would be no other orchards in the immediate neighbourhood to stultify the labour undertaken by the gardeners of the same. In northern districts, insects are usually less abundant, and always less varied than in the south.

Mr John Henry Holland, till recently at Kew, has been appointed assistant curator of the Botanic Station, at Duke Town, on the Niger Coast.

The proof of it.—The surest way of testing whether a big fungus is a Mushroom or a toadstool is to eat it. If you have no bad symptoms, it was a Mushroom; if you die you will have no doubts afterwards as to what it was. Snaggs would rather remain in doubt.

On Lord Rosebery's home farm at Dalmeny a heavy crop of Potatos was recently harvested. An eight-acre field gave a return of 156 tons, of the variety Up-to-Date. This is an equivalent of 19½ tons per acre, and the produce was of good marketable size.

Made in Holland will have to look out.—We notice by the Cork Press for last week, that Mr. Wm. Baylor Hartland, of Ardcairn, purposes giving a "one man exhibit" of late single self-coloured Tulips in the large hall at the Assembly Rooms, South Mall, the proceeds to be in aid of the city hospital. This is a good start with Irish industry, as we believe Mr. Hartland has the soil and climate.

M. Auguste Trecul, a French botanist, has to be added to the list of names of those who have all died within the last week or two. M. Trécul travelled extensively in Mexico, Texas and the Rocky Mountains, on behalf of the Jardin des Plants, Paris, and had sums of money granted him by the French Government, to enable him to carry out his labours. He collected a vast number of plants in those countries he visited.

Mr. William Bernice French, recently of Kew, has been appointed assistant at the Municipal Gardens at Queenstown, Cape Colony. He had been deputy foreman in the Orchid houses, and afterwards in the Palm house at Kew. Previous to that he had been in the ferneries. He entered Kew in 1891 and left quite recently. Previous to that date he had been in the famous gardens of the late Sir George Macleay, at Pendell Court, Bletchingley, Surrey.

A new Fruit.—What is described as a Strawberry-Raspberry, a hybrid between those fruits, is described by more than one of our contemporaries, neither of whom, nor the introducers, Messrs. Wm. Fell & Co, of Hexham, believe that any such hybrid has been effected. We should describe it simply as a variety of Bramble or Blackberry, It may be possessed of some special flavour, which, probably, gave rise to the above combination of names. It comes from Japan, is stated to be quite hardy, and keeps on fruiting the whole summer.. From a perennial root-stock it throws up numerous shoots which are said to die down annually.

Tercentenary of the Potato.—At the forthcoming celebration, at Dublin, on the 9th and 10th December, of the tercentenary of the introduction of the Potato into Ireland, a Conference will be held in The Rotunda, under the auspices of the Irish Gardeners' Association. A number of papers and lectures have already been promised. Arthur W. Sutton, Esq., F.R.H.S., of Messrs. Sutton & Sons, Reading, is to lecture on "The Potato." His remarks will be illustrated by lantern views, as on the occasion of his appearing before the Royal Horticultural Society of England in November last year. Messrs. Dobbie & Co., Rothesay, N.B., will deal with "Twenty-five Years' Experience on Potato Culture in Scotland and South of England." Professor Malden, late Agricultural Superintendent, of the Royal Dublin Society, will bring forward "English and Irish Potato Cultivation and Trade," as his subject. Mr. A. Findlay, the well-known Potato grower, of Markinch, Fifeshire, will make "Remarks on Raising New Varieties of Potatos." Lord Powerscourt is president of the Conference, and the secretary is Mr. Thomas Shaw, Rotunda Rooms, Dublin.

Nearly 70,000 tons of Cork are required annually in Britain, for the bottling of the beer and aerated waters consumed.

Wild Strawberries continue to ripen around St. Tudy, Devon, in spite of the rough weather. Six very fine ripe fruits were gathered the other week.

The Royal Horticultural Society of Ireland have arranged for a display of greenhouses, heating apparatus and other horticultural sundries at their annual Chrysanthemum and fruit show on the 4th and 5th November.

Mr. C. H. Humphries, curator of the Botanic Station at Aburi, Gold Coast Colony, is at present in England on leave of absence, but his six months' holiday will be over in December. His duties are being looked after by Mr. Charles Berryman, who left the Royal Gardens, Kew, for that purpose.

Vanda caerulea alba.—A novelty in its way turned up in the sale rooms of Messrs. Protheroe & Morris, Cheapside, on the 23rd inst. This was a white variety of Vanda caerulea. The peculiarity about it was that the flowers were quite blue when they first expanded, but were almost pure white on Friday of the above date. The plant was well flowered and knocked down at 4½ guineas.

The Women's London Gardening Association.—This is said to be a thriving institution. In addition to its horticultural activities it has sensibly set itself to the supplying of delicious jams, jellies, damson-cheeses, bottled fruits, chutneys, honey, &c, made or bottled on the premises. The association has struck out fresh lines for itself, by making cranberry-jam, rowan jelly, and similar delicacies hitherto carried on by private enterprise for home consumption.

Birmingham Gardeners' Mutual Improvement Association.—At the bi-weekly meeting of this Association on the 19th inst., there was a good attendance under the presidency of Mr. A. Spinks. An exhibition of Apples by members residing in the district was held. Apples in quantity were also brought for identification, as well as a collection of British and American varieties for comparison. The latter were shown by Mr. W. Gardiner, of Harborne, who described the chief characteristics of the varieties shown.

Mr. Henry Millen, the Curator, of the Botanic Station at Lagos, has arrived in England on leave of absence. He is an old Kewite, and has been in the service in Lagos Government since 1890. In his absence his duties at Ebute Metta will be discharged by Mr. F. G. R. Leigh, Acting Curator, and by Mr. T. B. Dawodu, who will look after the gardens attached to Government House. Both these latter gentlemen are natives of Lagos, and had the benefit of horticultural training at the Botanic Gardens, Jamaica (1890—93), and at Kew (1893—94).

Owls and Vermin.—A series of leaflets is being issued by the Society for the Protection of Birds. Each leaflet contains a short description of a species of British bird together with its habitat, the nature of its food and other characteristics pertaining to to the respective species. The section of the Wild Birds' Act which relates to each bird under consideration, is also pointed out. Mr. Montagu Sharpe deals with the owls in Leaflet No. 1, and describes owls as lynx-eyed cats with wings. In game-preserving districts these useful birds have been ruthlessly shot down until on the verge of extermination. The inevitable results have been plagues of mice, rats, and voles in such numbers as to be a real scourge, both to agriculture and horticulture. Owls should be tempted to take up their abode in those districts by every means possible. The game-preservers have only one view of the situation, or at least had so till they were being overwhelmed with rats and mice, when numbers of them came to see their mistakes. In olden times our forefathers would seem to have taken a wiser and more sensible view of the situation; for they encouraged owls upon their premises, leaving an ingress or owl-hole, often accompanied with a stone porch, in their barns, for the convenience of those destroyers of the mice and rats that took up their abode in the barns, granaries, and similar houses. Leaflet No. 2, is devoted to the Woodpeckers, the descriptive matter being by Sir Herbert Maxwell, Bart.

China Asters grown for Seed last summer upon the Continent and in Britain, were much injured by the wet weather during the flowering and maturing period. The prices for seed are expected to range higher than they were last year.

The Dwarf Pomegranate.—In Paris and other parts of France, fine effects are produced by the cultivation of Punica Granatum nanum in the form of dwarf standards. A bush of this dwarf type about 1½ ft. or 2ft. high has been flowering for a long time past against the wall of the Victoria house at Kew. Both calyx and corolla are scarlet. It flowers more freely than the type and should be added to every collection in the southern counties at least.

A triad of manures.—After taking note of the various elements of plants food, that are absolutely essential to plant life, we find that only three are as a rule difficult to procure by plants. These are nitrogen, phosporous, and potash. Most soils contain the rest in abundance, so that in supplying fertilisers to the soil, it is sufficient to procure or secure and utilise the three in suitable proportions for each class of plants in order to insure a good harvest, provided all other things are equal.

National Chrysanthemum Society.—The meeting of the Foral Committee of the above society which was held at the Aquarium on October 21st was rather a smaller one than we anticipated. The members of the committee evidently expected to see a good deal of material laid before them for they turned up in strong force. Flowers were sent by Messrs. Godfrey, Jones, Owen, Pearson, and Wells among the English growers, whilst M. Calvat ably represented the French cultivators. For particulars of the varieties certificated see another column.

Invading Army of Plants.—T. Kirk, F.L.S., gave an interesting paper on "The Displacement of Species in New Zealand," in the *Journal of Botany* for August. He says that out of 103 species of plants introduced from Buenos Ayres with ballast, eighty-six of them are already naturalised. Nor is this all; the invading army of plants brings in its train a more dangerous host of animals, such as the mussel scale, black scale, and numerous forms of plant lice. Higher in the scale of development come the wireworm, Turnip fly, Hessian fly, earthworms, molluscs, birds, and even mammals, which affect both the native flora and fauna.

Fruit and Honey on Railway Embankments.—Some ingenious calculator makes out that fifteen beehives per mile on railway embankments, at a rate of one pound of honey per day, in a length of 500 miles would furnish £7,500 worth of honey annually. We hope he has calculated the initial cost of hives and the expense of the attention necessary over such an extensive area. If we were to admit the feasibility of such a project, what about the thousands of tons of fruit that might be grown upon the railway embankments according to the same calculator? Fruit requires good soil to bring it to a reasonable degree of perfection. What kind of fruit could be expected from sandy and relatively sterile banks?

The Irish Fruit Industry.—Information, the want of which has long been felt, is now forthcoming upon this important subject as the result of the recent report of the Recess Committee. Over 3,000 tons of fruit are reported to have been railed from Richhill, up to the half of the season, and it is stated that £1,500 has been received by the railway company for freightage of this. A similar amount has also probably been despatched from Annaghmore, and from Portadown, Armagh, Trew, and Moy, hundreds of tons of Strawberries have been sent. If we take the average value of the fruit at £3 per ton, it will be seen that the railway company is receiving for carriage £17, for every £100 worth of fruit carried. This bears heavily on many of the farmers who prefer to cart their produce for upwards of thirty miles rather than pay the rates charged. The Apples this year are of excellent quality, and much superior to any American produce, and it seems a great pity that so promising an industry should receive so little encouragement and support. There is a tendency of late years to renovate the Orchards, and if only the railway authorities would meet the producer half way, it would be considerably better for all concerned.

The Egyptian Onion has a thick neck like a Leek, and is propagated by offsets and top sets. It is so hardy that it can be planted out in autumn and pulled up for use in April and May.

The Newcastle-on-Tyne Chrysanthemum Show will be held in the Town Hall and Corn Exchange on Wednesday and Thursday, November 18th and 19th. The last show held was a very great success, and, in the opinion of the judges, one of the finest in England. The committee have engaged some powerful musical attractions with a view to attracting large numbers of visitors. As usual, the committee will offer every facility to exhibitors from a distance who wish to set up stands not for competition.

Exterminating Butterflies.—"Nature Notes" for October appeals to the collectors of rare butterflies not to catch a single specimen more than they want for their collections. This advice may be taken by the amateur who merely collects to supply his own needs, but the professional naturalist and those who supply him with specimens, will continue their obnoxious practices in collecting all they can for sale, just as the plant collector does. Injurious moths and butterflies continue to be plentiful notwithstanding the war against them in garden, field, and orchard.

Abolition of the Paddy-tax and its Effects.—The tax on Paddy was abolished in Ceylon in 1892; and since then the crops have not been so good. There is a prevalent and widespread opinion amongst the cultivators that the deficiency of the crop is owing to the Government not collecting their share. The natives attribute the poor crops to the fact that the "blessed" or "fortunate shareholder," that is, the Crown, has nothing to do at present with Paddy cultivation. The fields continue to be carefully cultivated as formerly, but with different results, and the above opinion is not mere whim or sentiment, but is the deliberate and candid opinion of the intelligent and thoughtful masses of field-owners.

Insects and Colour.—M. Plateau, of the Belgian Academy, has been making some experiments with insects and Dahlias in order to learn whether or not the former are attracted by fine colours. In a large bed of single Dahlias he covered up the rays of some and the discs of other blooms, yet bees and butterflies sought these as eagerly as the uncovered flowers, pushing their way under the coverings in order to get at the small florets of the disc. M. Plateau concludes that they are guided by their sense of smell rather than sight. We think, however, that the professor might have allowed something for the intelligence of the insects, knowing as they must have done, that they were in a bed of Dahlias, and that the disc flowers have a certain amount of colour, and could easily be recognised at a short distance. The uncovered rays would also point to the presence of food for the insects.

Smoking Concert in connection with the N.C.S. Jubilee Fund.—The entertainment arranged to take place at Anderton's Hotel on the 29th inst., received a large measure of support, not only inside horticultural circles, but also outside help from many of those who, whilst ardent admirers of the Chrysanthemum, yet may not necessarily belong to any society devoted to its culture, We understand the promoters had received on all sides excellent promises of support in their programme. No less than twelve professional gentlemen besides a large number of amateurs placed their musical abilities at the disposal of the stewards. By permission of the Earl of Denbigh and officers, a detachment of the band of the Hon. Artillery Company assisted, under the direction of Mr. Edward Walker, and the management were also extremely indebted to the kindness of Mr. A. C. Clemow, the proprietor of Anderton's Hotel, for the use of the handsome and commodious Pillar Dining Hall for the purpose of the concert. If, as we anticipate, the function will have passed off with the entire success it thoroughly deserves we shall hope to hear of a satisfactory addition to the Jubilee Funds. Arrangements were made through the kindness of Messrs. Wm. Cutbush & Son, Messrs. B. S. Williams & Son, Mr. H. J. Jones, Mr. D. Ingamells, Mr. W. H. Lees, and Mr. Edwin Molyneux, for each visitor to be presented with a buttonhole consisting of a Chrysanthemum. As will have been gathered from our advertisement columns the address of the hon. secretaries and treasurers is 290, Dashwood House, E.C.

A dark Lilac-red Variety of Saintpaulia ionantha is one of the most recent novelties for which we may look presently. It is said to come quite true from seed.

A Correspondent writing from Stockport, Cheshire, tells us that what is needed, there is a fortnight's good sunshine to bring the 'Mums up to show form. Owing to the protracted wet weather and lack of sunshine, the blooms in that district are very much later than usual.

Rotation of Crops.—As years roll on we get more and more evidence of the mischief of growing the same class of plants year after year upon the same soil. We have recently had evidence of this in the case of Potatos, Cabbages, Cauliflowers, Pansies, Violas, Tulips, Sweet Peas, and a host of others too numerous to mention. Chinese Asters may, however, be added to the list.

We understand that Mr. Edwin Molyneux, the well-known expert, has accepted the invitation of the Ipswich and East of England Horticultural Society to judge the Chrysanthemum classes at their show on Nov. 11th and 12th, there are, we observe, several good prizes in the society's schedule, one of which consists of a cup, and added money that should tempt some of our more noted grower's to try issues with the cultivators of the Chrysanthemum in this progressive East Coast town.

"They gang in stirks and come out asses."—In quoting Robert Burns anent the students of colleges, the *Florists' Exchange* says that this notion of Burns "is fast being dispelled, and rightly so," by the grand work that is being done in connection with the agricultural colleges and other institutions in the United States. Britain had better not be behind in progressive work of a similar nature. Amongst the schools of America, the Missouri Botanical Garden, at St. Louis, Mo. takes, probably, the leading place.

Bees in a London Garden.—A contemporary speaks of the wonderful instinct of bees in finding their way to a small garden in the north-west part of London, not four miles from Charing Cross. Bees had been visiting the Michaelmas Daisies in this garden. We believe that wherever an open space in London permits of the cultivation of honey-bearing flowers, bees will find their way there. Only a few weeks a Cabbage Butterfly was seen in Fleet Street, probably prospecting for a Cabbage garden, there to lay her eggs.

Wasps, Flies, and Caterpillars.—Mr. Edward Step, of Portscatho, Cornwall, gives in the *Daily Chronicle* a record of his observations concerning the carnivorous propensities of wasps. The latter, according to this observer, caused a scarcity of flies in a certain locality, by hunting low down and catching the flies resting on some carpets, and not otherwise readily observable by the eye. The wasps were seen to pounce upon the flies and bear them away, lopping off the wings and legs as they flew. The thousands of grubs, the writer continues, that are reared in a fair-sized wasps' nest, are fed entirely upon insects captured in this way. On the contrary, it is only the perfect wasps, that for a short period previous to the close of their lives, develop a taste for ripe Plums. The infinitesimal damage they do is not to be considered, when we remember the good they do in keeping the plagues of caterpillars in fruit orchards in check. Mr. Step thinks that some day, perhaps, fruit growers will give a little more attention to the study of economic entomology.

NOVELTIES OF '96.

Amongst the floral novelties of 1896 that very much boomed dwarf Sweet Pea "Cupid" appeared, and with me was very far from being a success, and my experience seems to coincide with that of several other growers. According to a contemporary whose columns have lately been open to a discussion concerning this new Pea, it has been a decided failure, inasmuch as its peduncles are too short for decorative work, and what is worse, just as its blooms begin to open, they unaccountably drop (a most uncommon occurrence with Sweet Peas generally). I bought several packets last year and

raised the lot in pots, planting them out in due course. They grew vigorously enough, maintaining a procumbent habit and produced their flower buds, but imagine my dismay to find each morning the ground strewed with fallen undeveloped flowers. I might have thought that culture was at fault, but I observe others complain of the same thing.

Of Continental novelties that I tried and was not rewarded (or did I expect too much?) one was Nasturtium "Liliput." This was figured last autumn in a contemporary and described as a dwarf, bushy, and very floriferous Nasturtium, and as its name implies, Liliputian in character and size. Out of a batch I only saw one that gave any promise of being anything like the raiser's description. They began to wander and would soon have been all over the garden, but I pulled them up and saved the most likely stay-at-home one, but that did not nearly approach what I looked for, and I have not yet seen a Liliputian Nasturtium.

Another novelty was Pansy, Fiery Faces, gorgeously portrayed in the pages of a Continental Nurseryman's catalogue, but not one amongst my seedlings approach the illustration. Some are white, some dark blue, others of various shades of yellow and brown, disappointing alike to my employer and myself. Novelty No. 4 was Chrysanthemum carinatum "Purple Crown" and the less I say about it the better; one thing I must say, namely, next year I shall let my friends try these kinds of new things for me. —*Novelty.*

MANUFACTURE OF WINE FROM RAISINS IN RUSSIA.

ALTHOUGH in most countries strict laws exist for the regulation, preparation, and inspection of food and drinks—in the first place, from the standpoint of health, and, in the second place, for the purpose of collecting revenue—some articles are openly manufactured that cannot be accurately watched and assessed, and these are sold for something else than they actually are. For example, the United States Consul-General at St. Petersburg says that complaints have recently been made by the directors of the excise departments in different governments in Russia that a wine is made of Raisins and sold for Hungarian wine and Russian fruit Kvas, which competes with the Russian Grape wine. In governments densely populated by Hebrews, as in the kingdom of Poland, in the north-western and south-western regions, the production of wine from Raisins, which is used by the Hebrews for some of their religious ceremonies, has greatly increased, its total production in Russia being now more than 337,000 gallons a year. The average wholesale price is about 2s. 6d., and the retail price about 3s. per gallon; but in some of the outside governments this wine sells at very high prices, especially in the government of Chernigov, where it retails at 19s., and in the government of Vilna at 15s. per gallon. In 32 governments, and in the Ter and Ruban regions, and in western Siberia, Raisin wine is not made at all. The preparation of the wine is very simple. The Raisins are finely chopped, put into a vat, and warm water poured on them. The strength and quality of the wine depends upon the quantity of the water used. Generally, for one poud (36 pounds) of Raisins, from 5 to 13 gallons of water are used, from which 3½ to 5¼ gallons of wine are obtained. The Raisins are left from four to five days to ferment, and then the liquid is poured through a filter, and the wine is ready. Sometimes this wine, which is naturally of a yellowish colour, is coloured with burnt sugar or with Black Currants. It is very strong, containing about 12 per cent. of alcohol. On account of the simplicity of its preparation, no control is possible, and consequently it gives every opportunity for evasion and abuse. Wine is also made from berries and fresh and dry fruit; but the quantity is insignificant, because it is difficult to sell, on account of its high price. According to official returns, the total yearly production of wine in Russia is estimated to exceed 26,000,000 roubles in value. The Ministry of Finance, being desirous of protecting the public and the excise against fraud from Raisin wine, has just issued the following regulations concerning it:—The factories where wine from Raisins is made shall pay, according to the location, a tax as high as the wine sellers have to pay. The strength of the wine shall not exceed 12 degrees of alcohol. The wine is to be put upon the market in glass bottles only, which must bear labels of certain colour, prescribed by the Ministry of Finance, with the inscription "raisin wine" on them. It is strictly forbidden to print on such labels the name of any other wine. Violation of these regulations will be punished by heavy fines.—*Journal Society of Arts.*

Gleanings from the World of Science.

Hydrocyanic Acid in Plants.—In the *Annales du Jardin Botanique de Buitenzorg* (vol. xiii., pt. i., 1895) appears a most interesting and important paper by Dr. Treub, entitled "Sur la localisation, le transport, et le role de l'acide cyanhydrique dans le Pangium edule, Reinw."

This paper seems to throw some light on the steps in the formation of proteid by combination of the substances formed by assimilation in the leaves with substances absorbed by the roots. In Pangium edule large quantities of hydrocyanic acid (HCN) occur, either free or in an unstable combination. The substance obviously is of great importance in the metabolism of the plant, and its occurrence and behaviour have been studied in detail by Dr. Treub. In the stem and roots it occurs chiefly in the phloem, while in the leaf it occurs in most of the parenchyma cells, but also in certain specialised cells of the epidermis. To these last Dr. Treub assigns the formation of the acid. By various experiments he showed conclusively that it is transported through the phloem. For its appearance in the leaves he found certain conditions necessary. He could not prove that the presence of carbo-hydrates was required, but in the absence of light and carbon dioxide the acid rapidly disappeared from the leaf. It would appear, then, that the carbon and hydrogen of hydrocyanic acid comes from assimilated carbohydrate, while the nitrogen must be obtained from material absorbed by the roots.

In accordance with this supposition, Dr. Treub found that interference with the supply of water tended to prevent the appearance of hydrocyanic acid in the leaf; thus, if the vascular bundles of certain lobes only of a leaf be cut, these lobes continue to grow, but much less of the acid appears in them than in the uninjured lobes. The connection between water-supply and the presence of hydrocyanic acid is also borne out by another very interesting observation; it was found that the lowest leaf on the plant was entirely or almost entirely free from hydrocyanic acid; but, on removal of all the upper leaves of the plant, hydrocyanic acid soon appeared in the lowest leaf, the reason being, as Dr. Treub believes, that this leaf has now the whole water-supply to draw upon, and so is no longer starved for want of nitrogen salts.

From a study of the conditions for the appearance of hydrocyanic acid in the leaves, Dr. Treub concludes that in Pangium edule, at least, "hydrocyanic acid is the first recognisable product of nitrogen assimilation." He believes that the carbo-hydrate formed in ordinary assimilation is combined with nitric acid (set free by the vegetable acids from the nitrates absorbed by the soil) to form hydrocyanic acid, and that this, by further anabolic change, is converted into proteid.

These new and suggestive observations will no doubt lead to further work from which certain conclusions may come. As yet Dr. Treub cannot be said to have given direct evidence that carbo-hydrates and nitrogen salts are necessary for the formation of hydrocyanic acid; nor for his important inference that the acid is the first recognisable product of the assimilation of nitrogen. Hydrocyanic acid might equally, so far as we know, be a product of the decomposition of some more complex organic body.—*Natural Science.*

LIVERPOOL CHRYSANTHEMUMS.

Now that we are almost within the sound of the fray of the 'mums, a repetition of a hasty glance may prove interesting. There is not much to record as new introductions or change in the exhibitions or exhibitors. The shows in the neighbourhood are all in evidence; Liverpool still holds its own as the most important, and this year provides a twenty guinea Challenge Vase through the special effort of the committee, to this is added a first prize of ten guineas, which should be sufficient to attract outside growers. Of exhibitors the most important change is the retirement of Mr. J. Jellicoe, of Camp Hill, who from his numerous successes may be accorded the foremost position of fame amongst the many meritorious Liverpool growers. Although his exhibits will not appear on the exhibition table his collection is a large and varied one, grown under new conditions, which with the results may be given later on. The dates of the shows vary from the 11th to the 17th of November, being a little earlier than usual.

BOTANIC GARDENS.

Here we have the largest collection grown in the district, consisting of about 2,000 plants for large blooms, and 1,700 bush plants. There are three houses set apart for their reception, and as the plants open their flowers naturally the season will extend over several weeks, and will undoubtedly induce many thousands of visitors; the earliest plants are staged in straight sloping banks, the colours and sections being freely intermixed. Many of the new varieties are included, Les Enfants des Moss, Ryecroft Glory, and Bride of Maidenhead, being especially noticeable. The bush plants by the great and charming variety will prove highly interesting, the collection and arrangement being creditable to Mr. J. Devanney, the grower.

NEW HEYS, ALLERTON.

Here we have a good lot of plants fairly strong, with large dark leathery foliage, surmounted with clean strong buds that must finish many good flowers. The plants are arranged in the conservatory, where they can be well overlooked from the balcony. Brockley Gem, Owen's Crimson, Lucy Kendal, M. A. Haggis, are very fine amongst the "incurves," the "Japs" being well represented by Philadelphia, Boule d'Or (Calvat's), Mons. Chénon de Léché, Mrs. W. H. Lees, Le Moucherotte (fine), Eva Knowles, etc. In addition to the exhibition kinds, Mr. J. McColl has a nice lot of June struck plants, carrying one bud on each plant, which must give useful results.

OSWALDCROFT, WAVERTREE.

Mr. J. Haynes, who only grows a moderate collection, has many promising buds, well timed. The finest of the "incurves" are J. Agate, C. H. Curtis, Major Bonaffon, Madame Darrier, W. Tunnington, the Queen and Princess family, etc. "Japs" are represented by Duchess of York, Pallanza, E. G. Hill, Thos. Wilkin, Mons G. Biron, H. L. Sunderbruch, Mutual Friend, C. E. Shea, etc. Some half dozen pots of Cypripedium spicerianum were in fine form, many twin-flowered spikes being produced.

DOE PARK, WOOLTON.

Here we have a goodly number of the new varieties, many of the grafted plants showing the advantages gained from that process. Something out of the usual course of events may always be gathered from a visit to Mr. T. Carling. Dorothy Gibson, reflexed, and Hairy Wonder promise well. The chief of the incurved are C. H. Curtis, Major Bonaffon, Owen's Crimson, Jno. Fulford, Globe d'Or, &c. Lady Ridgway, Richard Dean (fine colour), Eva Knowles, Miss Rita Schroter, International, M. A. de Galbert, Lady Byron, G. W. Childs (broad petals), Amiral Avellan, Edith Tabor, &c., are fine samples of the Japanese type. Plants in 6 in. pots are numerous and good.

GOTSEY COP, GATEACRE.

Mr. W. Wilson has promising buds. Some varieties have proved difficult to secure the buds at the desired time, and which will result in some kinds being somewhat late. A good sprinkling of the newer varieties are included, many carrying fine promising buds. Trained plants are good, although the foliage is slightly undersized. Grapes were looking well, the bunches being good with fine berries.

CHILDWALL HALL.

Although not grown with the idea of exhibiting, Mr. D. Heaney has a grand lot of plants, chiefly Japanese, strong and above the average height, with clean large buds that must give satisfactory results. The selection includes the well tried and many new varieties.

CLEVELEY, ALLERTON.

No better place can be found than in the long corridor in which to show off the charms of the 'mum than here. Interspersed with Palms, Ferns, Salvias, &c., the flowers show to advantage. Rose Wynne (immense size), Maud Pearson, Col. Chase, Violetta, W. Seward (splendid colour), Oceana, Mons. C. Molin, are in fine form. The incurved sorts are generally good, including the Queen

family, C. H. Curtis, Baron Hirsch, &c. A large number of busb plants are still outside, protected with canvas, and which will prove of excellent service towards Christmas, wbere the demands made upon Mr. B. Cromwell become somewbat heavy.—*R. G. W.*

(*To be continued*).

PLANTS RECENTLY CERTIFICATED.

The undermentioned Chrysanthemums received First-class Certificates at ihe meeting of the Floral Committee of tbe N.C.S. held at tbe Royal Aquarium on October 21st.

PRIDE OF MADFORD.—An incurved Japanese variety, crimson-cerise in colour, with a ligbter reverse to the florets which are broad and interlacing. The bloom is of enormous size, being fully 10 in. in diameter, and of great depth. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

PRIDE OF EXMOUTH.—A very large spreading Jap. with long drooping florets divided at their apices. In colour it is white suffused with rose, tbe ceniral florets being prettily striated with rose. A First-class exhibtion variety. Mr. W. J. Godfrey, Exmouth, Devon.

MONS. HOSTE.—A huge Japanese form with very broad, and flat florets with obtuse apices. The colour is flesb-pink striated with rose. Mr. W. J. Godfrey.

RENA DULA.—A medium sized incurved variety of considerable merit, of American origin. It is a light purple-rose in hue, shading lighter towards the pointed tips of the florets. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Orchids from Rosemount, Perth. — Some Orchids have reached us from Mr. J. Lindsay, gardener to Jobn M. Fraser, Esq., Rosemount, Perth. The showiest and most interesting was a grand bloom of Cattleya dowiana aurea of high quality, and, in fact, the best of this particular type. The sepals and petals were of a much richer yellow than those of the typical C. dowiana. The ground colour of the whole area of the lip was orange, except a broad marginal area of rich crimson; the latter colour formed heavy lines or bands along the centre, even to the base of the tube. All parts were of good substance, and the lip and petals remained stiff witb us for some days after arrival, without being in water. Some flowers of Dendrobium formosum giganteum, of good substance accompanied the Cattleya, and the purity of the white made a beautiful contrast with the rich orange blotch, deepening almost to scarlet in the throat. Cypripedium spicerianum is also in season at Rosemount. Mr. Lindsay gives special attention to Orchids, and is well into tbe secrets of their cultivation.

Orchids at Chardwar.—Wben calling to see the collection of Orchids at the above address I was pleased to see the Phalaenopses still in rude health and just pushing some grand spikes, for they are marvels of successful cultivation. Cattleya labiata now makes a grand display, and comprises several magnificent varieties and splendid specimens, well grown and flowered. Tbe Dendrobium Phalaenopsis schroderianum still makes a splendid display, but many spikes bave been cut. I noticed some grand specimens of Dendrobium superbiens, with magnificent bulbs and just beginning to expand their blooms, and the variety is very fine. The cool house contained some good plants in bloom of Oncidium crispum, O. Forbesii, O. varicosum, a fine specimen of O. ornithorhynchum, a splendid specimen plant of Odontoglossum Rossii majus, and several good Sophronites grandiflora. I also noticed a grand variety of Vanda caerulea and a number of Cypripediums, including several good forms of C. Charlesworthii.—*C.*

Laelia elegans var. — Notwithstanding the numerous named varieties of Laelia elegans in cultivation, distinct ones continue to turn up and bridge over the intervening differences between the originals. All these forms occur in a state of nature and have been imported. We are in receipt of a pretty, light-coloured variety from Mr. A. Methven, gardener to the Marquis of Camden, Bayham Abbey, Lamberhurst, Kent. We have recently seen something approaching it pretty nearly, though the two are by no means identical. Nor does it agree with any of the named varieties. The sepals are of a creamy hue, lightly overlaid with pale pink deepening towards the revolute edges. The petals are considerably broader, and much clearer in colour, being of a soft lilac. Both the lamina and the side lobes of the lip are of a rich crimson-purple, thus forming a marked contrast to the sepals and petals. The base of the tube, both externally and internally, are white striated with purple; but these colours are very little in evidence owing to the crimson purple hue extending half-way down the tube. As a light variety having a well contrasted lip, we consider tbe variety a pretty and interesting one for a collection, flowering as it does in summer and autumn.

THE PLANT HOUSES.

The Stove.

WE are now upon the verge of the dull season, and the most trying part of the year for plants under glass. Hitherto the rays of the sun have been an important factor in keeping up the heat in the bouses, but now sun-heat will soon be reduced to its lowest ebb. As the mean temperature of November is only just over 40° Fahr. the fires will have to be kept going pretty vigorously. Witb the decrease of light the temperature may also be lowered a little. The warmest house should be kept up to 65° by night, with a 10° rise by day if tbe sun pops out, or 5° if it keeps dull. For the intermediate compartment 60° by night with a proportionate rise by day will suffice. Now that the year has got so far advanced, it will be advisable to lay by the syringe as far as its daily use is concerned. The requisite moisture must be provided for by damping the paths and stages, and the sponge may be made to serve the purpose of preserving cleanliness. Air must be given by the top ventilators when occasion offers. Houses that are fitted with the approved modern lantern roof are easy to manage in this respect. The lower ventilators, of course, must be opened regularly each day, except in foggy weather, when they are better closed.

RESTING PLANTS.—Although the majority of stove plants are growing more or less the whole of the year round, and it would thus be fatal to their welfare to allow them to suffer for lack of water at this season, anything like excitement should be spared them, as tbey are all the better for a season of comparative rest. Less water will naturally be required, and liquid manure must not be given, except to sucb plants as Euphorbia pulcherrima and E. jacquiniaeflora which have been grown on during the summer purposely for winter flowering.

BERTOLONIAS.—These beautiful little plants are rather aristocratic in their likes and dislikes, and they are not fond of spreading tbe winter with no other attention tban is given to the ordinary collection of stove plants. They manage to jog along well enough during tbe summer months, but in the winter-time the atmosphere of a large stove is apt to become too harsh and arid with fire-heat for tbem. The plants should now be covered with bell-glasses. These, during periods of very damp weather, are liable to be covered on tbeir inner surfaces with a deposit of moisture. It will be necessary in such a case to wipe the glass dry each morning.

NYMPHAEAS.—Not only should the temperature of the water be allowed to drop two or three degrees now, but the water itself should be lowered several inches. Another drop in both directions should be given in a fortnight or ten days time, so as to induce the plants to go gradually to rest.

GYMNOGRAMMES.—These bandsome but rather delicate Ferns must be given the warmest end of the fernery. When the stages are damped down in the afternoon that containing the Gymnogrammes should be passed over. When watering, also, it is important to see that the fronds are not wetted.

YELLOW FERN FRONDS will make their appearance in increasing numbers now, and a good deal of picking over, particularly with Adiantums, will be necessary. Adiantums from which the fronds have been cut for decorative purposes may be removed to a cooler house for awhile, and allowed to rest. The room thus made may be turned to good account for the otber subjects.

Pits and Frames.

A goodly pertion of the space in this department is blocked up with bedding stuff, and this will need very careful looking after. Flower buds and dead leaves must be removed, but yellow leaves should be left on until they can be easily picked off, otherwise cuttings, which may be only slightly rooted, will be disturbed. Air all such bedding stuff as Calceolarias, Pentstemons, Violas, and zonal Pelargoniums as freely as possible during the mild weather.

FUCHSIAS should be taken indoors without delay, given a good sbaking to remove as many of their leaves as possible, the labels pushed firmly into the soil, and the plants laid on their sides beneath the greenhouse stage.

LATE CHRYSANTHEMUMS that have been afforded protection and left out of doors must be taken in witbout delay, for in the event of a severe frost they would take harm.

FORCING PIT.—It is now time that a few Deutzias, Stapbyleas, and Lilacs were placed in heat, for it must be remembered that nature requires more stimulus at tbis back end of the year than she does at the beginning. For forcing purposes a continuous supply of bottom heat is necessary, and bouses wbich are devoted to Melon culture in the summer are capital structures to utilise for forcing purposes in the winter. Tbe brick beds should be cleared out without delay, the woodwork and glass of the house washed, and the bed refilled with fermenting material without delay. The latter, which will have been got in readiness for use by several thorough turnings, must consist in staple of leaves, as a gentle and lasting heat is what is wanted. Make the bed up by treading firmly. The pots of the plants may be plunged to the rims in the fermenting matter. A good night temperature for a start will be 50° Fahr. with a good rise during the day. A syringing between 9 and 10 a.m. should be given, and another between 2 and 3 p.m.

ROMAN HYACINTHS.—A batch of these sbould be introduced into heat without delay, and other batches taken in at suitable intervals—say, of about ten days or a fortnight—to keep up the succession. Roman Hyacinths will stand forcing very much better than will the later and larger named varieties.

CINERARIAS.—Early plants obtained from an April sowing are just showing the colour of their flower buds, and before long will be fit to move into the conservatory. Keep up the applications of liquid manure at each watering now, but do not make the solution too strong. The plants obtained from the main sowing, made in July, are strong, stocky little stuff that will come into bloom in early spring. These usually give greater satisfaction tban tbe April-sown plants, but the necessities of some establishments call for the first batch. As soon as a pit becomes vacant, the plants should be removed tbence out of the cold frames in wbich they have hitherto been accommodated, or an unexpectedly sharp frost may work serious damage. A careful look-out must be kept upon botb early and late plants for greenfly, which is very partial to the Cineraria. Fumigation is the easiest method of getting rid of this pest, and if proper precautions are taken to see that tbe plants are dry at tbe time of being operated on, and the fumigator is watched to prevent tbe tobacco rag or paper from flaring, no barm will result. Some gardeners, however, prefer to take the plants individually out of the house, and clean them by means of a sharp brush, for the fly, unlike mealy bug or scale, does not stick very tenaciously. This system has a good deal to recommend it upon the side of safety.

CHINESE PRIMULAS.—Thanks to tbe exertions of our florists there are now so many charming forms of this pretty flower that a representative collection is most effective in itself. Thus a small greenhouse or pit filled entirely with Primulas is one of the finest sights obtainable throughout the winter months, and the plants appear to much greater advantage in such a position than they do when scattered about a large conservatory as an edging to the taller subjects. Some care will be necessary now witb the watering, or the plants will damp off. A weak solution of Peruvian guano given at each alternate watering will work wonders. Enough of the guano may be used to colour the water a dull brick-red. The double varieties should be placed at the warm end of the house if there is one.

FREESIAS.—Attend to the staking of these withou delay. Only light stakes should be used, otherwise the effect will be clumsy and anything but graceful. Weak guano water, as recommended for the Primulas, will suit the Freesias admirably.—*A. S. G.*

HINTS FOR AMATEURS.

CHRYSANTHEMUMS.

AMONGST professional gardeners the Chrysanthemum fever is now rampant, for the Autumn Queen is summoning her court with an imperious haste that brooks no delay, and staid, orderly, cultivators are bracing themselves for the struggle, whilst others are tasting the sweets of victory or the pangs of defeat at the earlier meetings. Amateur gardeners too are in the thick of the mêlee, and are every whit as strenuous, as anxious, and as jealous as the professional element. It is questionable, indeed, if there is another flower into the cultivation of which the amateur throws so much of his heart and soul as the Chrysanthemum. Violas and Carnations and Roses are grown, and grown well too, in their hundreds of thousands by the cottage and villa holder in all parts of the country, and many a garden is rendered beautiful thereby, but each of these favourites has its own season and the amount of fostering care and attention that they each receive in no way diminishes the wealth of love that is lavished upon the Chrysanthemum, but rather increases it, for it implants the idea in the heart of the people that flowers of some sort are necessary in autumn and winter as well as in summer, and the Chrysanthemum is the only flower that has proved itself equal to the emergency of stepping into the gap, and flooding the dark days of autumn with a beauty as brilliant as a dream although scarcely so evanescent.

Decorative Plants.—The so-called decorative section has come into special favour of late years, and there is yet room for other good varieties possessing such qualities as dwarfness and natural bushiness of habit with freedom of flowering. It is also important that the flower stems should be stout and capable of holding the flowers erect. Colour is one of the chief considerations, size of bloom being of but little moment. Bush plants which have not been disbudded are of great value, and the amount of flower a well-developed plant will furnish is really wonderful. Two-year-old plants will render good service in this way, and will even beat the younger ones as to quantity of flower.

Plants out-of-doors.—In most gardens a few Chrysanthemums are planted out-of-doors to take care of themselves. If we get early frosts, *i.e.* about the middle of September it is only very early varieties of the Madame Desgranges and George Wermig type that have time to flower; the others are spoiled just as their flower buds are showing nicely. In a season like the present, however, where we have been free from frost, or nearly so, up to the end of October, mid-season varieties have had a chance to show what they can do. It will be well worth while to give these plants some protection now. If they are growing in the shelter of a wall, the matter is much simplified as a few nails driven into the wall will be sufficient to hang a few yards of tiffany or some mats on. If the plants are in the open ground a few stout bean stakes pushed in firmly around them, their ends coming together cone fashion at the top, will make a light and inexpensive frame work to support the covering materials.

Single Varieties.—No matter whether they are grown in the open ground or in pots, a few plants of single varieties should be in every collection, however small. Such sorts as Miss Rose, and Miss Mary Anderson, are really gems, and as they are naturally of dwarf habit, and very floriferous they come in splendidly for conservatory decoration. We have seen very dwarf plants of Miss Rose blooming away as happily as possible in a cottage window. Visitors to Kew Gardens will remember how conspicuous this variety is in greenhouse No. IV. in the autumn months.

Dwarf Singles. — Ordinary plants, unless of exceptionally dwarf habit, are too large for other than big windows, as they exclude too much light from the room. Excellent material for the decoration of the window, or for the filling of small vases may be obtained by striking cuttings in July. The tops may be taken from growing plants, and inserted four in a 4-in. pot. These cuttings strike readily if placed under a handlight, and kept closely shaded. They will not need any further potting, for the cutting pots will be large enough for the plants to flower in. Manure water may be given when the pots are filled with roots. By this means some pretty little stuff from 10 in. to 15 in. in height may be obtained.

Forward Show Blooms.—It often happens that one or two blooms have not been timed just exactly to suit the show at which it is desired that they should officiate. Such blooms will keep well if cut with long stalks and placed in water in a cool room until required. The difficulty of being too soon may therefore be easily surmounted in this way—much more easily in fact than that of being too late, for Chrysanthemums do not take kindly to being pushed on.

WATERING.

The use of the watering-can requires a great deal of care and discretion now. Plants that are being kept in cold frames will not need much water; many of them will go, indeed, for three or four consecutive weeks without any other moisture than that which they get from the atmosphere, which at this season is very close to saturation point. A rose-can must not be employed now, for that would result in the foliage being wetted, and this in its turn would bring on damping of the leaves and succulent stems.

Damp is the Greatest Enemy that plagues the gardener at this season of the year, and how to prevent it is the question that exercises the minds of all careful cultivators. Next to the exercise of discretion in the use of the watering-can—a discretion indeed that is apt to err on the side of giving too little water rather than too much—ventilation is the main consideration. Plants in cold frames must not be coddled too much. Air should be given in quantities, according to the nature of the plant, whenever the weather is as mild and open as it is at present. The lights may be simply pushed down in dry weather, but when it rains the lights must be tilted up at the back by the insertion of a brick or a block of wood. This will admit the necessary air whilst excluding the unnecessary rain.

Light is of the greatest value now to plant life, and steps should be taken to see that none of the plants are robbed of any of their due. If the glass is dirty it must be washed, and if the advent of frost renders the application of protective material necessary the frames must be uncovered as soon as the thermometer stands above 32° Fahr. All decaying leaves or pieces of stems should be removed as soon as seen, and absolute cleanliness from filth must be preserved. If these few simple precautions are carried out faithfully a great deal of trouble, and, perhaps, not a little disappointment may be spared the cultivator.

Anemones.—Whether planted in small beds by themselves or in isolated clumps close to the edge of the herbaceous border, the tuberous-rooted Anemones are well worthy the place they occupy. Any ordinary garden soil will suit them well, and by the sides of paths, or in sheltered nooks close to shrubberies, the commoner sorts will appear to great advantage. A light sandy loam is really what they like best, and they are also very fond of a sheltered position. In all cases the drainage should be ample. Planting may be conducted at almost any time between the end of September and the beginning of March, and if they do fairly well they may be left undisturbed for several years. It may be stated at the outset that Anemones are very good tempered plants, and amateurs may well take them up.

The above remarks will apply to the commoner varieties, from which an excellent result may be obtained with the minimum of trouble. Those cultivators, however, who believe in doing things thoroughly, and make a hobby of growing Anemones, often go to a great deal more trouble than would be entailed by planting in the ordinary simple way. If the soil is not considered to be just the thing, it is straightway dug out to the depth of 2 ft., and replaced by a rich loamy compost. This may be regarded as going to the extreme. A medium course is to manure the ground well, and dig it over deeply. About 6 in. of space should be allowed each way between the tubers, and they may be buried to the depth of 3 in. When planting in clumps, the trowel will be found to be the handiest tool to use. Where it is necessary to have the plants in flower as nearly as possible at the same time, however, a little care is necessary to see that the tubers are all planted at a uniform depth, for if a few are buried deeper than the others, as may well happen if the trowel is used, they will most assuredly be later in flowering than the rest. When planting whole beds, therefore, it is the best plan to draw drills of the depth, and at the distance apart, mentioned above, and then the tubers will be sure to be all treated alike.

By planting in several batches at intervals from the present time up till January, a grand succession of bloom will be forthcoming. If a succession is not needed, the whole stock may be planted now, or as soon as the places can be got in readiness for them. If the soil is very heavy and retentive, it will be wise to wait for another couple of months before planting, especially if the tubers are very precious.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Grapes.—Black Hamburgh is the best Grape that you can possibly grow, *El Nathan*, and we have no doubt that you will be fully satisfied with it. Foster's Seedling will do for a white variety. Muscat of Alexandria we would warn you will present greater difficulties to grow well. It needs more heat than the two first-named sorts. Its flavour, of course, is superb, for those who like Muscat-flavoured Grapes.

Lobelia pumila magnifica.—*H.* has been somewhat tardy in looking up his stock of Lobelias, and has only recently put in some cuttings. The cuttings are inserted in boxes and placed in his greenhouse, which, he says, never falls below 40° Fahr. He asks if the cuttings will root?

Of that we are very doubtful. They should have been put in a couple of months ago in a gentle heat. We should not advise him to put many hopes upon them now. It would be advisable to lift some of the old plants, cut the old flowering growths off with a sharp knife, and pot or box the roots up in rather dry soil. Place them on a shelf in the greenhouse as near to the glass as possible, and do not give them any water yet. A cold frame would be too damp, and the plants would go off.

Vines holding their leaves.—Forcing the leaves of the Vines will not do, but you may shorten the growths back, *i.e.*, cut away about half of them, without any injury to the Vines, and with a good deal of benefit to the plants beneath.

A Loughborough boiler will answer your purpose exactly, *L. A.* They may be had in all sizes, from very small ones suitable for houses that are little more than frames up to roomy structures. The cost of fixing them is small.

Japanese Chrysanthemums.—Viviand Morel and Charles Davis are two of the very best Japanese varieties in cultivation, *B.*, and they will be almost sure to find a place in the first-prize collection at the majority of forthcoming Chrysanthemum shows throughout the country.

Keeping Grapes.—This may be easily done, *J. Adams.* You will need as many bottles as you have bunches. Ordinary pint, or pint-and-a-half bottles will do, but they must have broad substantial bases, for reasons which will be obvious presently. Put a small lump of charcoal in each bottle, and fill up with clean soft water. The bunches must be cut with about six inches of wood below, and three inches above the point of attachment. Trim off all the leaves, and insert the bare stem in the bottles. Unless the bunches are very heavy, the bottles, if they have broad bases will stand without support. The bottles must be kept filled with water, as the latter becomes absorbed. A cool dark room is necessary, and in such a position the bunches will keep for a long time without spoiling.

Caladiums.—The Caladiums of which you speak as being planted out in a border under glass, *X*, will not need to be lifted. They may be allowed to remain where they are until spring, when they will come up as right as possible. The border should not be kept too wet, of course.

Storing Fuchsias.—Lay your Fuchsias on their sides underneath the greenhouse stage. Do not put them in close proximity to the hot water pipes, otherwise the wood will shrivel. Under ordinary conditions they may be allowed to remain without water until they show signs of breaking into growth. That will be the time to prune them—not now.

Potting Liliums.—Keep the bulbs well down in the pot when you pot your Liliums, *B. Enterton.* The pot should be filled about two thirds full when potting is finished, and the scales of the bulb should be just peeping above the soil. This will leave room for a top dressing of rich compost presently. Liliums always make a lot of thick fleshy roots at the bases of the stems, and a top dressing at the right time is of great value. Accordingly it is important that room should be allowed for it now.

VANDA SANDERIANA.

THIS grand Vanda was originally discovered by M. Roebelin, collector for Messrs. F. Sander & Co., in 1882, in the south-east of Mindanao. It first flowered in this country in the famous collection of Mr. Lee, at Downside, Leatherhead in 1883, when it created a considerable amount of sensation amongst Orchid growers, and caused a large demand for it. The sensation was practically renewed at the Drill Hall, on the 13th inst., when J. Gurney Fowler, Esq. (gardener, Mr. Davis), South Woodford, Essex, exhibited the largest and best-flowered plant which has ever been seen in this country, and to which the Royal Horticultural Society rightly awarded a Gold Medal.

The plant was brought home under the especial care of Mr. Boxall, one of Messrs. Hugh Low & Co.'s collectors, and J. Gurney Fowler, Esq., became the fortunate possessor soon after. The first time it flowered, after importation, it bore only about three spikes of bloom. The plant took kindly, however, to the treatment accorded it by Mr. Davis, and not only became well established but made such progress that it pushed up twelve flower spikes. One of the latter was destroyed by a hungry cockroach in its early stages; but the safety of the rest was secured. The eleven spikes bore in the aggregate 127 flowers, of a richer or darker colour than usual. This would give an average of eleven and a-half flowers or thereby to each spike, several of which bore twelve or more flowers. The old stems would have given the plant a somewhat leggy appearance if they had not been accompanied with numerous young growths from the base. The accompanying illustration was prepared from a photograph of the plant as it stood in the Orchid house in which it was grown at South Woodford. A better general idea of its magnificence would have been gained if the plant had been isolated so as to show off its individuality.

VANDA SANDERIANA.

CAMBRIDGE LODGE, CAMBERWELL.

WITHIN two and a half miles of Charing Cross, as the crow flies, under the smoke-laden atmosphere of the densely populated neighbourhood of Camberwell, is the town residence of R. I. Measures, Esq., Cambridge Lodge, Flodden Road, Camberwell. Here for many years past he has had a splendid collection of Orchids; and one need only inspect them to learn what can be accomplished in the way of Orchid culture under the most unpromising—we shall not say unfavourable—circumstances, after having seen the healthy condition of the plants. The situation might aply be described as a London back yard, for the greater portion of the garden is covered with seventeen glasshouses and surrounded by dwelling houses.

For some years past the collection of Phalaenopsis had been doing very badly, and there was some intention of throwing them away. To give them another chance they were placed in a different house. Some were brought back and suspended from the roof in the original house, and they commenced to grow away so freely that all were served in the same way. Everyone of them, even the smallest made excellent growth during the past summer, and are now commencing to throw up their flower spikes. Formerly the baskets containing them were stood upon a side bench, but the altered treatment has given them a fresh lease of life, and their health is now fully established. In this category we place P. grandiflora, P. amabilis, P. schilleriana, P. tetraspis, P. violacea, and P. v. schroderiana, with rosy tinted flowers.

The Laelia purpurata house has been brightened for some time past with several Cattleyas, including a beautiful form of C. hardyana, having deep rose petals and two large orange blotches at the base of the lamina of the lip. Very choice and distinct is C. labiata R. I. Measures' var., with white flowers, excepting a blotch of soft rosy veins upon the lip. Here also is Laeliocattleya corbeillensis, obtained from Cattleya Loddigesii crossed with Laelia pumila marginata. The white, nodding flowers of Maxillaria venusta are also very prominent. Lycastes in another house are doing well. In one of the Cypripedium houses all sections are represented and doing well.

There is a fine display of the autumn-flowering Cattleya labiata in the Cattleya house, and this will be kept up for weeks to come by the introduction of flowering specimens from another house. There are 300 Cattleyas of various species on the establishment. C. labiata R. I. Measures' var. is also flowering beautifully in this house. It came out of an importation made by Messrs. F. Sander & Co. A magnificent variety named C. l. superba came out of one of Messrs. Linden's importations. It strongly resembles C. l. Warneri, with a huge lip. Other varieties vary greatly in colour. Amongst them is a beautiful variety of Laelia elegans with pale rosy-white sepals and petals and a rich crimson lip; it is of recent importation, flowering for the first time. All are grown in pots and baskets. Cattleya dowiana aurea grows freely here, and is both handsome and conspicuous. A dark variety of C. bowringiana is in bloom; also C. gigas, Oncidium tigrinum and Vanda caerulea, but the latter is always pale in the dusky atmosphere of this neighbourhood.

The cool Cypripedium house contains large batches of showy and useful kinds for cut flower purposes, and are heing kept back for Christmas. The plants are *bristling* with flower scapes by the hundred. The house also contains a number of Masdevallias. including M. laucheana, full of flowers, and M. muscosa, with the mossy scapes and a sensitive lip, now preparing to flower the second time from last years flower stalks just as M. tovarensis does. A small flowering species is Restrepia Lansbergii but the blooms are richer in colour than R. elegans.

Close by is another house in several divisions, one of which is largely devoted to the botanical species of Masdevallia, many of which have been honoured with Botanical Certificates from the Royal Horticultural Society. The spotted M. guttula, the pale yellow M. Wageneri, and the dark purple M. glaphyrantha are full of interest. M. attenuata is creamy-yellow, striped with purple. A highly coloured form of Restrepia antennifera is notable for the great size of its lateral sepals. Cypripedium insigne montanum may be seen here in great variety. A curiosity in its way is a piece of C. insigne with variegated foliage and flowers. Though not an Orchid we can scarcely overlook the Australian Pitcher Plant (Cephalotus follicularis). A large piece of it had been broken up, and each portion potted separately in peat fibre and sphagnum. All

are thriving vigorously under bell glasses and bearing numerous large pitchers.

The Miltonia vexillaria house contains 300 plants of this species now making fine growth. The Hawthorn-scented Oncidium cheirophorum will presently be covered with numerous trusses of blossom. Here there are numerous very fine varieties of Cypripedium insigne, one of which has larger blotches than C. i. Chantini. The beautiful C. i. Ernesti is not overlooked, and close by is a form entirely devoid of blotches on the upper sepal. C. i. Cambridge Lodge var. on the contrary is remarkable for the size of the blotches on the upper sepal. Very finely coloured is the well-known C. arthurianum. C. Charlesworthi is very variable, and when grown under cool conditions the flowers are much darker, though smaller than those in a higher temperature. A large piece of Cymbidium traceyanum is throwing up its flower spikes, and alongside of it is the pretty C. cyperifolium differing chiefly by its smaller but similarly coloured flowers.

The warm Cypripedium house includes a great variety of species and hybrids in bloom. C. Mrs. Canham carries fifteen huge flowers, and C. Chas. Canham, now over, was equally good. The small flowers of C. Schomburgkii are exceedingly pretty. C. Indra has yellow petals, and is a hybrid, C. Ashburtoni calospilum is a great curiosity at present owing to one side of the scape and the corresponding half of the flower being yellow, while the rest is some shade of brown. C. Chapmani is a hybrid of which we shall hear more of anon. The same may be said in a smaller way of C. Henry Graves. C. spicerianum is grown in quantity.

The Cymbidium house is full of promise, containing as it does numerous large and vigorous plants grown in a very low temperature in order to keep them back till all danger of winter fog is gone. Another advantage is that they are not troubled with insects under cool treatment. The remarkably distinct Masdevallia Lowi is flowering finely. The sepals are divided almost to the base, spread in triangular fashion, and are drawn out into tails which make the segments 2 in. long. They are densely spotted with purple and have white tips. The flower scapes grow downwards amongst the sphagnum till they reach the light, and then grow straight upwards, to a height of 12 in. to 18 in.

For many years the Vanda house has been filled with a valuable collection of many species and choice varieties. They occupy the central stages of the two divisions of the house and many of them reach a great height, being of exceptional vigour, and well furnished with dark green leaves. Some or other of them are always in flower, especially V. tricolor, V. suavis and their varieties, which are in that condition now. V. Batemanni has been in bloom since last June, but is just now going out of season. The rare V. Parishi and V P. marriottiana may be seen here.

The Odontoglossums in the cool house are doing remarkably well, the leaves being clean, stiff and leathery. Many of the plants of Odontoglossum crispum have commenced to throw up their flower spikes. Oncidium macranthum is in bloom, and O. superbiens has a scape about 10 ft. to 12 ft. long, and will be more interesting several weeks hence. Maxillaria Lehmanni and Odontoglossum Edwardi are also located in this cool, airy structure. Close by the Odontoglossum house is a lean-to structure entirely devoted to Masdevallias in a clean, healthy and vigorous condition. Indeed, the collection of this class of Orchids is very extensive at Cambridge Lodge, the exact number being entirely unknown. The collection is about as complete as any in the country.

Mr. Measures has a very extensive series of beautiful paintings of Orchids which have flowered in his collection and elsewhere. They are constantly being added to as anything new turns up. Mr. Henry Chapman, his gardener, is responsible for the cultural treatment of this valuable and extensive collection, and it must be said that the health and condition of the plants everywhere reflect credit upon his watchful care and cultural skill.

Flax and Hemp Culture.—Several Nottinghamshire farmers are preparing their land for crops of this nature, and the experiment is being watched with considerable interest. The Duke of Portland and Earl Manvers are said to be amongst the experimenters.

CHRYSANTHEMUM NOTES.

THE Chrysanthemum season opens with great promise, whatever we may be obliged, ultimately, to chronicle concerning it. The blooms are by no means expanded yet, except in the case of the earlier varieties. The season may therefore be a long one, and we trust that many promises of fine flowers from vigorous plants will be realised. According to the calendar, however, the season is upon us, and we enter upon it with keen expectation of witnessing some lively competition for the prizes offered, and of seeing some fine blooms as the result of the labour of cultivation during the past twelvemonth.

RYECROFT NURSERY.

Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, has got together a display of 7,000 flowering plants independently of stock in small pots, or cuttings of new and rare kinds in process of rapid multiplication, for he practically carries on the work of propagation all the year round. He has a collection of new varieties numbering 307 from all sources, and which will entail a vast amount of sifting before the good varities are separated from the worthless. Of the vast assemblage here, we noted only a few of the best already in bloom.

The first house we entered was entirely occupied with plants struck during March, April, and May last. Naturally, all of them are very dwarf, but the vigour of a large number of them, as well as the size of the single bloom that each bears, are remarkable, in so far as they are expanded. Most of these are taken on what is known as the natural crown bud. Lady Byron, having large white blooms has turned out better than most people anticipated. It comes best from the early crown bud, and though the stems are weak, the growth is healthy; hence the surprise that the blooms should be so large and handsome. Louise, with compactly incurved and interlaced florets, is a marvel of durability. Many plants of Boule d'Or (Calvat) are grown, and the blooms are large and attractive. The crown bud of M. Chénon de Léché is rather pale in colour, but the terminals are of a much darker and characteristic hue. The white Madame Gustave Henry is very dwarf, and the white blooms have already shown the beauty of this new variety. All of the above are Japanese varieties, which are by far the most popular here. A number of decorative sorts are on trial, and amongst them is a buff-salmon variety, named M. Backmann, and recalling Triomphe du Nord in hue.

The most forward plants are arranged on the central stage of a long, span-roofed house, in such a way that a fine view of the whole may be obtained by looking down one side of the house. Besides the usual piping at the sides, a flow and a return 3-in. pipe under the staging keeps the atmosphere of the house dry and bracing. The florets of M. A. Parent are tubular and rosy, except at the tips which are expanded, showing a crimson-red inner face. Eschenauer is a neat and compact bloom of a creamy-white. Mrs. Harry Chiesman is a bold, incurved Japanese flower, with long, and wide, tubular, pure white florets. A huge flower also is Herbert J. Cutbush of a bronzy-gold hue on the reverse and crimson internally, more or less striped with yellow, with broad florets finally recurved. Marjory Kinder is a golden-yellow Japanese variety coming best from the crown bud. A beautiful and attractive flower is Pride of Exmouth, of great size and white, with pink edges to the florets. Amongst light coloured varieties, the soft pink Mrs. W. Carpenter is very choice. The incurved Japanese sort named Delicate is even more attractive on account of its delicate yet lively pink hue. The outer petals fall down giving the flower great depth.

White varieties are now both numerous and fine, including Madame Ad. Moullin, having broad, spreading and drooping white florets. The crown buds give the best flowers. The natural bud gives the best result with Master H. Tucker, having crimson florets with an old gold reverse, much shown owing to the incurving of the florets. The broad silvery-pink florets of Australia look very massive, their width and the huge size of the heads contributing to this result. It is in fact an incurved Japanese sort of the first magnitude, with compactly interlacing florets. Many plants all and severally have given every satisfaction. A very bold flower likewise is Ethel Addison, with broad amaranth florets that are pink on the reverse. Australian Gold, is a large pale yellow variety of beautiful contour, but not very appropriately named. Close by it we noted a seedling raised by Mr. Jones, and having long, slender, creamy-white florets. It looks promising by the time it is fully developed.

Mrs. Weeks is another beautiful white, but becomes tinted with pink later on. Madame Gustave Henry has done admirably on the early propagated plants. Golden yellow sorts are also well represented by Pallanza, Lago Maggiore, Miss Muriel Goschen, with huge heads of curling and interlacing decurved florets, and by Amiral Avellan, with broad florets, solidly built up in a deep bloom. Modesto is another incurved Japanese sort of a glossy golden yellow. M. Gerard is also incurved in a similar way but pinkish-purple. Mrs. G. Gover is a crimson-red variety, with an old gold reverse, and is one of Mr. Jones' seedlings. It is well suited for exhibition purposes. A strange and striking variety is Nyanza with florets of a brilliant crimson, but appearing striped on account of the peculiar way in which the florets are involute at the edges, showing the buff-yellow reverse. The incurved C. H. Curtis is in fine form; and a new incurved Jap., named M. Desblanc is of great promise.

The big span-roofed house originally built for housing the Chrysanthemums is now occupied with 2,000 plants arranged in undulating banks on either side of the winding central pathway. The plants here are mostly late, so that the display will last over a long period. Some magnificent blooms of Mutual Friend may be seen, and Emily Silsbury is also good. Ethel Tabor is dwarf, but has developed fine blooms from the natural buds. We shall no doubt see some fine groups made up from this rich and extensive collection, during the next month.

ROYAL EXOTIC NURSERY.

The Chelsea firm has established such a world-wide reputation for completeness and thoroughness of organisation, that it goes without saying that Chrysanthemums are by no means neglected amongst the host of other subjects which the Messrs. Veitch supply. Over a thousand plants are grown for flowering, the majority of them consisting of plants which are destined to produce blooms of show standard. The collection is kept well up to date, all the best varieties of proved merit, as well as the cream of the new sorts, which, year by year, are placed upon the market by indefatigable cultivators in this country, France and the United States being included.

Chelsea is, by no means, an ideal place for Chrysanthemum cultivation. The growing period is all right, but the fogs of Octoer and November play sad havoc with the blooms, as they are in a most critical stage, and late flowers are practically of no use whatever, as they have scarcely a chance to open. Mr. Weeks, who has charge of the Chrysanthemums, amongst the other numerous subjects over the welfare of which he so assiduously watches, is very emphatic upon this point. To use his own words "we want our blooms at Chelsea as soon as we can get them." "Look at Louise," continued he, pointing to a shapely little plant of that vartety, bearing three half-opened flowers, "it is not nearly so good as it was last year. If I had known what sort of September we were going to have, I'd have taken that bud sooner, and then I should have had better results." Evidently a Chrysanthemum grower in London must be a bit of a weather prophet as well, if he is to be uniformly successful with the same variety each year.

The Chelsea plants are conspicuous for the strength and substance of the foliage, and the firmness of the wood, but hardened aborted buds have been unpleasantly numerous this year. The sudden and continuous deluge of rain that visited us after the tropical summer had disastrous effects. The plants received a check, and seemed almost to stand still for some time. Nathless all this there are some rattling good blooms to be seen, colour, size, and form being first-class.

To take the novelties first of all, so dear to the heart of the "mummist" who is ever on the lookout for something new, C. B. Haywood is a superb white Jap. that gave an excellent account of itself last year, and one that we shall expect to see in form this. Dorothy Seward is a large full flower of great depth. It exhibits a bright shade of terra-cotta red, and retains its colour well. It does best on the crown bud. Emily Silsbury can scarcely be overpraised as a grand ivory white Jap. with long, narrow, drooping, and intermingling florets. It is a true October flowering variety, and comes best on the second crown bud. John Seward is a large, but by

no means coarse, somewhat loosely built flower of a bright canary-yellow hue. Mrs. Chas. Blick had not yet finished, but some buds of great promise were to be seen. Mrs. John Shrimpton has long drooping florets, golden buff in colour, charmingly striated with crimson-red. Oceana that was so well shown last year is a "topper." One little plant of it in a 7-in. pot was carrying a huge globular bloom that was fully 8 in or 9 in. over. The colour is rich butter yellow, the florets incurving gracefully, and forming a compact bloom. Vicar of Exmouth is built in precisely the same way as the well-known John Shrimpton which it also resembles very closely in habit. It is, however, a shade deeper in hue, and this is readily discernible upon comparison.

Novelties amongst the reflexed section are none too numerous. Accordingly, Dorothy Gibson, which is the latest arrival, is all the more valuable. It posseses excellent form, of rich golden-yellow hue, and is a distinct addition.

Ideality, white, tinted with pink is a new incurved form of considerable merit. It has the additional advantage of short and compact habit.

Coming to varieties that are familiar objects upon show boards in various parts of the kingdom we observed Viviand Morel, and its equally popular sport Chas. Davis in grand condition. The sturdy growth and bright yellow, but rather stiff looking blooms of Amiral Avellan were very conspicuous. Boule d'Or (Calvat's), golden buff with long incurving florets is a real gem. G. W. Childs, on the other hand, has not opened well. When properly expanded this variety is distinct from all others from the immense width of the stout crimson florets. H. L. Sunderbruck and Madame Ad Moullin, both of which are too well known to need further description were excellent. Reine d'Angleterre, however, has shown a tendency to malformed buds, which fact is to be greatly regretted. Mrs. Dr. Ward is not so much cultivated as it ought to be. The bronzy-yellow flowers, although of no great depth are of great width, and render it a most effective variety for groups of plants arranged for effect. The florets are rather hairy. President Borel needs no further recommendation. Some good buds of Madame Carnot bore evidence that this variety will claim serious attention from intending exhibitors, for it is one of the best exhibition whites we have.

HALE FARM NURSERIES, TOTTENHAM.

Over 800 varieties of Chrysanthemums are grown by Mr. T. S. Ware, at the Hale Farm Nurseries, Tottenham, N. About 1,200 plants are cultivated for producing blooms up to show standard. Late struck cuttings are another feature of the establishment, and represents a method of treatment that is each year becoming more popular. The cuttings are taken from the tops of growing plants in May, and after they have rooted are potted up into 32's. In these they flower, the first bud being taken, and make charming little stuff about 15 in. or 18 in. in height. Souvenir de Petite Amie in particular responds very readily to this treatment.

American Novelties.

Included in this section are some very promising varieties that have evidently a future. Rena Dula claims first place because it is the first that has won its spurs, if we may use the term, having obtained a First-class Certificate at the hands of the Floral Committee of the N.C.S. on October 21st. As a medium-sized incurved variety it is well worth its place. That it is a real incurved we received additional assurance from the sight of a bush plant of it upon which the flowers though necessarily smaller were well incurved. The blooms exhibit a pretty shade of light purple-rose. Miss A. L. Dalskoy exhibits a lovely shell-pink tint, and is a sport from Ivory, of which it is a complete replica with regard to habit of the plant and build of the bloom. Liberty, a huge deep ochre or buff Japanese form, comes over with a big reputation. It recently scored 98 out of 100 possible points in a contest at New York. Hairy varieties are also apparently well looked after by our friends across the water. Miss C. B. Freeman is a deep golden-yellow sport from Louis Boehmer, which it resembles in the contour of the bloom. Midnight, which promises well with Mr. Ware, is something after the style of Hairy Wonder, and comes very like it when taken on terminal buds. It is said, however, to be the largest hirsute variety in cultivation. It has very broad florets, and exhibits a rich shade of crimson-lake.

Home-grown Newcomers.

Miss Morley, a seedling of 1896, is the latest arrival. It is a seedling from Condor, but unlike that variety is of very dwarf habit, being well under 3 ft. in height. It is a Japanese variety with recurving florets, and in colour white delicately suffused with rose. George Blackburn, another '96 production, is a seedling from Chas. Davis, from which it differs in being tinted with rose. Miss Anne Gaunt, the result of a cross between Sunflower and G. W. Childs, has the build of the former parent with rather a deeper tone of yellow, whilst the florets are margined with the crimson of the latter parent. This variety was figured by us in the columns of The Gardening World in November of last year. In connection with the variety Australia, we may well say "Advance Australia," for we find here a huge flower with broad incurving and twisted florets, purple-amaranth in hue, with a silvery reverse. This flower is possessed of remarkably good-lasting qualities. With Mrs. Chas. Blick, a superb white, we must bring to a close the list of novelties for 1896.

Standard Varieties.

Under this head we may speak of sorts that have proved their merit at some or all of the principal shows of 1895 and previous years. Mr. Ware has a fine collection, although the Japanese section was decidedly the strongest. Madame Carnot, though somewhat late, was conspicuous in several places by the enormous size and promising appearance of the buds. They should just be in for the middle of the November shows. Madame Rozaine is a grand exhibition variety. It throws a gigantic bright rose flower, with substantial incurving petals with a silvery reverse. Some fine specimens of Phoebus showed up very strongly. They were carrying some magnificent blooms of this, one of the best yellows we have. Not a whit inferior to it in its way is Oceana, although the Hale Farm specimens needed another ten days to develop their beauty to the full. Monsieur Chénon de Léché, which made such an impression last year, is coming especially well this season, and the delicate shade of rosy-buff which it exhibits will not be wanting at our principal shows. Other varieties which have done well at Tottenham are Louise, Chas. Davis, Viviand Morel, Mutual Friend, Pride of Madford, and Reine d'Angleterre.

Singles.

We were too soon to see the bulk of the single varieties at their best, and can consequently speak only of one or two. Miss Mary Anderson is as yet unsurpassed, and for furnishing an abundance of cut flowers is invaluable. It is too well known to need further description. Maude Robinson is a very profuse blooming form, with dull rose cerise flowers. M. A. Double, a very free and handsome variety, has blooms of a bright terra-cotta hue. All three sorts should be in every collection.

BROUGHTON ROAD NURSERY, IPSWICH.

In Mr. R. C. Notcutt's collection of Chrysanthemums the plants, this season, are particularly dwarf, with good healthy foliage, but have suffered greatly from the ravages of earwigs. The particular feature of this collection is, of course, the plants of Edith Yabor, which were raised from seed there last season. We noted particularly amongst other new varieties Mrs. Briscoe-Ironside, Lady Byron, Mr. John Shrimpton, Mr. Chas. Blick, and M. Chénon de Léché. Of special interest are the American varieties, the three principal being Modesto, a rich golden-yellow, with handsome foliage; Sunclad, old gold-yellow; Sunstone, a straw-coloured Jap. Reflexed varieties are also grown, a particularly fine variety being the beautiful golden-yellow Dorothy Gibson.

VIOLAS FOR BEDDING PURPOSES.

At a meeting of the Devon and Exeter Gardeners' Association, in the Guildhall, Exeter, on the 21st inst., a paper on this subject by Mr. J. W. Moorman, Superintendent, Victoria Park, London, was read by Mr. W. Andrews; Mr. W. J. Weeks presided. The Viola, said Mr. Moorman, stood first on the list of hardy decorative plants for beauty, brilliancy and diversity of colour. We owed a greater debt of gratitude to the late Mr. John Wills, a Devonian, than to anybody else, in connection with the introduction of Violas for bedding purposes. About six varieties of the genus Viola were indigenous to and generally distributed over the British Isles, but the parents of those now grown, were V. tricolor, and V. lutea.

He should deal principally with the yellow mountain Viola (V. lutea) from which we have derived form, colour, habit and the free-flowering character now to be met with in the modern race. He knew of no other plant, which, with a minimum of labour had brought about such excellent results. Their profuse and continuous blooming propensities were a strong recommendation; they were equally suitable for small as for large gardens, and could be grown to perfection equally by the amateur as by the professional gardener. They were suitable for massing in large beds as well as for planting in borders and lines; and for mixing amongst ordinary bedding plants, or for carpeting the ground beneath the taller growing subjects. Whether for mixed bedding or for massing, the self-coloured varieties were the most suitable and useful. In spring bedding arrangements they were very effective, and would continue till winter had fairly set in. They were well adapted for town or suburban gardening, and considering the relatively heavy rainfall they had in Devon, good results should follow a fair trial.

Four leading principles should be observed if ultimate results were to be assured. The first was to obtain the best and freest flowering varieties. A good, rich and deeply dug soil was the next desideratum. The third principle was to propagate fresh stock annually by means of cuttings. The fourth point was to select a fresh position for the plants every year so as to insure an unexhausted soil, as far as Violas were concerned. Mr. Moorman then gave a selection of twenty-five varieties which he recommended as the best for bedding purposes in his experience.

Propagation was of the easiest possible nature, no artificial heat being needed, and scarcely any protection. To secure an early display in spring, the cuttings should be taken about the end of July or the beginning of August. They could, to meet various requirements, be rooted any time between the end of July and the end of October, by dibbling in the cuttings thickly in rows in a shady border or in frames according to the season. The best cuttings were those obtainable near the base of the stems forming the crown. Any varieties which did not produce cuttings freely, might be made to do so by cutting back the old stems within 3 in. or 4 in. of the base.

Violas were moisture loving plants, and consequently flourished best in a cool soil and climate. Their chief requirements in dry seasons were copious supplies of water. The surface of the ground should be frequently stirred, and weeds kept down. Mr. Moorman then gave several examples of pleasing mixtures that would happily associate with various self-coloured varieties. Some leading types of Viola were sent for the meeting by Messrs. H. Cannell & Sons, Swanley, and by Mr. Andrews who read the paper for Mr. Moorman. Mr. Andrew Hope produced a specimen of one of the parents of the race of Violas, and which he picked up near Ben Lomond in 1881. An interesting discussion followed the paper.

HOW TO GROW LOBELIAS.

Noticing the many inquiries about how to keep the above during the winter, I thought a few hints might come in time and be of service. At our place we grow many thousands of Lobelias, and all from seed, which I would as soon have as the best cuttings that can be procured. Many may laugh at this, but let them try the following plan and then let us know the result.

Get Sutton's Dwarf Blue, Veitch's Blue Stone, Dicksons', of Chester, King of Blues, Royal Purple, or Pumila magnifica, from any good strain. The latter I consider to be equal to any of the first-named varieties. Our seed is sown in well-drained pans, the soil being made pretty firm. Sow as thinly as possible, for herein lies the secret of success; once get damp among Lobelias and nothing can save them. What one should aim at is to get the seedlings nicely up, and then not push them along in any way, but keep them cool and, as it were, just alive, during the dark days of winter. When these have got away in the new year more water may be given, which will soon put a different complexion on them. Towards the end of February pricking off may be started in stock boxes, and from thence given more space as required. No one need be afraid of the result if they watch carefully. Good seed is the first necessity; 2, thin sowing; 3, careful watering; and, last of all, keep the plants cool, dry, and away from damp.—*J. G. Pettinger, Strawberry Dale Nursery, Harrogate.*

OUR AUTUMN QUEEN.

AGAIN we are fairly launched in our annual fight for honour. After months of great watching and endless little cares we shall soon know the result of our labour. Many will be disappointed, and perhaps some justly so. These have my sincere sympathy. Most men, and I think more especially Englishmen, when they see they are beaten, will abide by the judges' decision. However, judges are not at all times perfect; they should however, be chosen as near the ideal as possible. They are no doubt, in many instances placed in positions when they would gladly change places with anyone. Their main desire is (or should be) to give satisfaction to the society, exhibitors, and everyone concerned. Therefore, I say, let them be of the best. To the unsuccessful I can only say, keep going on. Every man has his day, and my opinion is, that, to anyone that will persevere, success will come. Gardeners that have masters interested in the cause stand on good ground. Never will they begrudge the many little niceties so essential to good Chrysanthemum growing, and without which, any high place in the show world is not to be expected.

The small man with limited means, and a master that dosen't know a 'mum from a Cabbage, has great hills to climb before his time comes, and no wonder that so many fall out of the ranks in the struggle. Once more I say, and this to any judge of Chrysanthemums that may give this a passing glance, "do your best at all times, and if any one who has come off badly should ask what his faults are, don't be frightened of telling him. A few words of encouragement to the downfallen have done wonders for many, more especially where the advice comes from sound men.

Those who win the day may be congratulated on their success, and well may they enjoy the result of their long endeavours.

Just a few words on varieties that promise well and which should never be discarded from the list for untried new ones. Sunflower.—This most beautiful golden yellow flower deserves a good place anywhere, being of a good constitution, and at all times good to do. Viviand Morel should be secured as terminal buds, which will result in a beautiful soft pink bloom, the crown bud coming many shades lighter, and sometimes nearly white.

C. Davis, a very delicate terra-cotta, is a sport from the last-named, and is good in every particular. Florence Davis, the green Chrysanthemum is also good. The following will also be found to be worthy of the attention of new beginners:—Col. Chase, a straw-coloured Jap; Baron Hirsch, bronze incurved; Mons. Bahuant, bronze incurved; Wm. Seward, the terminal bud, a beautiful deep crimson, and a splendid flower; Gloire du Rocher, gold and red; Boule d'Or, yellow; Beauty of Exmouth, white; Avalanche, white.—*J. G. Pettinger, Strawberry Dale Nursery, Harrogate.*

NOTICE OF BOOK.

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THE part of the journal above noted contains a great variety of information, commencing with eight papers, which were read at the meetings of the Royal Horticultural Society. The papers on "Melons" and "Summer Saladings" contain practical information for the guidance of those who may only be climbing the hill of knowledge in their profession, or may require information on certain points in their practice the growing of salad plants may be considered an easy matter generally, and so it is, but careless or haphazard cultivation will never insure very successful results in keeping up a continual supply of those not nnimportant items of a large gardening establishment. Pine-Apple culture is not very extensively carried on at the present day, and for some years past has been contracting rather than expanding. Improved methods of cultivation, by which the period between the rooting of the suckers and the maturing of the fruit is shortened, may, however, in the near future cause a revival of this special culture; for home grown fruits, matured, as they are, upon the plants, are superior in flavour and general excellence to those conveyed from distant countries, before they are fully ripe.

The paper "On the Species and Varieties of Tulipa," by Mr. J. Gilbert Baker, F.R.S., is highly interesting to those who take special interest in Tulips, and must have been a revelation to those who knew little of Tulips beyond those so extensively cultivated in parks and gardens for bedding purposes, most of which belong to Tulipa gesneriana. Those who had some idea of botanical classification were able to follow Mr. Baker, but a much larger number should now be able to grasp the details as given in so clear and succinct a manner in the journal under consideration. Mr. Baker does not attempt to determine whether such forms as T. retroflexa, T. elegans, T. vitellina, T. viridiflora, and others of a like character, are true species or garden forms. The long cultivation and improvement of T. gesneriana in gardens, renders this an extremely difficult and uncertain task. The above he describes as "less known species of garden forms, allied to T. Didieri," a native of Savoy.

An interesting paper on Iris, is contributed by Mr. W. J. Caparn of Oundle, Hants who treats of the history and geographical distribution of the genus. The Rev. George Henslow, M.A., F.L.S., consistently with his favourite subjects, treats of "The Movements of Plants." Those, who are unfamiliar with the various physical attributes, and properties of plants, and the technicalities with which they are clothed, may be staggered with such a term as thaumotropism; but it is described in other words, as that faculty by which plants are enabled to "turn heatwards" or assume the habit of creeping or trailing upon the ground or close to it when the soil in which they are growing is warmer than the air immediately above it. He gives various instances of it in Malta, in this country and in dry Alpine regions where this phenomenon is common.

LAW NOTE.

EXTRAORDINARY ORCHID DISPUTE.

In the City of London Court, on Monday, before Mr. Commissioner Kerr, the case of Rappart *v.* Peat and Dillon was tried, raising a peculiarly interesting question of importance to Orchid growers and others. The plaintiff, Mr. David B. Rappart, The Promenade, Liscard, Cheshire, sought to recover against the defendants, Mr. W. B. Peat and Mr. Malcolm Dillon, executors of the late Mr. G. D. Owen, 24, Grosvenor Road, Newcastle on-Tyne, the return of the sum of £17 6s. 6d. which he had paid to them for certain Orchids. Mr. Piesse, plaintiff's counsel, said that he attended the sale of the Selwood collection of Orchids which was held at Selwood, Rotherham, Yorks, on April 24th, 25th and 26th, 1895, when the late Mr. Owen's collection was disposed of by auction. The plaintiff's case, shortly, was that he there purchased Orchids which were not of the rarity represented, and he consequently asked for his money to be returned. There was no question of feeling in those proceedings, the plaintiff putting his case no higher than that a mistake had been made. The plaintiff was called and he said he purchased an Odontoglossum elegans, four bulbs, with one growth, for 5 gs. He also bought a Dendrobium splendissimum grandiflorum and a Cattleya Skinneri alba, with seven bulbs, for the latter of which he paid 8½ gs. At the time he bought the plants they were not in flower and it was impossible to tell what varieties they were other than from the descriptions contained in the catalogue upon which he purchased. In April when the Odontoglossum flowered he found that it was a Hallii and was worth instead of 5 gs. about 2s. 6d. The Dendrobium turned out to be an Ainsworthii and was worth about 2s. or 3s. The Cattleya Skinneri alba turned out to be quite an ordinary variety and it was not an alba at all. The petals were a light rose colour. In cross examination he said he could not say he had a very great knowledge of Orchids. He had only been collecting them during the past eighteen months. He had about 1,000.

Mr. Commissioner Kerr (surprised). What do you do with them all? The plaintiff: It is a hobby. Mr. Commissioner Kerr: Oh! The plaintiff further said that he was quite sure the plants had not got mixed up while in his houses. He produced the plants in court for the inspection of the judge. Mr. Commissioner Kerr: I hope the legal atmosphere will not kill them or even damage them. The plaintiff in further evidence said that the Dendrobium came from the Quorn House collection when Mr. Owen purchased it. After he had bought it from the defendants, Mr. Protheroe, who was staying at the same hotel as he did, told him that he was afraid it was not the trne variety. At the sale the plant was exhibited.

Mr. Edwin Pollock, defendants' counsel, said they were quite satisfied that the plants which they sold to the plaintiff were true to their names, and that the plaintiff had mixed them up in some way or other. The plaintiff said that he did not complain of any error of description. What he said was that he had not got the plants which he bought. Mr. Commissioner Kerr said there was no suggestion of *mala fides*. He thought the matter might be referred to someone who could act with impartiality, and in whom the parties had confidence.

Mr. J. Baggallay, the representative of Messrs. Charlesworth, Bradford, Orchid growers and importers, said that in April he happened to call on the plaintiff on business when he saw the Odontoglossum. It was certainly not an elegans, but a very poor variety.

Mr. James McNab, traveller for Messrs. Sander & Co., St. Albans, said he also called and saw the Cattleya Skinneri alba, and it was not an alba at all. The petals were slightly diffused with rose. His firm sold the plant (which was supposed to have been bought by the plaintiff) to Mr. Owen, and they were paid 35 gs. for it. That could not have been the one now in question. They also sold Mr. Owen, for 15 gs., the Odontoglossum elegans. They were then both in flower, and there was no mistaking them for the plants now produced.

Mr. James O'Brien, hon. secretary of the Royal Horticultural Society, also gave evidence in support of the plaintiffs' case. For the defendants evidence was given to show that the defendants had, in fact, sold genuine plants to the plaintiff. Mr. Commissioner Kerr said the case was a very difficult one to decide. He would take time to consider his decision.

SOCIETIES.

ROYAL HORTICULTURAL.

THE meeting on the 27th inst. was chiefly notable for the fine display of Orchids. Pelargoniums and stove foliage plants were also present, and new Chrysanthemums were fairly plentiful.

Messrs. J. Veitch & Sons, Chelsea, exhibited a large, well-arranged, and showy collection of Orchids, amongst which Cattleya labiata in great variety, C. dowiana aurea, C. statteriana, C. Chloris, and Cypripedium Charlesworthii were prominent and attractive. Interesting in their respective ways were Lycaste costata, Cycnoches chlorochilum, Cypripedium Milo, C. harrisianum superbum, C. insigne montanum, Odontoglossum harryanum, O. bictonense album, Oncidium ornithorhynchum, and many others, all splendidly flowered (Small Gold Medal).

R. I. Measures, Esq. (gardener, Mr. Hy. Chapman), Cambridge Lodge, Camberwell, exhibited a collection of Orchids, including Cattleya labiata R. I. Measures' var., many other forms of the same species, also Cypripedium Mrs. C. Canham, C. leeanum superbum, C. arthurianum, C. Milo, Laelia elegans, Cattleya gigas, a huge-flowered form of Cypripedium tonsum, and many others (Silver Flora Medal).

Messrs. Hugh Low & Co., Clapton, staged a group of Orchids, amongst which we noted a huge piece of Cycnoches chlorochilum, and many beautiful varieties of Cattleya labiata. C. dowiana aurea, Oncidium ornithorhynchum album, and the huge flowers of Odontoglossum grande were also noteworthy.

Messrs. B. S. Williams & Son, Upper Holloway, staged a collection of Orchids, in which Cattleya labiata, Oncidium Forbesii, O. ornithorhynchum, O. o. album, and Cypripedium insigne Wallacei were prominent features.

Messrs. F. Sander & Co., St. Albans, exhibited a showy group of Orchids, including very numerous varieties of Cattleya labiata, also the hybrid C Johnsoni superba, C. labiata, The Bride, C. l. The Pearl, and others. Oncidium varicosum, Dendro

bium Johnsoniae, and Oncidium trigrinum were also well flowered.

A splendid collection of cut flowers of Orchids was exhibited by Thos. Statter, Esq. (gardener, Mr. R. Johnson) Stand Hall, Whitefield Manchester. Numerous and handsome were the forms of Dendrobium Phalaenopsis schroderianum. The sepals and petals of Cattleya aurea johnsoniana were the richest in colour we have seen, notwithstanding the fact that many other fine varieties were also shown here. One form tending towards C. hardyana had rosy petals (Silver Flora Medal).

F. Hardy, Esq. (gardener, Mr. Thos. Stafford) Tyntesfield, Ashton-on-Mersey, Cheshire, staged five plants of Laelia praestans. S. G. Lutwyche, Esq. (gardener, Mr. J. Paterson) Eden Park, Beckenham, exhibited Miltonia lamarcheana, a hybrid Cypripedium between C. callosum, and C. villosum, also the hybrid C. beechense, of rich colour, C. Charlesworthii, and C. insigne montanum, the two latter being choice.

M. Georges Mantin, Chateau de Bel Air, Olivet, France, exhibited seven plants of the hybrid Cattleya Mantinii, in a great variety of colours, the size of the flowers also varying (Silver Banksian Medal). He also received a cultural commendation for one fine piece of C. M. nobilior.

H.J.Elwes,Esq.(gardener, Mr.J.Lane), Colesborne, Gloucester, exhibited a group of small but interesting types of Orchid including Arundina chinensis, Pleione Wallichi, Dendrobium Aphrodite, Liparis spathulata and a long-tailed Cirrhopetalum (Bronze Banksian Medal). A cultural commendation was accorded to Mr. W. Lane, King's Ride, Ascot, for a grand piece of Cattleya bowringiana with five huge trusses of bloom.

Messrs. Linden, Brussels, exhibited a remarkably distinct supposed natural hybrid Cattleya named C. le Czar. Restrepia antennifera and R. Lansbergii were exhibited by R. I. Measures, Esq. Cypripedium Regina and Cattleya Elvina, two grand hybrids were exhibited by Messrs. J. Veitch & Sons. Cattleya la Belle and Cypripedium Marriottianum, both hybrids, were exhibited by Sir William Marriott, Bart. (gardener, Mr. Thomas Denny), The Down House, Blandford. R. J. White, Esq., (gardener, Mr. J. G. Check), The Firs, Peckham Road, staged Cattleya labiata.

C. L. N. Ingram. Esq. (gardener, Mr. T. Bond) Elstead House, Godalming, staged Laeliocattleya callistoglossa Ingrami, having a huge flower, also L. Gazelle splendens. A hybrid Cypripedium of great vigour was also shown by Walter C. Clark, Esq., Sefton Park, Liverpool.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., set up a very neat group of stove foliage plants including some well coloured Crotons and Dracaenas, a few Cypripediums, and some plants of Saintpaulia ionantha (Bronze Banksian Medal).

Mr. W. Wells, Earlswood Nurseries, Redhill, Snrrey, put up a number of well-flowered plants of Chrysanthemums. Some dwarf plants of the new yellow Jap. Australian Gold in 32-size pots, each plant carrying a superbly finished bloom were a chief feature here. Notable also was a grand plant of Mons. Chénon de Léché with three grand blooms. Dwarf plants of John Shrimpton were also shown well here (Silver Banksian Medal).

A collection of winter-flowering Zonal Pelargoniums was contributed by Mr. Owen Thomas, gardener to Her Majesty the Queen, Royal Gardens, Windsor. The plants were well flowered, and bore some good trusses, but they were much too leggy in habit to be really good (Silver Banksian Medal).

Messrs. John Laing & Sons, Forest Hill, S.E., were responsible for an exceedingly pretty group of miscellaneous plants. Well-grown Crotons, Dracaenas, and small Palms represented the foliage elements. Single flowered tuberous Begonias, including the beautiful late variety, Autumn Queen, Begonia Gloire de Lorraine, and a fine piece of Cypripedium harrisianum also contributed their quota of beauty (Silver Flora Medal).

A large group of Crotons was set up by Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford. All the plants were clean and well grown, whilst the specimens submitted of such varieties as Warrenii, Mortii, Aigburthensis, and Reedii were deserving of special mention. The colour throughout was very well developed (Silver Gilt Banksian Medal).

A Silver Banksian Medal was awarded to Mr. Lane, gardener to H. J. Elewes, Esq., Colesborne, Gloucester, for a charming collection of Nerines. The umbels of flower were large, and numerous shades varying from rose-white to scarlet and crimson were represented. Excellent specimens of Nerine flexuosa major, N. cinnabarina, and N. Meadowbankii, came from Mr. Bain, gardener to Sir Trevor Lawrence, Esq., Burford Lodge, Dorking.

Mr. W. Wells showed three dozen large cut blooms of Chrysanthemums—La Garonne, Pride of Exmouth, Australian Gold, Belle Mauve, and Harry Johnson were the best varieties. A dozen blooms of Chrysanthemum Tulwell Park were shown by Mr. A. N. Rickwood, gardener to the Dowager Lady Freake, Fulwell Park, Twickenham. Messrs. Cannell & Sons, Swanley, Kent, also exhibited cut blooms of Chrysanthemums, several Awards of Merit being granted. The grand yellow incurved variety Ernest Cannell was in fine condition here.

A Silver Flora Medal was voted to Mr. W. Tarr, gardener to A. Pears, Esq., Greenbank, Isleworth, for a large group of Chrysanthemum Sunflower, Eda Prass, Viviand Morel, Chas. Davis. Mons. Freeman, President Borel, and John Shrimpton were all represented by some very fine blooms.

Mr. Anthony Waterer, Knap Hill Nurseries, Woking, obtained a Silver Flora Medal for some exceedingly well berried Pernettyas, and some shapely specimens of Picea pungens argentea, the Colorado Blue Spruce of varying heights. A few finely coloured samples of the Knap Hill Scarlet Oak were also submitted by the same exhibitor. Messrs. Jas. Veitch & Sons, Chelsea, showed a case full of large and richly coloured fruits of Physalis Franchetii.

A collection of tweny-four medium sized and well finished Melons was exhibited by Mr. T. Crisp, Osberton, Worksop, a Silver Banksian Medal being awarded. A Cultural Commendation went to the same exhibitor for bunches of Golden Queen Grape.

In the classes for the best flavoured Apple and Pear, in which special prizes are offered by Messrs. J. Veitch & Sons. Mr. G. Woodward, gardener to R. Leigh, Esq., Barham Court, Maidstone, was placed first for a Pear with Doyenné du Comice, and second with Beurré superfin. This exhibitor also had the best flavoured Apple in Cox's Orange Pippin. Mr. C. Herrin, Dropmore, was second here with Ribston Pippin. Celery Barr's Self Blanching, and Celeriac were shown from the Society's gardens at Chiswick.

GARDENING MISCELLANY.

CLERODENDRON FOETIDUM.

This Clerodendron is very distinct in appearance from its congeners which are such favourite occupants of our stoves and warm greenhouses. A native of Northern China, it is, as may be supposed, possessed of a much hardier constitution than most of the members of the genus. A clump of it planted on the western side of the temperate house at Kew has been in flower for some time past. The plants average about 5 ft. in height. The stems are thin and wiry, purple green in colour, and mottled heavily with gray blotches. The leaves are rather large, cordate in shape, somewhat acuminate, and with margins irregularly serrate. The rosy-lilac flowers which are produced in dense terminal corymbs 4 in. to 5 in. in diameter are very small, and emit a powerful odour which, however, is not unpleasant, as the specific name foetidum would lead one to expect. C. Bungei and C. foetidum are synonymous.

ASTER TURBINELLUS IN POTS.

Not only are the perennial Asters queens of the outdoor garden in the fast declining autumnal days, and the long autumnal nights when more than a suspicion of frost may be in the air, but some of them render an exceedingly good account of themselves if potted up and bloomed under glass. Aster turbinellus thus treated, has been in splendid form of late in the greenhouse at Kew, and may well suggest to gardeners to go and copy the example thus set. Twelve-inch pots are employed, and these are quite large enough to accommodate fine specimens 5 ft. in height, and 3 ft. or 4 ft. through. A. turbinellus is especially adapted to this work, for the stems are long and wiry, and the habit light and graceful. The flowers run about 1½ in. in diameter, and exhibit a delicate shade of mauve. Indeed, with the quite length of the ray florets, the individual flowers look like stars, and well justify the popular name of Starworts which has been bestowed upon this handsome genus.

ASPARAGUS.

Will some one give me their experience in planting Asparagus in autumn? I have some beds requiring to be filled up, and having a quantity of two and three-year-old plants, that must be moved this autumn to clear the ground, and having been told that Asparagus planted in autumn would do well, should like to have the experience of some practical man who has tried the autumn planting. I have always done well with spring planting till this season and then the weather has been so hot and dry for such a long time, causing many plants to perish; therefore the vacant places require filling up and I should like to use these plants to make them good. Also some older beds I have require making good, and these plants would come in well for them. If I could plant them now instead of in the spring it would be a great saving of time, and advantage to the crop next season if they would grow and do well. —*Inquirer.*

PEAR BEURRE BOSC.

A medium sized specimen of this variety grown in Devonshire, was supplied us by our correspondent Mr. J. Mayne, in order to determine its excellent qualities. The Pear-shaped fruit was just in perfection and of a light yellow, covered with a thin russet marked with darker spots, and a good deal broken up here and there into splashes and markings which showed the yellow ground colour between. The flesh is white, soft, and buttery, without grit, juicy and sweet with a pleasant aroma, and very melting. The core was exceedingly small, and the central fibrous tissues reduced to a minimum. The report of the committee of the National Pear Conference, held in the Royal Horticultural Society's Gardens, Chiswick, in 1885, describes it as first-rate, with a tender, juicy and very pleasant flesh. It is in season as a rule during the months of October and November, but the sample sent bore some evidence of being on the point of passing beyond its best, and therefore unusually early in accordance with the past summer.

SMYTH'S HYBRID FRENCH BEAN.

I am pleased to be able to give this a word of praise. In my opinion this is a vast improvement on many of the older varieties. In the first place it is very early, also an abundant cropper and a very compact grower. The pods are of medium size, the beans very small in the pod. I found that by careful gathering, this variety stood longer in bearing than many older sorts with larger pods and beans larger. Symth's Hybrid with its medium or rather smaller pods is less trouble to dress for table; and lastly it is very tender and delicious when cooked, and only requires to be grown, when, in my opinion, it will become a favourite with many.—*J. L., Palgrave.*

UNLOVELY CRITICISM.

Sarcasm I had almost said, but then such a mode of expression is always unlovely, whereas with regard to fair and unbiased criticism there is certainly no reason why such an under current of jealous feeling should be resorted to. Such sentiments rise to one's mind when observing the epithets hurled at each other by gentlemen representing the political arena for instance. Such thoughts pervade the understanding when one exponent of a branch of the gardening industry strives through the subterfuge of anonymity by the aid of the horticultural press to take a mean advantage of a contributor, and this oft-times, merely because that contributor has had the courage to reveal his name (the subject on which A. has written having been one which A. S. would never have touched, had not his chance come to "have a knock" at probably a former rival, recognised by the revelation of the said name). But when, Mr. Editor, through that cloak of anonymity and idiomatic Latin phrases is fully recognised the "unlovely criticiser," what then? Tableau!—*Ecce Homo!!*

CHRYSANTHEMUM SHOWS.

BY TELEGRAM.

WATFORD.

THE Watford Chrysanthemum Show held at the Clarendon Hall, Watford, was the scene of the opening show of the provincial series on Tuesday last. An excellent competition took place, the leading prizetakers including Mr. Pummell, gardener to C. G. Nott, Esq., Harrow Weald, Mr. Gleeson, gardener to C. Keyser, Esq., Warren House, Stanmore, Mr. W. Tidy, gardener to W. K. D'Arcy, Esq., The Hall, Stanmore, Mr. F. Harmer, gardener to C. R. Humbert, Esq., Dell Field, Watford, Mr. Wilson, gardener to H. J. Jourdain, Esq., The Elms, Watford, Mr. Deane, gardener to the Earl of Essex, Mr. J. Cox, gardener to the Honourable A. H. Hibberd, Esq., Watford, Mr. J. Gillet, gardener to H. J. Luhbock, Esq., Newherries, Radlett, Mr. G. Ashdown, gardener to Major Collis Browne, Byfleet, Mr. E. Beckettt, of Aldeham House Gardens, Mr. H. Reed, gardener to Mrs. Moon, Watford, Mr. Brown, gardener to Lord Esher, and Mr. Davis, gardener to W. F. D. Schreiher, Esq., Watford.

The trade exhibitors were Messrs. Scrivener & Co., Mr. Darby, Mr. Childs, and the Ichthemic Guano Company.

Splendid wreaths were exhibited by Messrs. Scrivener & Co.; Mr. Newman, florist, Watford, and others, the first and second prizes being awarded in the order named.

We congratulate the Watford Society upon having so able and courteous a secretary to organise such a good a show and to attend to the many visitors.

BLACKHEATH.

THE Kent County Chrysanthemum Society held their annual show in the Rink, Blackheath, on Wednesday last. The entries compared favourably with last year for size and quantity of blooms. Fruit classes were not so numerous. Exhibits all round, however, were good. In class I. for a group arranged for effect, in a space not to exceed fifty superficial feet, the leading honours were carried off by Mr. A. White Holland, Lee Park Nursery. Mr. F. P. Preston, Blackheath, was second. In class II. for thirty-six blooms (eighteen incurved, and eighteen Japanese) distinct, the first prize was secured by Mr. W. Lawrence, Hollingbourne. He was followed by Mr. A. G. Hubhuck, Chislehurst; by Mr. C. J. Whittington, Bickley Park; and by F. G. Foster, in the order named. Mr. J. Scott, Chislehurst, took the leading award in the class for twenty-four Japanese varieties, distinct, showing some grand blooms. He was followed by Mr. C. J. Whittington, and by Mr. P. Walker, Fawkham, in the order given.

Mr. H. F. Tearks, Chisleburst, had the best two bunches of Black Grapes. Mr. C. Bayer, Forest Hill, was second; and Mr. S. White, Crayford, was third. Mr. C. Bayer came to the front for two bunches of White Grapes. Mr. C. Jay, Bexley, took a second place, and Mr. L. J. Baker, Chertsey, came in third.

The class for the president's prize was an interesting one, the prize being offered for twenty-four Chrysanthemum blooms distinct (eight each of Japanese, incurved, and reflexed). Mr. C. J. Huhbuck took the lead. Mr. C. Jay was a good second; and Mr. H. F. Tearks came in third.

Trade exhibits were represented by Mr. H. J. Jones, Ryecroft Nursery, Hitber Green, Lewisham, who had a grand group of Chrysanthemums and fine foliage plants. Messrs Geo. Bunyard & Co., Maidstone, exhibited a collection of a hundred varieties of Apples and Pears, which for size and colour were simply remarkable. Messrs. J. Laing & Sons, Forest Hill, also staged a splendid collection of Apples and Pears. Mr. A. W. Holland, Lee Park Nursery, set up a group of plants. The Ichthemic Guano Company, of Ipswich, had an exhibit of plants grown by their special fertiliser.

STEYNING.

The fifth annual show of the Steyning Chrysanthemum Society was held at the Town Hall on Wednesday and Thursday, the 28th and 29th inst. In the cut flower classes, for twenty-four Japanese varieties, district, H. Head, Esq., Steyning, took the leading award. Similar honours were taken by J. Stredwick, Esq., Hastings, in the class for twelve Japanese varieties, distinct. For the best group of Chrysanthemums, any varieties, the coveted first was taken by the Rev. C. W. Napier, Steyning. The class for a vase of Chrysanthemums also created some amount of interest, and the leading award was taken by Madame A. Slaughter. H. Head, Esq., exhibited the best three Chrysanthemum plants. Miss Wood, Steyning, led the way for a bracket basket of Chrysanthemums. Mrs. H. J. Burt, had the best sprays of flowers for ladies' dress.

In the fruit classes, the leading prize for Apples was taken by the Rev. C. W. Napier. H. Head, Esq., took similar honours in the class for Pears. Miss Flowers took the lead in the class for table decoration.

Trade exhibits were fairly numerous, and amongst them we noted Mr. Walter Hills, florist, Steyning; Mr. Charles Kilmister, nurseryman, Steyning, who had a splendid show of wreaths. The Ichthemic Guano Company, Ipswich, had a stand of their famous manures. Altogether it was a splendid show for this early part of the season, the exhibits being excellent throughout.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Name of Cattleya—*Jas. Thompson*: As far as we can see by the specimen sent, it is a late and small flower of Cattleya gaskelliana. Owing to the want of packing, the flower had been much smashed up in coming through the post. We think, however, that the flower will be considerably altered by the time the plant gets well established and comes into bloom next year.

Forcing Rhubarb.—*Rhubarb*: It depends very much upon the temperature of your greenhouse, as to whether you could get Rhubarb fit for use by Christmas. It requires relatively more heat, or longer time to get it fit for use at this period of the year than it would in spring. A temperature, however, of 45° to 50° would bring it along pretty rapidly. In any case we think you had better make a start at once so that the roots may come along slowly and surely. A few roots at first would be sufficient, and you could introduce other batches every ten days or a fortnight, so as to ensure a succession. If you can place the roots anywhere near the hot-water pipes, so much the better. Cover the roots with leaf mould or some light rich soil, and see that this never becomes dry, more especially if the roots are placed close to the hot-water pipes. Should you require the stalks to be well blanched and tender, you must cover them up with something that will more or less effectually exclude the light. A little thinking will enable you to consider the best means of covering up with the materials to hand, or to devise something that will effect the same purpose.

Dessert Apples.—*H. Warner*: You will be quite within the meaning of the schedule by exhibiting Blenheim Orange in a class for dessert varieties, because this Apple may be used either for desset or culinary purposes. Possibly you may be tempted by the size of the fruits of Blenheim Orange, but if you show such high class quality as Cox's Orange Pippin, Rihston Pippin and Worcester Pearmain, of good colour and nearly equal size, we think they would tell well with judges who know their work.

Saintpaulia ionantha.—*Sigma*: This plant belongs to the natural order Gesneraceae. Being comparatively a recent introduction, it has only got into the most recently revised or new books.

Books on Geometry.—*Arthur Hillier*: There are numerous editions of the "Elements of Euclid," edited by different authors, and sold in every store or emporium of school books; but we doubt if such would be of any great assistance to you without a considerable amount of study. The subject has never been considered of sufficient importance to warrant the production of a book suitable for beginners or otherwise in the art of laying out flower beds. The best plan would be to get a book or two containing designs of flower beds. The latter should be copied until you thoroughly understand them, and could readily transfer them to the ground from paper. After getting some insight into the subject in this way you would then be able to think out new and improved designs for yourself. Fresh designs would be more interesting than old ones, and the flower garden would be rendered the more novel and attractive by such means. Cheap books of designs for this purpose are few. We believe you could not do better than get a copy of the "Hampton Court Guide," which contains or used to contain plans of numerous flower beds. This could be obtained by applying to Mr. Graham, superintendent of the gardens, Hampton Court, Middlesex. It is relatively cheap, and we think would suit your purpose.

Name of Fruit.—*M. M.*: Pear Marie Louise d'Uccle.

Communications Received.—B. S. Williams & Son.—H. Cannell & Son.—H. C. Zwart.—W. Wells.—J. Veitch & Sons.—H. J. Jones.—J. G. Pettinger (please do).—James Milligan (arrived in good condition).—R. M.—W. L.—S. W.—A. T., B.—Western.—A. Joss.—S. Baird.—Beta.—T. Anderson.

COVENT GARDEN MARKET

October 28th, 1896.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs.	25 0	27 6
Grapes, per lb.	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples, per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	3 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Chrysanthemums, doz. blooms	1 0	4 0
Chrysanthemums, doz. bunches.	3 0	6 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	4 0	6 0
Gladiolii, doz. spikes	1 0	3 0
Hyacinths (Roman) doz. sprays	0 9	1 0
Hyacinth (Roman) doz. sprays	0 9	1 0
Lilium lancifolium, doz. blooms	1 6	2 6
Lilium longiflorum per doz.	4 0	6 0
Lilac, White (French) per bunch.	4 0	6 0
Lily of the Valley doz. sprays	1 0	2 6
Marguerites, 12 bun.	1 0	2 0
Maidenhair Fern, 12 bs.	4 0	6 0
Mimosa, per bunch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	6 0
Pyretbrum doz. bun.	2 0	4 0
Roses (indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	4 0	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	0 6	1 0
Roses, doz. bchs	9 0	12 0
Pink Roses, doz.	2 0	3 0
Smilax, per bunch ...	1 6	3 0
Stephanotis, doz. sprays	2 6	4 0
Tuberoses, doz. blooms	0 3	0 4
Primula, double, doz. sprays	0 6	0 9
Violets (French) per doz. bunches.	1 6	
Violets (English) per doz. bunches.	1 6	2 6
Violets (Parma) per bunch.	3 0	4 0
Violets Czar, large, per doz. bunch.	2 0	3 0

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Coleus, per doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, in var. doz	6 0	24 0
Erica, per doz.	9 0	15 0
Erica Hymalis, per doz.	12 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Lycopodiums. doz.	3 0	4 0
Marguerite Daisy doz.	6 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums, scarlet.	2 0	4 0
Solanums, per doz.	12 0	15 0

NOTICE.

THE THIRTEENTH VOLUME of THE GARDENING WORLD commenced on SEPTEMBER 5TH, 1896.

NOW IS THE TIME for new subscribers to start. The last issues can yet be supplied. Readers requiring back Numbers to complete Volumes can obtain same, post free for 1½d. each, direct from the Publisher. All back Volumes and Numbers kept in stock.

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, NOVEMBER 7th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 9th.—Chrysanthemum Shows at Gloucester and St. Neots.
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

TUESDAY, November 10th.—Royal Horticultural Society: meeting of committees at 12 o'clock.
Chrysanthemum Shows 2 days—Brighton, Kingston, Chesterfield and district, Bexley Heath, Huddersfield, Folkestone, Croydon, Cleveden, Longton, Ipswich, Reigate, and Belfast; 1 day—Henley.
Sales of Bulbs by Messrs. Protheroe & Morris. and Mr. J. C. Stevens.

WEDNESDAY, November 11th.—Chrysanthemum Shows 2 days—Lewes, Faversham, Canterbury, Bournemouth, Guildford, Cheltenham, Patricroft, Yarmouth, Rugby, Banbury, Northampton, Barnet, Cardiff, Cranbrook, Jersey, Carlisle, Dundee, Hull, Liverpool, Blackburn, and Birmingham; 1 day—Highbridge and Yeovil.
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

THURSDAY, November 12th.—Chrysanthemum Shows 2 days—Glasgow, Bury St. Edmunds, Tottenham, and Winchester; 1 day—Teignmouth, Colchester, Highgate, and Lizard.
Sales of Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, November 13th.—Chrysanthemum Shows, 2 days—Wellinghorough, Derby, Stockport, Grimsby; Leicester, Sheffield, and Bradford; 1 day—Liscard.
Sales of Bulbs by Messrs. Protheroe & Morris and Mr. J. C. Stevens.
Sales of Orchids by Messrs. Protheroe & Morris.

SATURDAY, November 14th.—Royal Botanic Society's Chrysanthemum Show; Batley Chrysanthemum Show (1 day).

A SUCCESSFUL JUBILEE CELEBRATION.—The exhibition got together on the first day of the celebration of the Jubilee of the National Chrysanthemum Society was remarkable for the extent and quality of the exhibits. Excitement may be said to have centred around four or five leading points in the exhibition, namely, the leading classes for cut blooms, the groups of plants, the trained specimens, the fruits and vegetables, as far as both gardeners and the public were concerned. The great efforts put forth by the society in order to get up a first-class exhibition to commenorate the event of its Jubilee, proved by results to be in every way worthy of it. Fine as last year's show was, the present was by no means a repetition of it. The different arrangement of the classes, and the valuable prizes offered were the means of drawing out individual talent in various directions.

The number of competitors in the classes for cut blooms of sixty Japanese, and sixty incurved Chrysanthemums, was something remarkable. The amount of time and energy that must have been spent by

specialists in this line of cultivation, to fill these two classes would be sufficient to appal the novice and prevent him from entering competitions of this nature. The British gardener, however, has sufficient grit in him to carry him through any amount of labour in the cause of his vocation. As will be seen by our report, the tables have been somewhat overturned in the leading classes. Mr. W. Mease, gardener to Henry Tate, Esq., has been known to us for years past as a good grower of the incurved type; now he boldly takes the lead in the class for sixty Japanese varieties. He has been an exhibitor for the past thirty or forty years. Mr. W. H. Lees, gardener to F. A. Bevan, Esq., took the second place for sixty Japanese varieties. Horticulture, and the Chrysanthemum world in particular must be all the more delighted with two such champions, in place of one. While speaking of cut blooms we may note one observation as confirming the popularity of the Japanese section of Chrysanthemums over that of the Chinese section. We had extreme difficulty in getting round the tables to note the prize winners for the sixty Japanese varieties, whereas in the other case, the British public was comparatively uninterested half the time, so that reporting in that case was an easy matter.

The circular groups of Chrysanthemums in competition for the President's prizes were a highly attractive feature of the exhibition. They were a real departure from the square and semi-circular groups of bygone years, and much admired by the general public. No better trained and flowered specimens have ever before been seen at the Royal Aquarium. They were marvels of floral beauty, particularly the leading prize lots in the two classes. The tables of floral decorations in the western end of the building on the ground floor, were equally meritorious, and thronged by the public all day, on Tuesday at least. They were non-competitive exhibits, and great improvements on anything in that line previously seen.

Many of the visitors declared they had never seen such a display of Grapes at a London show. The quality was good and the competition heavy. Mr. William Taylor, gardener to C. Bayer, Esq., Forest Hill, and Mr. William Taylor, gardener to Alderman Chaffin, Bath, had a severe struggle with one another for all the leading prizes. The first prize lot of twelve bunches of Grapes was a revelation of cultural skill. The competition was equally severe amongst the vegetable classes and the quality was unusually fine. The Grapes and vegetables entirely filled St. Stephen's Hall. Potatos were grand. The exhibit in the non-competitive class, by Messrs. Sutton & Sons, Reading, consisted of clean and beautiful tubers of Potatos of table quality that has never been surpassed in London.

Lincoln's Inn Grapes.—At a recent council meeting of the Benchers, some Grapes grown this summer in Old Square, Lincoln's Inn, were partaken of by the learned gentlemen present, who expressed their appreciation at being supplied from vines grown and ripened in the very heart of London.

Hypericum mosserianum.—This dwarf and free-flowering St. John's-wort is a great acquisition to gardens, as it practically continues in bloom for the greater part of summer. It proves perfectly hardy at Kew where it is grown in a large bed near the ferneries and greenhouse. The flowers are of the first size for the genus and bright yellow, with a great brush of stamens, tipped with red anthers in the centre. The arching stems never exceed 12 in. in height.

Mr. Horace Darwin, a son of the great naturalist, the late Charles Darwin, has consented to take the office of the Mayor of Cambridge.

The Marriage, of Mr. David Gibson, gardener at Coombe Cottage, Kingston-on-Thames, and Miss Cecilina Ada Webb, daughter of Mr. Webb, builder, South Norwood, was celebrated at Woodside Church, Croydon, on the 24th ult.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, November 10th. in the Drill Hall, James Street, Westminster, 1 to 4 p.m. At three o'clock lectures will be given by Mr. R. Fife and Mr. J. Long, on "Seed Growing."

Errata.—On p. 140, in the 38th line from the top of the third column, read Mr. James O'Brien, hon. secretary "of the Orchid Committee" of the Royal Horticultural Society. On p. 141, in the 10th line from the top of the middle column for Mr. W. Wells, read "Mr. W. J. Godfrey, Exmouth, Devon, showed three dozen large cut blooms of Chrysanthemums.

Delancy Park, Guernsey.—The Council of the Delancy Park Improvements, have invited Mr. A. E. Stubbs, of Ipswich, to join their committee of management of next year's feté, and we understand that gentlemen has accepted the invitation. It is probable that the festivities next year will be arranged on a larger basis, and may form part of the celebrations in course of arrangement with regard to the anniversary of Her Majesty's Reign.

Death of Mrs. John Heal.—We very much regret having to announce the death, on Saturday, October 31st, of Mrs. John Heal, the wife of the eminent hybridist, in the new plant department of Messrs. J. Veitch & Sons, Chelsea. We sincerely sympathise with Mr. Heal, in the irreparable loss which he has sustained by the death of his wife, and feel sure that his numerous friends, personal and otherwise, through the length and breadth of the country, will join with us in offering him our profound sympathy and condolence.

Orchids at the Sale Rooms.—The beautiful varieties or forms of the hybrid Cattleya Mantinii which we noted at the Drill Hall on the 27th ult., and which were very much admired on account of their bright colour, turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 30th. Two of them were sold for 15 gs. each, and another for 10 gs., showing the appreciation in which they are held. A piece of C. dowiana aurea fetched 5½ gs. H. T. Pitt, Esq., Rosslyn, Stamford Hill, secured a large plant of C. labiata for 5 gs. The flowers were of enormous size, rich in colour, and leathery in character. Each petal measured a good 3 in. in diameter. Vanda caerulea was knocked down at £2 15s. There was eager bidding for the 200 tubers of the yellow Calla (Richardia Pentlandii) often fetching 12s. to 15s. a tuber.

N. C. S. Smoking Concert.—A most successful smoking concert was held at Anderton's Hotel, London, on the 29th ult., in aid of the funds of the Jubilee Festival. The idea was conceived and arranged amongst a few unofficial members of the society, but the first public announcement thereof brought many willing helpers, some even from the Jubilee Committee. The hon. secretaries, Messrs. A. E. Stubbs, and E. E. Abrahamson secured contributions from several gentlemen who were designated patrons and hon. stewards, besides a long list of stewards who acted as the committee, and amongst whom a guarantee fund was raised sufficient to cover expenses in the case of failure. A quintette from the band of the Hon. Artillery Company was permitted to attend by the Earl Denbigh and officers of the regiment and its able director. Mr. Edward Walker was mainly responsible for putting into shape a programme of some forty-five pieces. Mr. A. E. Stubbs acted as chairman, and was assisted by Mr. F. A. Cobbold as vice-chairman, with the result that a most enjoyable evening was spent. The large Pillar Dining Hall was kindly lent for the occasion, and was artistically decorated by Messrs. W. Cutbush & Son, and Messrs. B. S. Williams & Son, whilst bouquets of Chrysanthemums were supplied to each visitor through the courtesy of Messrs. D. Ingamells, H. J. Jones, W. H. Lees, and Ed. Molyneux. It is expected that a substantial sum will be handed over to the society.

Our 'Mum number is by no means mum, seeing that it contains so many *speaking* illustrations.

VICTORIA PARK.

The Chrysanthemums are entirely confined to the span-roofed house, which was built specially for them about nine years ago in Victoria Park. There are about 2,000 plants arranged in a continuous, but undulating and sloping bank on either side of the pathway; each bank rises into five mounds alternating with four depressions or bays. Such a mass of gorgeous colours in all shades, from the purest white to the darkest crimson could hardly fail to attract the people who come in their thousands, especially on Sundays. The plants are very dwarf, the front ones coming very low down; they are also healthy and well furnished with dark green foliage, to the pots, without a trace of mildew as far as we could see. The house has been open to the public since October 13th or 14th.

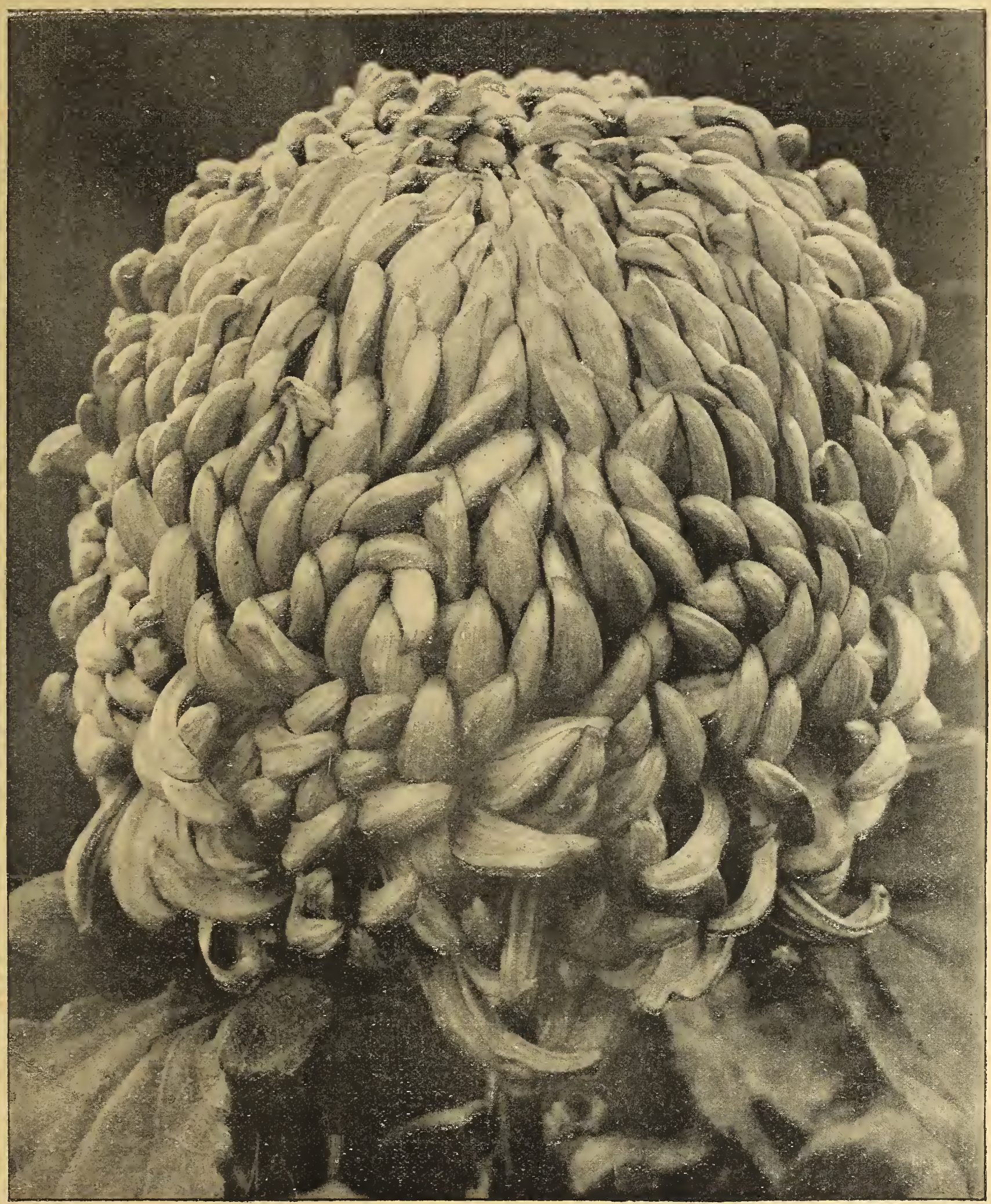
Amongst the great mass of flowers a large number of big, handsome blooms may be noted. Very fine are the yellow M. Panckoucke, the bronzy Miss E. S. Trafford, the Golden Sunflower, the pinky-white Inter-ocean and International, and the bronzy Col. W. B. Smith. Viviand Morel and Charles Davis, variable as they are in colour, are still indispensable in collections. The marcon-crimson William Seward and the green Florence Davis find plenty of admirers. The orange-scarlet Gloire du Rocher is plentiful and every plant has done splendidly; and the same may be said of Vice-President Calvat, Louise, G. W. Childs, Edwin Molyneux, and Pride of Madford. The latter is a massive purple variety with a silvery reverse.

The crimson-red Alberic Lunden is being forgotten in the race for big blooms, but it still finds a place here, as well as the orange-crimson John Laing. The creamy-white Mr. A. H. Neve is a fine thing, with its broad florets, but owing to the relatively small size of the blooms it is liable to be neglected for exhibition purposes. Mdlle. Marie Hoste is similar in form, but larger and purer white. Miss Maggie Blankiron is a globular golden-yellow variety. Madame E. Rey is a large pinky-white bloom; Madame Ad. Moullin on the contrary is pure white and pretty even in its early stages. J. S. Dibbins is a beautiful globular, yellow bloom but it is falling behind in size. Late flowering varieties are Madame C. Harman Payne, the richer purple Duke of York, and the promising new yellow M. Ph. Dewolfs. A beautifully built bloom is Bride of Maidenhead with narrower and more curly florets than Avalanche. Delicate and pretty is Mrs. E. G. Hill, which finds a suitable position in the back row, on account of its tall stems. Very promising and distinct is Miss Elsie Teichmann with broad creamy white florets more or less tinted with greenish yellow in the centre. None of the blooms were fully developed when we saw them; but evidently the flowers can be grown to great size.

All of the above are Japanese varieties, and the bulk of them in mostly every modern collection belongs to that section. Incurved varieties are fairly numerous, and include fine blooms of such old favourites as Novelty, Mr. Bunn, Lord Wolseley, Prince Alfred, Prince and Princess of Wales. More recent acquisitions in fine condition are Robert Cannell, M. R. Bahuant, Robert Petfield, and Mr. C. H. Curtis. Mrs. R. C. Kingston is in magnificent form notwithstanding the bad reports we have heard of it elsewhere.

Many of the Anemones are in fine condition including the beautiful yellow M. Charles Lebocqz. the soft yellow Lady Margaret, the silvery-pink Jeanne Marty and the rich purple Nelson with a beautiful and high centre when fully developed. The king of all the Anemones here this season is Descartes, of which there are numerous specimens with dark reddish-purple rays and a prominent dark, bronzy centre. The true reflexed section is represented by Dr. Sharp, and the beautiful bronzy Golden Christine. Pompons are fairly numerous, but they are late. The queen of this section is Mademoiselle Elise Dordan, with its globular blooms of fluted pink florets. The plants are tall, freely branched and floriferous.

Mr. J. W. Moorman, the superintendent is to be congratulated upon his fine and very representative collection, admirably presented to an appreciative public.



CHRYSANTHEMUM MRS. G. H. SMART.

MRS. G. H. SMART.

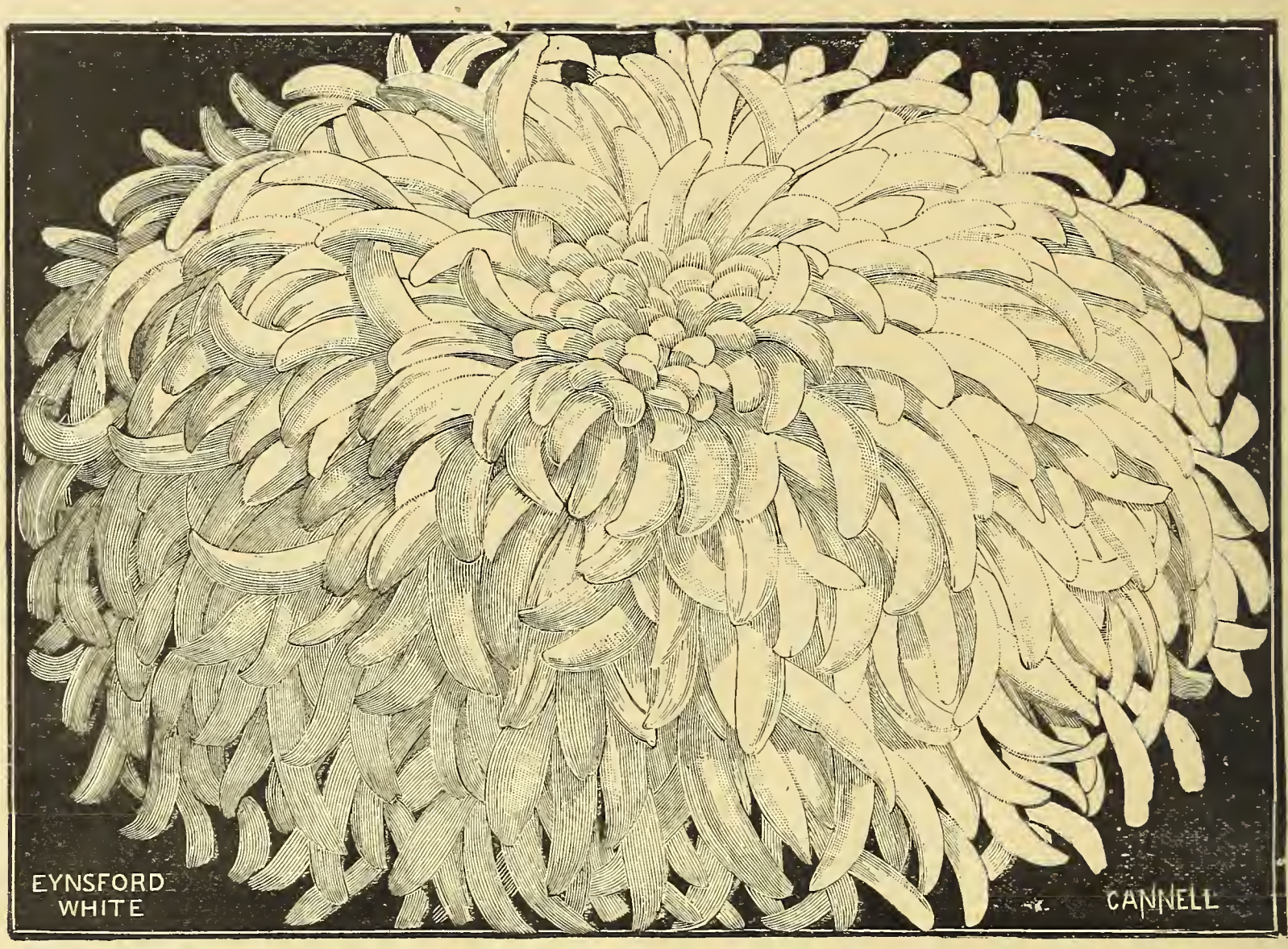
INCURVED Japanese Chrysanthemums take a multiplicity of forms according as they are much or little incurved. Mrs. G. H. Smart is very much incurved, but the florets are irregularly arranged, and more or less interlocking with one another. This lack of regularity separates it from the Chinese or true incurved Japanese type. The blooms are of great size, good form, highly attractive and well adapted for exhibition purposes. The florets are of medium width, rather deeply fluted or grooved, and golden-buff on the inner face; but owing to their being so compactly incurved, the reddish-buff exterior is most in evidence. The variety was raised by Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, in 1894, and adds another to the numerous acquisitions which have been secured there. We are indebted to Mr. Jones for this opportunity of presenting our readers with the accompanying illustration.

DEVONHURST CHISWICK.

A FINE collection of the most modern varieties of Chrysanthemum are grown in the gardens of E. H. Watts, Esq., Devonhurst, Chiswick. All, or almost every bloom, are grown to exhibition size notwithstanding the fact that they are mostly intended for home decoration. For two days, every year, the gardens are open to the public on payment of a small sum, the proceeds of which are given in aid of one or other of the local charities. With this end in view, the gardener, Mr. James Gibson, has to arrange his plants in the most attractive way the houses at command will permit. These consist of a Peach-house and two vineries connected end to end. In order to permit the public to come in close contact with the greatest possible number of plants, the latter are arranged in undulating banks, now towards the back wall of the different houses, so that the public enters at one end of the range and following a winding pathway, makes its exit at the other end. Judging by the large number of local visitors, this annual exhibition is very much appreciated.

The varieties grown are very numerous, but space forbids mention of more than a few of those that

have been most successful this year. We were too early to note the finest of the later blooms, but a large number of them are above the average for size. This would be accounted for by Mr. Gibson's skill as a cultivator, and by the presence of many of the most recent and best varieties. Mr. E. G. Hill, Mademoiselle Thérèse Rey, Souvenir de Petite Amie, Charles Davis, and Robert Owen are well-known favourites. The last-named is particularly fine, recalling this variety when it first made its appearance. Reine d'Angleterre, and M. Chénon de Léché, are two new varieties of magnificent proportions. Very beautiful are the silky gloss of the yellow H. L. Sunderbruch, and the golden yellow of Duchess of Wellington, with its incurved and twisted florets. Guirlande is pnre white with the exception of a faint green tint in the centre of the young flowers. Pallanza will probably find its level as a decorative variety of the first water, for it is easily grown and the golden-yellow blooms are handsome. The soft yellow flowers of Duchess of York attain enormous size. Very distinct in its way is La Moucherote with narrow, buff yellow florets.



Chrysanthemum Eynsford White.

A favourite with most people is Louise on account of the quantity of material in its globular white blooms, which keep on developing over a long period of time. We have never seen Mrs. Falconer Jameson more highly coloured, while the blooms are equally handsome in size. Madame Carnot proves troublesome to some cultivators, but Mr. Gibson finds no difficulty with it, the blooms being massive as are the glossy golden flowers of Phoebus, an incurved Japanese variety with broad florets. Col. W. B. Smith is another variety which has proved equally meritorious at Devonhurst. The long, delicate pink florets of L'Isere are graceful and pretty. Lady Byron was amongst the earliest to reach perfection and is really splendid, notwithstanding the unpromising character of the plants and buds. E. Molyneux gives trouble to many cultivators, especially those within the influence of London smoke. This season at Devonhurst it leaves little to be desired.

Every one of the above are Japanese varieties, but though they hold the post of honour here, the incurved varieties are by no means discarded. Though mostly late, we noted fine blooms of Baron Hirsch, chestnut; Lord Wolseley, bronzy-red; the orange-red Globe d'Or, and the massive yellow C. H. Curtis. As arranged, the above are interspersed with Palms, Ferns, Crotons, and other subjects to relieve the great mass of colour.

EYNSFORD WHITE.

When well-grown, the flowers of this Japanese variety attain a diameter of 7 in., but on the average it more often measures 6 in. across, and should be ample for general purposes. The florets are of medium width, regularly and beautifully recurved, forming a compact and well-built flower of a beautiful ivory white. The plant is of dwarf, sturdy habit, of the easiest cultivation, and by a matter of arrangement may be had in bloom over a long period of time. It is, therefore, well adapted for cut flower purposes, for conservatory decoration or as a beautiful bloom for the front row of the exhibition table. The merits of the variety have been recognised by a First-class Certificate from the National Chrysanthemum Society, and by an Award of Merit from the Royal Horticultural Society. For this opportunity of figuring it, we are indebted to Messrs. H. Cannell & Sons, Swanley, Kent, who were the raisers.

TRENT PARK.

At this season of the year the eyes of all cultivators of Chrysanthemums are directed towards Trent Park in expectation and anticipation. The prospects of Mr. W. H. Lees, who last year made such a name and fame for himself as the champion grower of the Chrysanthemum, repeating his triumphs this year at the Royal Aquarium, and other central exhibitions throughout the country, are naturally warmly discussed by all those interested in the cultivation of the Autumn Queen for show purposes. Accordingly we felt that in the interests of our numerous readers we could not do better than try to obtain a glimpse of what there was to be seen in that direction.

Trent Park, the residence of F. A. Bevan, Esq., is easily reached from King's Cross by the Great Northern Railway, and is between two and three miles distant from that company's station of New Barnet. Being thus situated in a comparatively rural part of Hertfordshire the 'Mums have the advantage of plenty of light and pure air to enable them to develop their colours to perfection.

About 650 plants in all are grown, and when we take into consideration that it is from this comparatively small number that Mr. Lees obtains such quantities of large show blooms the high quality of the culture accorded them must be obvious to all. Indeed, during our visit we did not see a single poor bloom, and only very few second-raters. If anything, Mr. Lees is in better form this year than he was last, and by the time this is in the hands of our readers we have no doubt that our expectations as to his success at the National Crysanthemum Society's Show will have been amply justified.

No undue rankness or grossness of growth characterises the Trent Park plants. Mr. Lees believes in having plants of medium strength, consequently the greatest care is taken not to overdo matters in the way of feeding, particularly with strong chemical manures. Contrasting the apparently slender character of the stems with the huge size of the blooms that surmounted them we could only wonder that the former were able to bear the latter. Hairy Wonder presented a striking instance of this, for the stems were wonderfully thin and wiry, whilst the flowers were larger than any we have ever yet seen of this variety.

As may be expected, the shading of the blooms from bright sun is assiduously attended to, as a few minutes neglect in this direction would inevitably cause the blooms to fade.

Taking the Japanese section first of all we found much to wonder at and admire. Mrs. W. H. Lees is credited with being one of the largest 'Mums in cultivation, and two huge samples of it were evidently trying their best to keep up the reputation. Turning from these to the rich, bright yellow blooms of Phoebus we found they measured fully 7 in. in depth by 7½ in. in diameter as they stood. Lady Bryon, a superb white, was nearly as large. Edith Tabor, a new yellow, has broad recurving florets, incurving slightly at the apices. It is rather tall in habit, and makes a capital back-row plant for a

group. Duchess of Wellington is another grand yellow, with long fluted petals slightly thorned on occasion. Emily Silsbury on terminal buds is a dream of purity. This variety seems to come well anyhow. Le Moucherotte (Calvat) we had not seen in condition this season until we saw the Trent Park plants. It appears to be decidedly later this year than last. Australia, although very large, is not at all coarse. It exhibits a very pretty shade of light rosy-amaranth with a silvery reverse. International, a charming American introduction of 1894, is also rendering an excellent account of itself. The dark orange blooms, flushed with chestnut-red, of Mrs. Hermann Kloss are at once conspicuous and distinct. This variety is certainly one of the best of the novelties. The yellow form of Primrose League is also a charming new thing that will doubtless become very popular.

Miss Elsie Teichmann, Mephisto, Lady Saunders, Mons. Chénon de Léché, Madame Ad. Chatin, Reine d'Angleterre, Oceana, Madame Carnot, Dorothy Seward, Mutual Friend, Edwin Molyneux, Mrs. Harman Payne, and Col. Chase are a few other sorts amongst the many that were represented by some superb samples of the cultivators art.

The incurved section is likewise well looked after. Ma Perfection is the latest arrival here. It is a pure white of extra large size and capital form, and will doubtless be a great acquisition to a class which has not advanced at the same rate as the Japs. James Agate is one of, if not the best white variety that we have had up the present time. D. B. Crane, sent out in 1895 is of medium size with broad florets, and exhibits a pretty shade of buff. Some very neat blooms of Bonnie Dundee (1896), likewise caught our eye. This variety does not grow to a large size, but its bronze-yellow blooms are very acceptable. M. P. Martignat is of medium size, yellow, and with broad, obtusely-pointed florets. Robert Petfield represents an excellent type of incurved bloom, and its sport, George Haigh, is not far behind it, and fills up a gap with regard to colour. Globe d'Or is buff, flushed with bronze, and rather larger than most of the incurves. John Fulford, sent out in 1895, exhibits a curious shade of cinnamon-red. Queen of England, although an old variety, still keeps before the public, thus closely imitating her name-mother. The golden form of it, known as John Lambert, is both a pretty and a distinct flower. All the foregoing, together with other varieties of which the pressure on our space forbids detailed mention, were in splendid condition with Mr. Lees.

PHILADELPHIA.

As the name will suggest, this originated in America, and has now had two year's trial in this country, or nearly so. The first blooms of it seen here were sent over from America in November, 1894, and made a good impression after having been packed up for ten days on their long journey. The variety belongs to the incurved Japanese section, and has long, pointed florets, compactly incurved, forming a globular bloom about 6 in. in diameter, and remarkable for the peculiar way in which some of them point to the right and others to the left, interlacing with one another to some extent. The bloom is of a delicate creamy-white, and has the tips more or less tinted with sulphur-yellow. The variety originated as a seedling with Mr. Hugh Graham, an enthusiastic florist of Chestnut Street, Philadelphia, but not being put into commerce then, considerable delay was created before it was placed in the hands of the public. Having arrived late for the floral committee meeting of the National Chrysanthemum Society, that body awarded it a Silver Gilt Medal. Needless to say it created a considerable amount of interest and excitement amongst the Chrysanthemum growers present. The plant proves easy of cultivation, and only requires ordinary care to bring it to perfection. Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, supplied us with the accompanying illustration (p. 155).

"Flora of Syria, Palestine and Sinai."—This work which has been carried on for some time past by the Rev. George E. Post, M.D., has now been completed. It extends to 920 pages and includes all the flowering plants, Ferns and their allies. The work embraces 126 orders, 850 genera, and 3,416 species, many of the latter being new to science. The work is illustrated with 445 woodcuts. The area covered extends from the Taurus to Ras Muhammad, and from the Mediterranean to the Syrian and Arabian desert.

TORQUAY CHRYSANTHEMUM SHOW.

The above show has made prodigious strides this year. Competitors last year only numbered ten with thirty entries. At the exhibition held on the 28th ult., there were 30 exhibitors with 100 entries. The American method of exhibiting some of the flowers in vases, with long stems and their own foliage was immensely popular. Miss Fripp, Teignmouth, secured the leading prize for twenty-four cut japanese blooms in eighteen varieties, Mr. V. Stuckey, Langport, being placed second. Miss Fripp also headed the list for twelve incurved blooms, distinct. The first award for thirty-six Japs, cut with long stems, and comprising eighteen varieties fell to the lot of the Rev. Talbot Greaves. The premier prize for a group of Chrysanthemums to occupy a space represented by a diameter of 9 ft. was carried off by the Rev. H. Rutherford, Torquay, whilst for a similar group possessing a diameter of 12ft., Dr. W. Ford Edgelow, Torquay, was placed first.

BIDEFORD CHRYSANTHEMUM AND FRUIT SHOW.

The fourth annual show of the Bideford Chrysanthemum Society took place in the Bideford Pannier Market on the 29th ult. Over 190 entries were forthcoming, being an increase of nearly ninety over those of last year. The special prize, a valuable silver tea service, given by the president for a group of Chrysanthemums was won by Mrs. Sawer, Northam. The schedule contained numerous classes for cut Chrysanthemums, fruit, and vegetables, in all of which competitions the cottagers entered keenly. Mr. F. Bray, Bideford, obtained chief honours for a collection of vegetables, the prizes in this class being given by the Mayor, Mr. H. Ascott,

SPIDERY CHRYSANTHEMUMS.

Those who object to the great size of exhibition blooms may find a place for some of a totally different character and which can never be grown to exhibition size under any condition of cultivation. All are well adapted either for conservatory decoration, or for cut flower purposes, as they are light, graceful, and as durable as any class of flowers. For conservatory decoration, they should be grown in the bush form, for which their freely branching habit readily lend themselves. Mrs. Filkins is a Japanese variety of remarkable structure, the spidery appearance being due to the way in which the florets are cut into a number of slender, spreading segments at the apex. The opening buds are rather grotesque, as the florets begin to lengthen. The blooms are of a bright golden-yellow. Souvenir de Madame G. Eynard is another decorative variety belonging to the same section, and is remarkable for its broad, suddenly pointed and more or less twisted florets. The blooms are reddish-chestnut tipped with golden-yellow. Silk Twist is also a decorative Japanese variety with curiously twisted and pointed florets. The heads are rosy-mauve, shaded with a creamy hue. See illustration of these spidery Chrysanthemums for which we are indebted to Messrs. H. Cannell & Sons, Swanley.

1, Mrs. Filkins; 2, Souv. de Mme. G. Eynard; 3, Silk Twist.

Extract from a Lecture on "Foods" by Dr. Andrew Wilson.—"The consumption of cocoa happily increases year by year. I say 'happily,' because, as tea and coffee are not foods, while cocoa is a true food, any increase in the national nutrition means an increase in the national prosperity. Winter, besides, is close upon us, and I advise those who are susceptible to colds to fortify themselves against chill by attention to their food. The easiest way of effecting this end for many is to substitute cocoa (Epp's being the most nutritious) for tea and coffee."

CALVAT'S AUSTRALIAN GOLD.

Our impression of the value of this variety improves as we gain fresh acquaintance with it. The accompanying illustration, for which we are indebted to Mr. W. Wells, Earlswood Nurseries, Earlswood, Redhill, Surrey, shows a globular Japanese bloom 9 in. in diameter, and was prepared from a photograph, taken life size from one of the numerous plants in the Earlswood Nurseries. The early flowers are mostly from crown buds, which give large and handsome blooms of a pale yellow colour, and hardly in accordance with the name. The late or terminal buds give rise to flowers of a bright golden-yellow, so that we shall look forward to something fine when the late buds have had time to develop. The florets are of medium width, beautifully and regularly incurved in the early stages, but more irregular as the flower attains a large size. In any case the massive early blooms, from which the photograph was taken, are marvels of culture for the small 6 in. and 7 in. pots in which Mr. Wells grows them. Only one bloom of such huge dimensions is obtainable under the conditions, and the most sanguine could hardly expect more.

Chrysanthemum Calvat's Australian Gold.

Vitis inconstans, best known as Ampelopsis Veitchi, has six botanical synonyms, and in America is known as Japan Ivy and Boston Ivy.

MIDNIGHT.

Additions continue to be made to the hirsute section of Chrysanthemums, and this recent novelty comes from America, as did the original Mrs. Alpheus Hardy and several others. The blooms remind one somewhat of Hairy Wonder, but as the accompanying illustration (p. 154) will show, they are more globular, and very different in colour, being of a richcrimson-lake hue. It promised well when we saw itthe other week in the collection of Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, who supplied us with a photograph, but it required another week or so to bring it to perfection. It is expected to prove the largest hairy variety in cultivation; but that

will best be determined after it finds its way into the hands of a large number of cultivators. The florets are incurved, more or less spirally twisted, broad, blunt and roughly bearded. We shall be eager to note its behavicur in our climate.

EXMOUTH YELLOW.

Six blooms of this novelty were exhibited at the October show of the National Chrysanthemum Society by the raiser Mr. W. J. Godfrey, Rolle Street, Exmouth, Devon. The variety was very much admired by connoisseurs as something of great promise. The blooms were not sufficiently advanced, however, for the society to fully determine their merits, so the committee desired that blooms should be brought forward on another occasion. It is a true Japanese variety of a beautiful, clear yellow, and seems destined to make its appearance pretty frequently on the show boards in the near future. See illustration for which we are indebted to Mr. Godfrey, and which was prepared from one of the blooms shown at the Royal Aquarium on October 5th, 6th, and 7th. The florets are of great length, medium width, decurved, twisted and more or less incurved at the tips, making altogether a massive well-built and well-balanced bloom.

Chrysanthemum Exmouth Yellow.

DOVER HOUSE, ROEHAMPTON.

Upwards of twelve hundred plants are grown here, a number that cannot fail to be a heavy strain upon the resources of any other than a very large establishment. Dover House is the property of C. J. Morgan, Esq., and under the able management of Mr. H. J. McLeod the gardens are widely famed for the thoroughness of their upkeep. The best of the Chrysanthemums are accommodated in a range of lofty vineries, where they get the maximum quantity of light and air, both of which are essential, if the blooms are to open properly, and to keep their beauty for very long. The Dover House collection comprises the greater part of the best standard varieties, including many of comparatively recent introduction. All the plants, it may be mentioned here, are in excellent health and condition.

Incurved varieties are much stronger than is usually the case in the majority of private establishments, where the Japs., by reason of their greater decorative value and consequent popularity both with gardeners and their employers, monopolise the greatest share of attention. Instead of distributing the "incurves" about amongst the japs., Mr. McLeod has staged most of them in a corner by themselves. Lord Wolseley was the most conspicuous variety in this section. This is a purple-red sport from Prince

Alfred. Some huge blush white blooms of Jeanne d'Arc were also very conspicuous. Baron Hirsch has done well, for the blooms, although not large, possess good form, and are well incurved without any artificial aid. Mrs. J. Kearn, a novelty to us, is a variety of great promise. It throws a pure white bloom of great depth, which fills up well in the middle, although the florets are somewhat short. Madame Darrier closely resembles Baron Hirsch in build, although it has a good deal more gold in it, which renders it exceedingly showy. The florets, too, are tipped with bright gold excrescences. The great fault of this variety is that unless crown buds are secured the plants become so lanky as to necessitate the employment of a step-ladder before their beauties can be perceived.

Coming to the Japanese varieties we were fain to admire some grand samples of Chas. Davis, which were in reality the best in the house. Not only were they striking in point of size, but the colour was exceedingly rich. Emily Silsbury, on terminal buds is a good early November flower, but when taken on crown buds blooms nearly or quite a month earlier. Mutual Friend, and Mdlle. M. A. de Galbert are two good whites that should be in every collection. Mrs. Chas. Blick belongs to the same category. Louis Boehmer was especially well-coloured, and both it and its white form are charming and distinct. Etoile de Lyon is well-known as exemplifying one of the largest and heaviest types of show bloom that we have. Both it and Reine d'Angleterre appear to have a good deal in common, and occasionally resemble each other so much as to make it difficult to distinguish between them.

Calvat's Boule d'Or is a noble flower, nearly globular in shape, with massive florets loosely interlacing. Mrs. W. J. Godfrey, white, with a suspicion of rose suffusion, is charming. The slight thorning adds to, rather than detracts from its beauty. John Shrimpton needs no recommendation. It appears to have done well everywhere this year, and Dover House certainly is not the exception. Good blooms of Florence Davis, John Lightfoot, Col. Chase, Sunflower, Pallanza, and H. L. Sunderbruch were much in evidence. Marjory Kinder, a really fine yellow, is not known or grown nearly so extensively as it deserves to be upon its merits. We are indebted for it to C. E. Shea, Esq., by whom it was raised. Miss Goschen is another rich golden-yellow Jap., with very long and spreading and rather narrow florets which turn upwards slightly at the tips, thus imparting a very graceful character to the bloom. Lady Randolph represents a type of flower of which we have none too many examples. There is a lot of stuff in the flower, which exhibits a curious shade of crimson-cerise with a light rose reverse. The florets reverse slightly and the occasional glimpse of the lighter colour thus obtained serves to throw into greater relief the deeper hue.

Chrysanthemum Midnight.

LIVERPOOL CHRYSANTHEMUMS.

(*Continued from p.* 135).

The few days that have elapsed since the last article on this subject was penned, have opened the flowers to a considerable extent, so that a forecast of what we may expect on the exhibition table, may be more closely defined. Last season the incurved section baffled the most skilful growers; what with damp and the flowers collapsing, this section did not reach the high standard usually found in this district. This season the incurved varieties promise to be considerably ahead of last year; the greatest difficulty that the grower will have to combat is that of time; the flowers of the Queen and Princess type in most cases are not more than half open, and if this dull moist heavy weather continues, it will prove difficult to have the blooms in readiness for the 11th. The blooms generally promise well, being of good size, with an abundance of petals, and clean—important points for the building up the elements of success. The Japanese section can hardly be spoken of in such high terms; the blooms generally give evidence of a slight reduction in diameter, and it is questionable whether the depth will not also be a depreciable quantity; this statement more particularly refers to the older varieties; some of the newer ones are distinctly in advance of the better known kinds. Dampness has not made itself felt to any great extent; yet if the mild dull weather continues it will tax to the full the intelligence of our cultivators. The Committee of the Liverpool Horticultural Association have secured their new Challenge Vase and it is asserted to be the finest ever offered by this Society.

Another new feature at this show will be that St. George's Hall will be lighted with electricity which should add to the attractiveness of the exhibition.

Sefton Park.

This is the third exhibition provided by the corporation and to show the success that the Autumn Queen has attained, a new house has been handed over for the better display of her charms. A span-roofed house fully 100 ft. by 20 ft. is devoted to this purpose; the arrangement is light and pleasing, the blooms not being overcrowded but set off to the best advantage by a back ground of dark healthy foliage. The sides of the house are furnished with bush plants of pompons and singles. The number grown is 1,100 for large blooms, and 1,500 bush plants, the display being highly creditable to Messrs. W. Clark, foreman, and S. Moore, the grower. Amongst the newer varieties the following are included:—Mrs. W. H. Lees, Mutual Friend, good, Phoebus, Mons. C. Molin, Van den Heede, Mdlle. M. A. de Galbert, International, G. W. Childs, Miss Rita Schroeter, Niveus, Golden Gate, W. A. Manda, &c.

Beechwood, Woolton.

In this collection some 400 strong, we have many promising flowers; the "incurves" giving evidence of finishing fine exhibition blooms. Mdme. Darrier, fine depth, Mons. Bahuant, Baron Hirsch, J. Agate, Globe d'Or, with the Queen and Princess family are all in excellent form. Japs. also are satisfactory, Mdlle. M. A. de Galbert, Mons. G. Biron, and others unfolding in good style. Small plants struck in June are in quantity and every prospect of quality to follow. The batch as a whole fully sustains the high reputation of Mr. H. Howard.

Allerton House.

A collection of considerable extent, including a large selection of anemone and reflexed varieties all in good trim, which should stand the grower, Mr. G. Eaton, in good stead, whatever company he meets. The pick of the new varieties are Japs,—Beauty of Teignmouth, Mons. Gruyer, Noces d'Or, fine golden yellow, Phoebus, Wilfred Marshall; incurved varieties—Ami Hoste, R. C. Kingston, James Murray, etc. Anemones are John Bunyan, Descartes, fine colour, Duchess of Westminster, Queen Elizabeth, pleasing form, etc. A group in the spacious conservatory is effectively arranged and shown to great advantage.

Fulwood Park.

Mr. Thomas White, although not a large grower, is well worthy of a visit. A fine bank principally of Japanese arranged in the greenhouse is pleasing; many of the older varieties show to advantage with additions of some of the new kinds that have been already mentioned.

The Hollies, Woolton.

Although Mr. Vaughan has reduced his collection this season, the quality is fully maintained. Most of the kinds are somewhat backward, a detail that has been successfully gained according to requirements. The "incurves" are promising exceedingly well, the Queen type having large and clean-formed buds; C. H. Curtis, Violet Tomlin, and R. C. Kingston, are also in fine form. The best Japs. include Col. T. C. Bourne, International, Mutual Friend, &c.

Greenbank, Wavertree.

As usual Mr. T. Foster, has many promising flowers, although the glass structures are not so well-fitted as most of the places recorded, to finish the flowers for the exhibition table; yet the manner in which the flowers are opening is sufficient evidence that good flowers will be present. A bank of naturally grown plants whether as a group or for cutting, must prove of considerable value at this season.

Highfield, Woolton.

Here we have probably the largest collection round Liverpool, consisting of some 800 plants, including a goodly number of new varieties. A Peach house full of the Queen family promises to give a large number of exhibition flowers. Amongst the newer Japs., Lady Ridgway, Van den Heede, G. W. Childs, specially fine, Modesto, golden-yellow, and others prove that many acquisitions will be found amongst those sent out last year. In addition to those mentioned, Mad. Darrier, C. H. Curtis, Globe d'Or are most creditable incurved varieties. A sport of considerable merit, from Emily Dale is grown in quantity; the colour is somewhat paler than Queen of England; it appears to be quite distinct and of better form than its parent, and is giving promise to be of some value to Mr. G. Haigh during the coming season.—*R. G. W.*

BATTERSEA PARK.

SOME 2,000 plants of all sections are grown at Battersea Park. They are accommodated through their flowering stage in a large roomy Palm house, 125 ft. in length by 25 ft. in width. This house was opened to the public on Saturday, October 17th, and will continue open until about the end of November, a period of six weeks. Some improvement has been effected this year in the matter of staging. Instead of the sloping bank system, which has been followed in former years, advantage has been taken of the different heights of the plants to so arrange them that they present an undulating outline instead of a flat regular surface as hitherto.

Numbers of bush plants grown on without disbudding, and allowed to bloom as they like, have been loosely slung to the eaves of the house, and the long graceful trusses of flowers allowed to assume a sub-pendant position. It will be remembered that this system was adopted with conspicuous success last year. Such well-known varieties as Margot, Golden Madame Martha, Source d'Or, Elsie, and James Salter lend themselves very well to this work, and are now a blaze of bloom, whilst the Christines are promising well for a later display. A new feature is a number of pompon varieties on the left hand side from the entrance door that have been trained over to form a hedge, as it were, with a convex outline. These plants, however, look too stiff to be really graceful, although they will probably improve as their flower buds expand.

The show on the whole is well up to the standard of former years, and when we consider the low lying position of the park, all the more praise is due to Mr. Coppin and his capable grower Mr. Wheeler for the manner in which they have surmounted natural difficulties and presented such a brave show to the public.

The Japanese section is decidedly the strongest, although it must not be supposed that the incurved section is neglected. On the contrary we noted some excellent blooms of Mr. Geo. Glenny, still one of the best medium-sized yellow varieties in cultivation. Mr. Bunn, and Baron Hirsch were also represented by some good blooms. Queen of England, and its golden form were promising well, and will be better for a few days longer. The same might also be said for Golden Empress of India.

Mons. Wm. Holmes was bearing large flowers of wonderful brilliancy of colour. The bronzy-orange of Gloire du Rocher was also conspicuous. Another week or two will see some excellent specimens of John Shrimpton, with its rich crimson hue that is so telling amongst a mixed collection. William Tricker, although a somewhat ragged bloom, is invaluable for October work, and this year it has done exceptionally well. For showiness nothing can beat the yellows, for come dull weather or fine they are always gay. Several good plants of Sunflower were on view, rather early for this celebrated variety, it is true, but in fine condition. Miss Watson is a lovely yellow flower with long narrow florets. It is rather tall in habit and very distinct in character, so much so, indeed, that one could easily distinguish it dotted about the house. Miss Dorothy Shea, another standard variety had not yet come to its full beauty, but had the makings of a first class flower. Than President Borel there was no more effective subject in the whole house. It had, if anything, exceeded its reputation, and the rich rosy cerise of its florets, with their old gold reverse, sparkled gaily in the transient beams of a Battersea October sun. Some superb samples of Lady Byron, a comparatively new white variety, were remarkable for their size, depth and purity. Miss Annie Hartshorn is an incurved Japanese form of medium height, great merit and purity. Viviand Morel must not be forgotten, although it was rather late. Its relative Chas. Davis will be good in another week. Edouard Audiguier, one of the very best dark varieties we have, was in fine condition. Madame Edouard Rey, Mons. Tarin, Mons. Freeman, and Col. W. B. Smith, are other varieties that have done wonderfully well.

The popular hairy flowers were not wanting. The white and chaste Louis Boehmer, with its marvellously beautiful arrangement of hairs or thorns was much in evidence, and Hairy Wonder, still the best of its colour, was evidently trying to keep up its reputation.

The most commendable point about the Battersea collection is the brilliancy of the colour of which the blooms are possessed. To this may be added as an additional merit perfect cleanliness of growth and habit.

JUBILEE CELEBRATION
OF
THE NATIONAL CHRYSANTHEMUM SOCIETY.

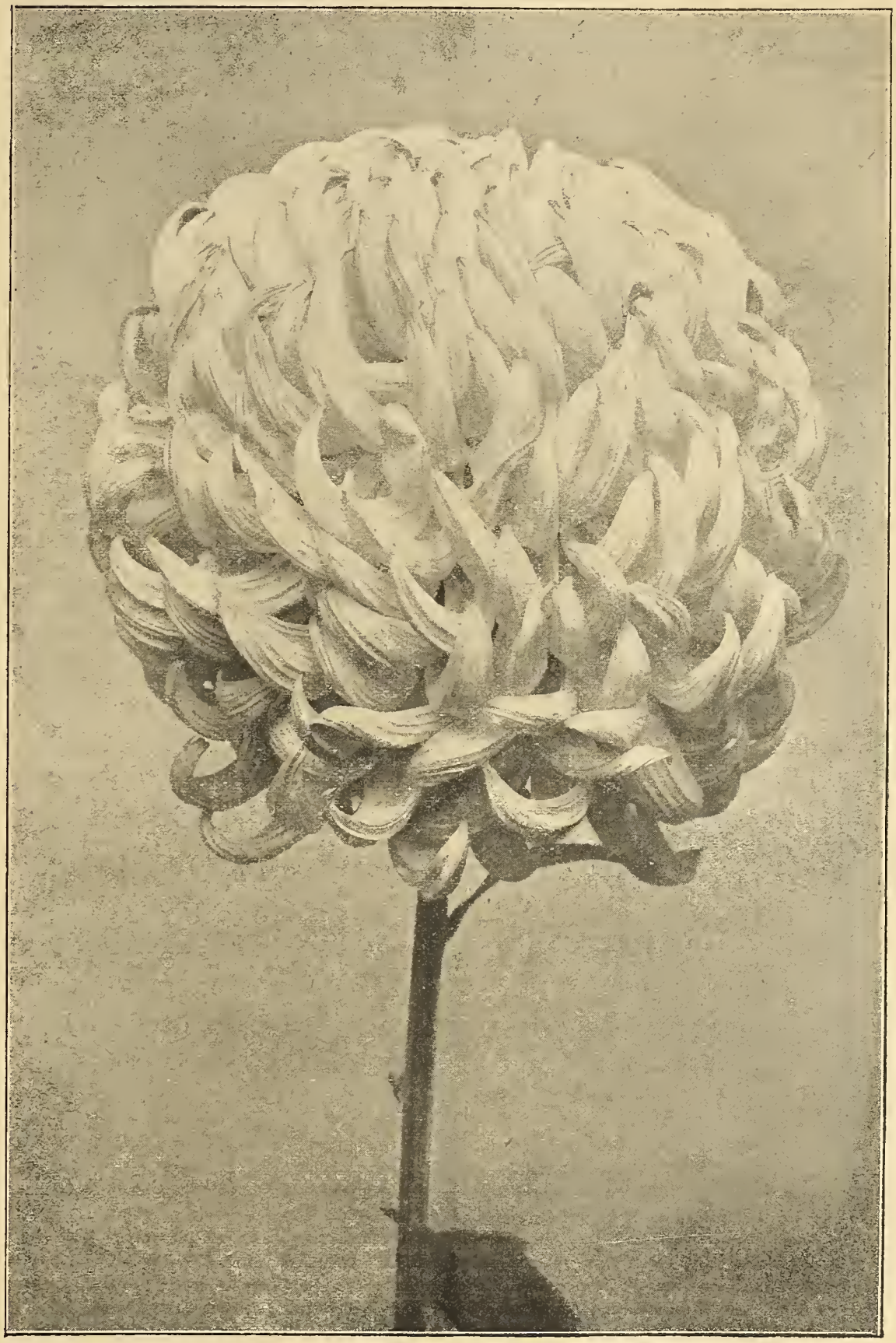
BOTH the ground floor and the two galleries of the Royal Aquarium were fully occupied, and even crowded in places, at the exhibition which opened on the 3rd inst. and continued over next day. The arrangements in many instances were quite different from any which have previously been made by the society, and the effect was really splendid.

The Gold Jubilee Medal offered by the president, Sir Edwin Saunders brought out five beautiful groups, arranged in a circle 12 ft. in diameter. Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, was decidedly first and carried off the coveted honour with a most graceful and tasteful arrangement, and blooms of immense size, all beautifully lightened with Cocos weddeliana, Crotons, and Maidenhair Ferns. Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham, had a beautiful arrangement much in the same style and took the second prize. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, took the third place with an admirable group. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, came in fourth with a good group, but lacked a few more Palms.

Mr. D. Donald, gardener to J. G. Barclay, Esq., Knoth Green, Leyton, took the Jubilee Gold Medal for nine trained specimens, which were of huge size and splendidly flowered. John Shrimpton, Viviand Morel, Elaine, and Charles Davis were some of his best specimens. Mr. J. Brooke, gardener to W. Reynolds, Esq., J.P., The Grove, Highgate, was a very good second indeed. Mr. W. Davey, gardener to C. H. Paine, Esq., Cedar Lodge, Stamford Hill, was third with smaller specimens.

The first prize, a Silver Gilt Jubilee Medal, was rightly awarded to Mr. D. Donald, for six trained specimen pompon Chrysanthemums; Wm. Kennedy, Wm. Westlake, and Soeur Melaine were some of his best. Mr. J. Brooke was again second; Mr. G. H. Cooper, Sydenham Road, Croydon, was third.

There were thirteen entries for the sixty Japanese blooms, and the leading award—a Gold Jubilee Medal and £15—was taken by Mr. W. Mease, gardener to Alfred Tate, Esq., Downside, Leatherhead. He had magnificent blooms of Mme. Carnot, International, Mrs. J. Shrimpton, Mutual Friend, Mrs. Chas. Blick, Mme. Ad. Chatin, Modesto, Edith Tabor, Western King, Violetta, Niveus, Lord Brooke, E. Molyneux, H. L. Sunderbruch, Hairy Wonder, Mrs. C. H. Payne, M. Gruyer, Phoebus, Miss Dorothy Shea, Mrs. W. H. Lees, Florence Davis, A. H. Wood, President Borel, Robert Owen,



CHRYSANTHEMUM PHILADELPHIA (See p. 151).

Etoile de Lyon, M. Panckoucke, Mrs. H. Weeks, Mdlle. M. A. de Galbert, M. Chénon de Léché, Australia, and Vicountess Hambledon. Mr. W. H. Lees, gardener to F. A. Bevan, Esq., Trent Park, New Barnet, was second with a magnificent exhibit, including Mme. Carnot, Australia, M. Chénon de Léché, Hairy Wonder, Thos. Wilkins, Mutual Friend, etc. Mr. A. Haggart, gardener to the Hon. Lucius O'Brien, Moor Park, Ludlow, took the third place with an excellent exhibit; and Mr. J. W. McHattie, gardener to His Grace The Duke of Wellington, Strathfieldsaye, Mortimer, came in fourth with a lot that would be hard to beat at an ordinary show.

Mr. W. Mease again led the way in the class for sixty incurved blooms, taking the Gold Jubilee Medal. He had handsome and well-coloured blooms of C. B. Whitnal, C. H. Curtis, Robert Petfield, Empress of India, Mrs. R. C. Kingston, Globe d'Or, Lord Alcester, Robert Cannell, Ami Hoste, John Fulford, Golden Empress, John Lambert, Jeanne d'Arc, Wm, Tunnington, Queen of England, J. Agate, D. B. Crane, Brookleigh Gem, etc. The second award was taken by Mr. W. Higgs, gardener to J. B. Hankey, Esq, Fetcham Park, Leatherhead, who had a very even lot and some splendid blooms. Mr. W. H. Lees, took the third place with some excellent blooms, but those in the front row were small. Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, Derby, came in fourth. There were ten entries in this class, the competition being very close.

The leading award for thirty-six Anemone-flowered Chrysanthemums was accorded to Mr. W. Skeggs, gardener to A. Moseley, Esq, West Lodge, Barnet, who had beautiful blooms of Antonius, Emily Rowbottom, Perle, Francis Bois, Jeanne Hachette, &c. Mr. J. Justice, gardener to the Right Hon. Sir Richard Temple, The Nash, Kempsey, Worcester, was a good second, but had some weak blooms.

The first prize for twenty-four varieties of single Chrysanthemums was worthily awarded to Mr. G. W. Forbes, gardener to D. Nicots, Esq., Regent House, Surbition, who had a charming exhibit of Jane, Mary Anderson, Rose Pink, Miss Annie Holden, Charming, &c. Mr. James Agate, Havant, was a good second; and Mr. W. Wells, Earlswood Nurseries, came in third.

Mr. Norman Davis, The Vineries, Framfield, Sussex, took the leading award for twenty-four bunches of Chrysanthemums as grown for market, and which were neatly set up in one-sided bunches. Mr. F. W. Foster, Brockhampton Nurseries, Havant, Hants, was second with hemispherical bunches.

FRUIT.

There were two open classes for fruit, and the leading award for nine dishes, a Silver Gilt Jubilee Medal, was carried off by Mr. M. Gleeson, gardener to C. J. Keyser, Esq., Warren House, Stanmore. He had two Pineapples, three bunches of Muscat Grapes, three of Mrs. Pince, one bunch of Bananas, one Melon, one dish of Apples, and two of Pears, all in first-class order. Mr. John Hayes, The Gardens. Castle Ashby, Northampton, was second with plenty of variety; and Mr. W. J. Empson, gardener to Mrs. Wingfield, Ampthill, Beds., was third.

There was good competition for twelve bunches of Grapes, there being thirteen entries of high quality. Mr. William Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, took the first prize, a Silver Gilt Jubilee Medal, showing grand bunches of Gros Colman, Trebbiano, Gros Maroc, Alicante and Muscat of Alexandria. Mr. W. Taylor, gardener to Alderman Chaffin, J.P., Bath, was a close second. Mr. J. H. Goodacre was third with well finished bunches; and Mr. W. Tidy, gardener to W. K. D'Arcy, Esq., Stanmore Hall, Middlesex, was fourth.

The prizes offered by Messrs. William Thomson & Sons, Clovenfords, for three bunches of Gros Colman, brought eight entries. Mr. William Taylor, gardener to Chas. Bayer, Esq., again led the way with huge bunches and berries. Mr. W. Tidy was second; and Mr. W. Taylor, gardener to Alderman Chaffin, was third.

Apples were numerous and attractive. The leading prize for six dishes of dessert varieties was taken by Mr. King, gardener to J. Colman, Esq, Gatton's Park, Reigate. Mr. Geo. Woodward, gardener to Roger Leigh, Esq., J.P., Barkham Court, Maidstone, was a good second. The same order was maintained in the class for six dishes of culinary Apples which were large, and handsomely coloured. The first prize was taken on the score of colour, for the fruits were really magnificent.

Pears were also an interesting class, there being eight entries of splendid samples. The first prize for six dishes of dessert varieties was taken by Mr. A. J. Thomas, Bargams Hill, Rodmersham Every sample was large of its kind and clean skinned. Mr. Geo. Woodward was a good second. Mr. W. J. Stevens, gardener to G H. Dean, Esq., 70, Harold Road, Sittingbourne, was third.

Mr. W. Tidy had the best three bunches of white Grapes in Muscat of Alexandria. Mr. F. Cole, gardener to Sir G. Russell, Bart., M.P., Swallowfield Park, Reading, was a good second. Mr. W. Taylor, gardener to C. Bayer, Esq., was third. The latter came to the front for three bunches Black Grapes; Mr. W. Tidy was second; and Mr. W. Taylor. gardener to Alderman Chaffin, was third.

SPECIAL JUBILEE PRIZES.

CUT FLOWERS.—A solid silver tea service was given by the Ichthemic Guano Co., per Mr. William Colchester for the best twenty-four incurved blooms. As this was an open class the competition was very keen, no less than eleven collections being forthcoming. Ultimately Mr. T. Robinson, gardener to W. Lawrence, Esq., Elsfield House, Hollingbourne was placed first with a very fine and even lot of blooms that included Lord Alcester, Madame Darrier, J. Agate, Major Bonaffon, Princess of Wales, Golden Empress, Mr. J. Kearn, and Lord Rosebery in fine order. Mr. H. Butcher, gardener to C. Buss, Esq., Lodge House, Smeeth, Ashford came in second; Mr. B. Calvert, gardener to Colonel Archer Houblon, Hallingbury Place, Bishop's Stortford, third; and Mr. F. G. Foster, Brockhampton Nurseries, Havant, Hants, fourth.

In a smaller class for twelve incurved blooms, distinct Mr. Silas Cole, gardener to Rt. Hon. Earl Spencer, Althorp Park, Northampton, was the most successful competitor. Mr. James Wyatt, gardener to James Perry, Esq., Bradenhurst, Caterham Valley, was second; and Mr. Rd. Jones, gardener to C. A. Smith-Ryland, Esq., Barford Hill, Warwick, third.

For the prizes offered by Messrs. W. and G. Drover, Trinity Street, Fareham, for twelve incurved blooms distinct, Mr. J. R. Heasman, gardener to Mrs. Axley, Fen Place, Turner's Hill, took first place; Mr. A. Lockie, gardener to A. J. Thornhill, Esq., Teddington Hall, Huntingdon, taking second award. The prizes in this class were open only to those who have never won a prize at the N. C. S. exhibitions.

In the class for twelve Japanese blooms, distinct, open to amateurs only, in which the donor of the special prizes was Mr. Sam. Deards, Victoria Works, Harlow. Mr. Jas. Stredwick, Silver Hill, St. Leonards, was first, and Mr. Martin Silsbury, Providence, Shanklin, Isle of Wight, second.

A silver Cup was offered by Mr. A. Pooley, Ealing, for six blooms of not less than three varieties of hairy Japanese. Mr. H. Love, 1, Melville Terrace, High Street, Sandown, Isle of Wight, was credited with the best lot showing Mrs. Dr. Ward, Louis Boehmer, and Hairy Wonder. Mr. James Stredwick obtained the second award.

M. Calvat, Grenoble, contributed a couple of dozen blooms of new seedling Chrysanthemums all of the Jap. section.

Mr. H. J. Jones offered special prizes for twenty-four Japanese blooms distinct, and the result was a very keen competition. Mr. Chas. Penford, gardener to Sir F. Fitzwygram, M.P., Leigh Park, Havant, came in first with a superb collection. Chas. Davis, Mme. Carnot, Edith Tabor, Mme. Ad. Chatin, Etoile de Lyon, Phoebus, Van den Heede, John Shrimpton, and Viviand Morel were some of his strongest varieties. The second award fell to the lot of Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich; Mr. F. Cole, gardener to Sir George Russell, Bart., M.P., Swallowfield Park, Reading, was third; and Mr. G. W. Drake, 74, Cathay's Terrace, Cardiff, fourth.

Prizes for six blooms of Japanese Mrs. Charles Blick were given by Messrs. Cutbush & Son, and here Mr. T. H Lodge, gardener to Mrs. Meset, Hockerill, Bishop's Stortford, appeared with flying colours with an even and very fine lot. Mr. C. Blick, gardener to Martin Smith, Esq., The Warren, Hayes, Kent, was placed second.

Mr. W. Messenger also won the premier award for three blooms of the new Japanese Edith Tabor with grand samples. The donor of this prize was Mr. R. C. Notcutt, Broughton Road Nursery, Ipswich.

Mr. W. J. Godfrey had announced special prizes for six blooms, comprising not less than four varieties to be selected from his nine novelties for 1896. Mr. G. W. Drake was the most fortunate exhibitor, showing grand specimens of Pride of Exmouth and Mrs. Hume Long.

Mr. J. Justice, gardener to the Rt. Hon. Sir Richard Temple, Kempsey, Worcester, won the first award for twelve Japanese Anemones distinct. Such sorts as Enterprise, Ruche Lyonaise, Mme. Lawton, Robin Adair, W. W. Astor, and Nelson were very conspicuous here. Mr. C. Light, gardener to the Rev. A. L. Johnson, Capel Street, Ipswich, was second; Mr. W. Skeggs, gardener to A. Mosley, Esq., West Lodge, Barnet, third.

TABLE DECORATIONS.—These were well deserving of a word of praise, as they were distinctly an improvement upon other years. Mr. F. W. Seale, Vine Nurseries, Sevenoaks, staged three charming epergnes of Chrysanthemums, winning thereby the first award. Mrs. W. Green, Jun., Harold Wood, Essex, was second with three epergnes but little if any inferior to those sent by the first prize winner. Mr. J. Prewett, 11, Lancaster Street, Bayswater, W., was third. There were no less than ten entries in this class, Mr. L. Dunmall, gardener to P. Waterer, Esq., Fawkam, Kent, obtained the coveted Gold Medal for the best twelve blooms of any Chrysanthemum of commercial value. The blooms were cut American fashion with long stalks and arranged in a most imposing way in a tall narrow-necked glass vase. Mdlle. Marie Hoste was the variety shown.

The first award, a Silver Gilt Medal, for the best hand-basket of foliage and berries, fell to the lot of Mr. W. Salmon, Ivy Cottage, Elder Road, West Norwood. Mr. T. W. Preston, 31, Sedgemoor Place, Camberwell, obtained the second prize, a Silver Medal. The first prize for a vase of six blooms of Japanese Chrysanthemums was carried off by Mr. James Brookes, gardener to W. J. Newman, Esq., Park House, Totteridge; and the second by Mr. D. B. Crane, Archway Road, Highgate, N.

VEGETABLES.—Messrs. Jas. Carter & Co. presented some substantial prizes for a collection of vegetables comprising ten distinct kinds, and including Celery, garden Beet, Turnips, Cauliflower, Brussel Sprouts, and Carrots, obtained from seed supplied by the firm. No less than fourteen collections were staged. Mr. E. Beckett, gardener to the Rt. Hon. Lord Aldenham, Aldenham House, Elstree, Herts, distanced all competitors with a superb exhibit. Seldom, indeed, have we seen such a collection as his. Carrots, Tomatos, Onions, and Celery, were especially fine. Second came Mr. E. Brown, gardener to R. Henty, Esq., Langley House, Abbotts Langley; and third Mr. C. J. Waite, gardener to the Hon. W. P. Talbot, Glenhurst, Esher, Surrey.

Messrs. Webb & Sons, Wordsley, Stourbridge, contributed special prizes for a collection of vegetables comprising nine distinct kinds grown from their seeds. Fourteen exhibits were staged. Mr. J. Bowerman, gardener to Chas. Hoare, Esq., Hockwood Park, Basingstoke, headed the list, with capital Potatos, Tomatos, Cauliflower Sprouts, and Leeks; Mr. Thos. Wilkins, gardener to Lady Theodore Guest, Inwood House, Henstridge, occupied the second place; Mr. C. J. Waite, gardener to the Hon. W. P. Talbot, Glenhurst, Esher, third; and Mr. E. Beckett, the fourth.

For Messrs. Harrison & Sons prizes for a collection of six dishes of vegetables confined to Onions, Beet, Carrots, Leeks, Parsnips, Potatos, Cauliflower, Tomatos, or Turnips, there were also numerous competitors. Mr. W. J. Empson, gardener to Mrs. Wingfield, Ampthill, Beds, came out at the top of the list, closely followed by Mr. E. Beckett, and Mr. C. J. Waite in the order of mention.

Messrs. Dobbie & Co., Rothesay, offered a number of prizes which called out some excellent material.

Mr. J. Bowerman was placed first for six flat Onions. Second came Mr. W. Pope, gardener to the Earl Carnarvon, Highclere Castle, Newbury; and third Mr. M. Edmundson, 92, Beech Street, Askam-in-Furness. The class for six specimens of Dobbie's Champion, or International Prize Leek was exceptionally well patronised, a table running the whole length of St. Stephen's Hall, being almost entirely filled with the numerous exhibits, which totalled

seventy-nine entries. The awards were first, Mr. J. Bowerman; second, Mr. David Pitt, Eccles, Kelso; third, Mr. L. Collins, 108, West Wylam, near Prudhoe-on Tyne; and fourth, Mr. R. Mairs, the Gardens, Shobrook Park, Crediton.

Celery also was in capital form. The best three red and three white sticks were forthcoming from Mr. E. Beckett. After him came in order of mention, Mr. Daniel Logan, Castlelaw Gardens, by Coldstream, N.B.; Mr. G. H. Copp, The Gardens, Holnest Park, Sherborne, Dorset; and Mr. R. Lye, gardener to Mrs. Kingsmill, Sydmonton Court, Newbury.

The best six Carrots (Intermediate Type) were sent by Mr. James Scott, Newtown, Pencaitland, Haddington. Mr. C. J. Waite was second here, and Mr. W. Pope third. Mr. C. J. Waite showed the best six roots of Dobbie's Selected Parsnip, and was followed by Mr. Thos. Wilkins, and Mr. Geo. Lovelock, gardener to the Earl of Ancaster, Normanton Park, Stamford, who took second and third prizes respectively. Mr. W. Lanerock, 113, Prunlaws, by Leslie, N.B., came out strongest for six roots of Dobbie's Golden Ball Turnip, with clean and shapely samples. Mr. John McKinnie, The Gardens, Roundelwood, Crieff, came second; and Mr. John Robertson, Smallhome, Kelso, N.B., occupied the third position. Mr. W. Dendy, Keeper Muntham, Horsham, Surrey, showed the best six samples of Dobbie's Purple Beet, and very shapely and well grown they were. Mr. A. E. Kirtland, Bletchington, Oxford, was second, also with good specimens.

Mr. Martin Silsbury, was awarded first prize for six blooms of the best novelty with Lady Isabel a flesh-coloured incurved Jap. The prize in this class was given by the trustees of the Veitch Memorial Fund. Mr. H. Love, 1, Melville Terrace, High Street, Sandown, Isle of Wight, obtained the premier award for three blooms each of six novelties sent out in 1895 and 1896. They were Emily Silsbury, Phoebus, Wm. Fife, Mrs. C. Orchard, M. D. Taillandier, and Pallanza.

MISCELLANEOUS EXHIBITS.

Potato disease has this year been very prevalent especially among the older varieties, therefore the great show of disease-resisting Potatos made by Messrs. Sutton & Sons, the royal seedsmen, Reading, who introduced the great disease-resisting variety, viz., Magnum Bonum, and have since brought out year by year many other sorts, attracted particular attention. The principal feature of the collection was the ten large heaps of the following popular sorts:—Sutton's Windsor Castle, Sutton's Supreme, Sutton's Satisfaction, Sutton's Harbinger, Sutton's Early Regent, Sutton's Reading Russet, Sutton's Seedling, Sutton's Ringleader, The Sutton Flourball, and Sutton's Magnum Bonum, the two latter being the varieties which gave such extraordinary crops, free from disease, in connection with the Royal Agricultural Society's trials of Potato Diggers at Leicester at the beginning of October. The cream of the stand was Sutton's Reliance, a new disease-resisting Potato, an early main crop variety, also highly suitable for exhibition. There was nearly a ton of tubers in forty varieties, and we have never seen cleaner samples nor better table quality (Silver Gilt Medal).

Messrs. H. Cannell & Sons, Swanley, Kent, had a long table chiefly occupied with Chrysanthemums, Pelargoniums, and Cannas. Amongst the Chrysanthemums were grand blooms of Viviand Morel (colour splendid), A. H. Wood, Lady Ridgway, Australian Gold, Mrs. J. Lewis, Madame Gustave Henry, and Mutual Friend. The Cannas were those of the Madame Crozy strain, and all in the best form. The Pelargoniums were set up in large bunches, and beautifully set off with Maidenhair Fern, Fescue grass, Cyperus, and Palms. All the leading varieties were well represented. They also showed Chrysanthemums as they were exhibited fifty years ago (Silver Gilt Medal).

Messrs. W. & J. Brown, Stamford, Peterboro', and Grantham, exhibited about 120 dishes of Apples and Pears in fine condition. Excellent samples were Peasgood's Nonsuch, Gascoigne's Scarlet Seedling, Queen Caroline, Blenheim Orange, &c. (Silver Medal).

Mr. H. Berwick, Sidmouth, Devon, staged a collection of Apples and Pears, the former being highly coloured; handsome, were Hoary Morning, Bietingheimer Red, Beauty of Wilts, and Pear, Uvedale's St. Germain (Silver Medal).

Mr. William Colchester, Ipswich, had the most artistic exhibit of its kind on the lower floor of the Aquarium, and occupying the eastern fountain. The high centre-piece was a life-size figure of the goddess Flora, surrounded by Palms, Crotons, Dracaenas, Maidenhair, and other Ferns. On the four corners were life-size figures representing the four seasons. Each of these figures held an electric arc. Chrysanthemums in 32-sized pots, each carried one huge bloom, and they, with cut flowers were plentifully distributed over the great conical mound of flowers and greenery showing the fertilising effect of pure Ichthemic Guano (Gold Medal).

Messrs. J. Laing & Sons, Forest Hill, London, had a table of Apples, notable for their rich colour and tasteful arrangement. Handsome samples were Belle de Boskoop, Mere de Menage, Peasgood's Nonsuch, Cox's Pomona, Atlanta, Taranaki Russet, Bismarck, Emperor Alexander, and Uvedale's St. Germain Pear (Silver Gilt Medal).

Mr. H. Deverill, Banbury, Oxon, had a fine table of vegetables, including splendid heaps of Deverill's Ailsa Craig, Rousham Park Hero, and Deverill's Cocoanut Onions, also Leeks, Celery, Carrots, Beet, Potatos, Parsnips, &c. (Silver Medal).

Messrs. W. W. Johnson & Son, Boston, Lincs, had an exhibit of sixty-five dishes of Potatos, including some enormous samples of Up-to-Date, also Johnson's Prolific, Satisfaction, Maincrop, Kidney, Snowflake, The Bruce, &c. (Silver Medal).

Mr. H. Shoesmith, Claremont Nursery, Woking, exhibited six stands of Chrysanthemums, including excellent blooms of Madame Carnot, Mons. Chénon de Léché, Phoebus, Thomas Wilkins, Mutual Friend, and several others (Silver Medal). Mr. M. Larsen, Roebuck Nursery, Enfield, Highbury, staged Pelargonium King of Denmark (Commended).

The Lawes' Chemical Manure Co., Ltd., 59, Mark Lane, London, had a stand of various manures, notable amongst which for garden purposes was Lawes' Horticultural or Garden Manure, an ideal fertiliser, not a manufactured article, but a recently discovered natural guano, of which the Lawes Chemical Manure Company are the sole consignees for Great Britain and the Channel Islands.

The Permanent Nitrate Committee, 3, Gracechurch Street, London, had an exhibit of nitrate of soda in one of the galleries.

Messrs. Jas. Carter & Co., High Holborn, had a most imposing exhibit. A long table running across the hall was piled up with superb samples of vegetables grown from their seeds. Several huge gourds which ornamented the centre of the table were most conspicuous; indeed, everything was of mammoth proportions here, roots of all kinds being especially meritorious (Silver Medal).

Messrs. S. Spooner & Sons, Hounslow Nurseries, contributed a small collection of well-coloured Apples, including King of the Pippins, Bramley's Seedling, Radford Beauty Blenheim Orange, Margil Wellington, of which especially fine dishes were on view (Silver Medal).

Mr. Robert Owen, Maidenhead, sent four dozen excellent flowers of seedling Chrysanthemums, all of which, with one exception (Edith Tabor), have been raised by him. Eva Knowles, Duke of Wellington, Grachie, Pride of Maidenhead, Mr. E. G. Whittle and Brittania were represented by some nice flowers, and there were also some neat samples of unnamed forms (Bronze Medal).

Patent exhibition flower tubes were shown by Mr. C. Springthorpe, The Gardens, Coombe Court, Kingston-on-Thames.

Mr. W. J. Godfrey, Exmouth, Devon, staged eight dozen grand blooms of Chrysanthemums in first class style. Such standard varieties as Pride of Exmouth, H. L. Sunderbruch, Madame Gustave Henry, Oceana, Mutual Friend, Baron Adolphe de Rothschild, Exmouth Yellow, together with such novelties as Australian Gold, Arona, and White Swan, were in first-class condition. The same exhibitor staged a quantity of single and decorative varieties. These were arranged very tastefully on a bank with a few show blooms. A neat little batch of well-grown plants of Calla Devoniensis was also contributed by Mr. Godfrey. This form possesses the same dwarf habit as Little Gem, but is a much more floriferous subject (Silver Medal).

Messrs. Sankey & Sons, Bulwell Potteries Nottingham, decorated the fountain at the lower end of the hall with samples of their well-known ornamental pot ware. In this case many of the pots were filled with Ferns and foliage plants and produced an exceedingly good effect. Some patent Fern tiles for walls that were included are evidently a capital thing, showing that any dead wall can easily and inexpensively be beautifully covered with Ferns or other plants.

Mr. H. F. Brown, 129, Selhurst Road, South Norwood, showed specimens of improved potware.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood, S.E., set up a very pretty table of hardy fruit and foliage plants. The latter were arranged in three small groups in the centre of the table. The Apples and Pears were well-coloured, and were clean and shapely specimens (Silver Medal).

Messrs. Wm. Thompson & Sons, Clovenfords, are well-known to the public if only for the sake of the valuable manure which bears their name. Mr. J. George, 14, Redgrave Street, Putney, S.W., showed samples of this, together with some magnificent Grapes that had been grown by its aid, also various garden requisites. Messrs. J. Veitch & Sons, Chelsea, S.W., put up a very nice group of Chrysanthemums. Backed by healthy plants of Cocos plumosa the bright hues of the blooms appeared to great advantage.

Messrs. Wood & Sons, Wood Green, had a stand with various horticultural requisites, and a good deal of taste was displayed in the setting out of the numerous specialties in which the firm deals.

The magnificent group of Chrysanthemums set up in the gallery at this show last year, by Mr. H. J. Jones will yet be fresh in the minds of our readers. This year Mr. Jones struck out in a fresh direction, but still effectively. Against a background of dull-hued tapestry several large and handsome vases stood out in bold relief. These were filled with Chrysanthemums cut with long stalks, associated with dried fern fronds, and coloured foliage Crotons. Palms and Ferns tastefully set up completed the background for the cut Chrysanthemums in front. These were both large and brightly coloured, and comprised all the leading varieties which Mr. Jones knows how to grow so well (Silver Gilt Medal).

Side by side with Mr. Jones' great effort appeared another imposing one from Mr. Norman Davis Framfield, Sussex. Two gigantic glass vases had been utilised here, in addition to others of shorter stature, Some superb cut blooms occupied the front rank. They included Modesto Sunstone, Lady Byron, Mrs. Hermann Kloss, Mrs. H. Weeks, and Viviand Morel, which were some of the best in a collection in which all were up to the high water mark of merit (Silver Gilt Medal).

Messrs. B. S. Williams & Son, Upper Holloway, N., set up a very fine group of stove foliage plants and Orchids. The latter included some well-flowered pieces of Cattleya gigas sanderiana, C. labiata, Oncidium Forbesii, and C. Ornithorhynchum. At the corner of the group a splendid batch of Begonia Gloire de Lorraine attracted a deal of attention, and was certainly a great feature of the exhibit (Silver Gilt Medal)

Mr. Joseph Arnold, St. Paul's Road, Camden Town, had a stand setting forth the excellency of his special loam and peat, also the various kinds of sand supplied by him.

Messrs. Wm. Cutbush & Son made a brave display with a large and tastefully arranged group. Such Chrysanthemums as Edith Tabor, and Mrs. Chas. Blick came out very stongly in the background, and they were supplemented by Malmaison Carnations, Erica hyemalis, E. gracilis, and Begonia Gloire de Lorraine, of all of them in excellent order. The front row was composed of some capital Apples, and a few Pears. On a small side-table close to the large exhibit appeared some heavy samples of Onions Barnet Hero, and Ailsa Craig (Silver Gilt Medal).

Messrs D. Dowell & Son, Ravenscourt Avenue, Hammersmith had a stand of horticultural sundries.

A bright spot of colour marked the place where Messrs. D. & W. Buchanan, Forth Vineyards, Kippen, by Stirling, had deposited their Grapes. These were large bunches and exceedingly well finished, the berries, moreover, being of gigantic proportions. The superbly-coloured Vine leaves were placed on white canvas screens and that formed a background to the fruit which was much admired by visitors (Silver Medal).

Messrs. Carter Page & Co., 52 and 53, London Wall, exhibited a collection of horticultural necessities in a neat and masterly manner.

Messrs. Chas. Lee & Son, Hammersmith contributed a good collection of hardy fruit—Apples, chiefly (Silver Medal).

THE BANQUET.

Under the presidency of Sir Edwin Saunders, the president of the society, a large number of members, friends, and visitors assembled at the Hotel Metropole, at 7 p.m., to celebrate the Jubilee in another fashion. Amongst those present we noted Sir Trevor Lawrence, Bart., F. A. Bevan, Esq., C. E. Shea, Esq., C. C. Paine, Esq., C. Harman Payne, Esq., Messrs. Leonard Sutton, H. Canrell, H. Williams, H. Laing, J. H. Laing, H. J. Jones, T. Bevan, Norman Davis, H. J. Veitch, A. Dean, G. Gordon, T. W. Saunders, &c.

After the usual toasts had been rendered the president proposed the "National Chrysanthemum Society." He said that it first originated as the Stoke Newington Society in 1846, which he believed was the first English society to take up the Chrysanthemum to advance its cause by exhibitions. The late Robert Fortune introduced the Chusan Daisy and the Japanese type which had grown to such dimension at the present day. The Stoke Newington Society lasted thirty years, and accomplished much. Then it became merged with the Borough of Hackney Society. When the late Mr. William Holmes took its affairs in hand, it soon became necessary to find more room for the exhibits.

In 1877 the exhibitions were transferred to the Royal Aquarium, and in 1883 its title was changed to that of the National Chrysanthemum Society. After this the membership rapidly increased till it now stood at 870. It had 138 societies in various parts of the world affiliated with it, several being in the colonies. Its official catalogue was welcomed all over the world, and the Jubilee edition had just been published.

The present was a most momentous period in the history of the society; it had reached the fiftieth year of its existence, and they were assembled to celebrate its Jubilee. Some might take exception to this statement because it had first been the Stoke Newington Society; but they did not wish to forget that the society had such a small beginning. The growth of a society resembles that of an individual. Though the society was not always so great and also prosperous as to-day, they would not allow one jot of its history to lapse.

A jubilee might be defined as a popular manifestation of joy concerning some great event; and in olden times was celebrated with banners, clarionets, shouting and blowing of trumpets, as first defined in Leviticus; so that this kind of jubilation is 3,000 to 4,000 years old, and came to us from the Jewish nation. It was based on the mystic number of seven or some multiple of it so that the year after seven times seven was a year of rest and jubilation. The show commemorating the Jubilee of the National Chrysanthemum Society being renewed for the space of four days he believed was unparallelled in horticulture.

Charles E. Shea, Esq., proposed the "Affiliated Societies" of which there were 138 forming a bond or union for mutual assistance and spread over Great Britain and the Colonies. Mr. T. Bevan, of the Highgate Society, replied, and spoke at some length on the visits their society made to the Continent in order to see what could be learnt concerning Chrysanthemums in Belgium and France. He trusted that the day was not far distant when all the societies in London would join in building a suitable hall for their horticultural exhibitions of all kinds.

C. Harman Payne, Esq., proposed the "Donors of special prizes," and amongst other things spoke of the beautiful groups which the president's prizes had been the means of bringing out. F. A. Bevan, Esq. replied, stating that he had some diffidence in rising to speak on the subject; but he desired to promote more and more the welfare of the society. The growers, however, deserved the credit for the splendid character of the show. He desired to speak of the hall which had been alluded to by Mr. T. Bevan. If the show was held elsewhere than at the Aquarium he know of several people who would support it They wanted more light to show off their flowers and to be quite separate from the present adjuncts of the show.

Sir Trevor Lawrence, Bart., proposed "The President," and said that all present had no doubt followed with intensity the speech of the president. Robert Fortune had been of vast importance to horticulture in several ways by his introductions from China. He alluded to the horticultural hall concerning which Mr. T. Bevan and F. A. Bevan, Esq., had just spoken. They were once very near getting it, but the failure to secure it was owing to the financial collapse some years ago. The cause was ably advocated by Baron Sir Henry Schroder. Sooner or later we would have the hall. Horticulture was best done in this country, but the foreigner was treading upon our heels, and we would have to put more energy into it. A more capable or more genial president than Sir E. Saunders was impossible. The latter replied that he was scarcely worthy of the high eulogium passed upon him.

Mr. T. W. Saunders proposed "Kindred Societies" to which C. C. Paine, Esq., replied, stating that the Royal Horticultural Society would be most willing to help in getting a hall. The president proposed "The visitors," to which George Cox Bompas, Esq., replied. J. Harrison, Esq., proposed "The press," and Mr. G. Gordon replied. A very enjoyable evening was spent. The floral decorations of the hall were arranged by Miss Lilian Hudson.

CHRYSANTHEMUM SHOW.

EXMOUTH, *October, 30th.*

The eleventh annual exhibition of Chrysanthemums, fruits, &c., took place on Friday, October 30th, at the Market Hall, and in every respect may be described as an unqualified success. The spacious hall was tastefully decorated with evergreens, flags, &c., and an abundance of lights were utilised in the evening so that a very careful inspection might be made of all the exhibits. Very favourable weather prevailed all day and a large number of visitors and patrons attended the show. The entries were far more numerous than at any previous show, whilst the general quality of all the exhibits was excellent.

For thirty-six cut blooms, Japanese section, there was keen competition, the prizes after considerable judging being awarded to first, V. Stucky, Esq., Teignmouth; second, H. Hammond Spencer, Esq.; third, G. W. Drake, Esq, Cardiff; fourth, Miss Fripp, Teignmouth. This decision did not give universal satisfaction, but as one of the rules of the society states "that the decision of the judges to be final and without appeal," there was no departing from the awards though some little soreness was apparent. The whole of the blooms, however, were of splendid form, size and colour, well set and of remarkable freshness. For twelve Japs. R. A. Browning was first, and Mrs. Kavanagh, second. For twelve incurved distinct, H. Hammond, Esq., was well to the fore, followed closely by Miss Fripp, and V. Stucky, Esq., was third. These blooms were much finer than many of the same class of recent years, still behind some of the old Liverpool boards of ten or fifteen years ago.

The groups were just particularly fine flowers uniformly good, foliage large and plentiful, the result being that very few stakes were to be observed protruding in any group. This eyesore oftentimes detracts much from the general effect. Mrs. A. D. Sim, first; Mrs. Goldney, second; and General Rocke, third; being successful in one class; whilst Dr. Hodgson, Col. Burch, and Sir C. Pearson, were the successful competitors in another circular group class. Groups of semi-circular form were shown by Mrs. Creswell, Sir J. Phear, and Mrs. H. Stewart, and were awarded prizes in the order their names appear. Other successful exhibitors of pot plants were Col. Lloyd, H. Clark, Esq., Miss Clark, Mrs. Kavanagh, Dr. Shier, and Dr. Hodgson. In the group of the last-named we noticed a most beautiful plant with some six perfect blooms of the white Louis Boehmer, perhaps one of the most beautiful things of recent introduction.

With Primulas Mrs. Payne was first, and Mrs. Goldney second. Table plants were shown by Rev. H. Clerk and Mr. J. Gordon, who was first with six Ferns. Some excellent fruit was shown, the first prize for Alicante Grapes being awarded to G. W. Matthews, Esq, for a splendid exhibit both as regards size, colour, and general finish. J. Gordon was second with a lot, but slightly inferior. Rev. H. Clerk was first for Muscats, and also for any other variety, Miss Pinckney being second in the latter class. Numerous classes were devoted to Apples and Pears, and much excellent fruit was shown. Among the successful exhibitors we noticed the names of Sir J. Phear, R. Ley, Esq., Sir Ch. Pearson, Major Obbard, Col. Lloyd, J. Gordon, Esq., Mrs. Forbes, and Miss Pinckney. Vegetables were numerous and good, Mrs. Cresswell being first with eight kinds closely followed by Mr. Payne, the third falling to Miss Pinckney. For the best collections of Potatos, six kinds, nine tubers of each, Sir Ch. Pearson came in first, and Miss Pinckney second.

Mr. W. J. Godfrey, nurseryman, had a very extensive display of bush Chrysanthemums and zonal Pelargoniums, besides a fine stand of cut blooms, many of which were new, or shown for the first time. Some of these will doubtless be at the Royal Aquarium, so we may hear of them again. The promoters of the show have every reason to be satisfied, it being considered the best ever held in Exmouth.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Apples Disqualified.—At the recent Agricultural Show held at Kilmarnock (Ayrshire), a competitor was disqualified for showing Warner's King and Nelson's Glory in a collection of Apples. The judge decided that those two varieties are the *self-same* Apple, and consequently the competitor was disqualified for being *short of a variety*. As this is the chief show for fruit in the West of Scotland, the decision naturally gave rise to very heated discussions amongst gardeners and others. For the benefit of your numerous readers here, will you kindly give us your opinion on the subject.—*Gardener.*

[Warner's King is an Apple that has a great number of synomyms including Nelson's Glory and David T. Fish, which are perhaps the most common. At the National Apple Congress held in the Royal Horticultural Society's Gardens, Chiswick, October 5th to 25th, 1883, there were 150 dishes of it under its proproper name, Warner's King. There were also twenty-three dishes of it under the name of Nelson's Glory; fourteen, under the name of D. T. Fish; 1, as Drumlanrig Castle; 1, as Barker's Seedling; 2, as Cobbett's Fall Pippin; 1, as King's; 1, as Minier's Dumpling; 1, as Poor Man's Friend; 1, as Silverton Pippin; and 1, as Veitch's Cluster. It will, therefore, be seen that Warner's King may often be exhibited under a wrong name, so that the judge in this instance was right, and his decision must be respected. Gardeners would do well to procure a copy of the book on *British Apples*, which, we believe, costs 2s. 6d. It gives the proper names of British Apples with a list of synonyms at the end.—ED.]

Names of Fruit.—*James Milligan*: Apples—1, Emperor Alexander; 2. Striped Beefing; 3, not recognised; 4, Lord Derby. Pears—1, Beurré Sterkmans; 2, Winter Nelis; 3, not known; 4, Gansell's Bergamot.—*Charles Etherington*: 1, Catillac; 2, Bergamot's Esperen; 3, Marie Louise d'Uccle.

Grubs in Vegetable Garden.—*A. C.*: The specimens you sent were the young of Snake-millipedes (Julus) which feed on soft-skinned grubs and insects as well as vegetables. When present in large numbers they are very injurious to the roots of various vegetable crops, causing them to decay. Dressings of soot are said to drive them away; and watering the ground with limewater is considered advantageous by helping to destroy them. During dry weather in summer you should set traps consisting of damp moss in wicker or wooden baskets sunk in the ground. Examine these every morning and destroy the Snake-millipedes caught. Cabbage leaves might be placed thickly over the ground, and examined every morning to catch those sheltering beneath them.

TRADE CATALOGUES RECEIVED.

FISHER, SON & SIBRAY, LTD., Royal Nurseries, Handsworth, near Sheffield.—Catalogue of Fruit, Rose, Forest and Ornamental Trees, and Shrubs.

KELWAY & SON, Langport, Somerset, England.—Wholesale Catalogue of Gladioli.

W. WELLS, F.R.H.S., F.N.C.S., Earlswood Nurseries, Earlswood, Redhill, Surrey.—Descriptive Catalogue of Chrysanthemums with Cultural Hints for 1896 97.

FREDERICK ROEMER, Seed Grower, Quedlinburg, Germany.—Novelties in Flower Seeds for 1897.

SAMUEL BIDE, Alma Nursery, Farnham, and St. John's Nursery, Woking, Surrey.—Catalogue of Coniferae, Hardy Ornamental Trees and Shrubs, Roses, etc.

LONDON SEED TRADE.

November 3rd, 1896.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Mark Lane, report a meagre demand for agricultural seeds. White Clover continues to advance. Alsike and Trefoil steady. American Red Clover offers more freely but prices asked are still too high. French-Italian Ryegrass has advanced 3s. per bale. Mustard and Rape seed steady.

H. J. JONES

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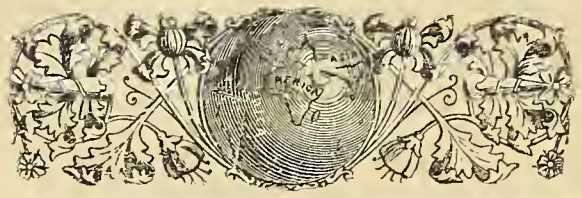

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, NOVEMBER 14th, 1896.

NEXT WEEK'S ENGAGEMENTS.

SUNDAY, November 15th.—Ghent Chrysanthemum Show (3 days).

MONDAY, November 16th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.

TUESDAY, November 17th.—Chester Paxton Society's Fruit and Chrysanthemum Show (2 days).
Large Sale of Japanese Lilies by Messrs. Protheroe & Morris. Sale of Dutch Bulbs by Messrs. Protheroe & Morris, and Mr. J. C. Stevens.

WEDNESDAY, November 18th.—Chrysanthemum Shows 2 days, at Wokingham, Tonbridge, Linfield, Newcastle, and Bristol; 1 day—Ayr.
Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

THURSDAY, November 19th.—Chrysanthemum Shows — Leighton Buzzard; 2 days—York, Barnsley, Leamington, and Lincoln; 3 days — Edinburgh, Norwich.
Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, November 20th.—Chrysanthemum Shows, 2 days—Manchester, Chorley, Wilslow.
Sale of imported and established Orchids by Messrs. Protheroe & Morris. Sales of Dutch Bulbs by Messrs. Protheroe & Morris, & Mr. J.C. Stevens.

SATURDAY, November 21st.—Aberdeen Chrysanthemum Show.

OFFICIAL CATALOGUE OF CHRYSANTHEMUMS.—The Jubilee Edition of the Official Catalogue of the National Chrysanthemum Society has been published very opportunely, at a time when the word Chrysanthemum seems on everybody's tongue, and when the Jubilee of the society was being celebrated in a manner worthy of the efforts of so large and influential a body. It is the fifth publication of its kind, exclusive of the supplements which have been published at periods intervening between the more complete lists. The compilation of it is based on the plan of the 1888 edition, and we have little to find fault with in that respect. Indeed, the chief complaint we should place against it, is that old as well as many new varieties are not included in the alphabetical list, so as to make it a complete catalogue of all the varieties at least which have been put into commerce since the publication of the first official list was published, including that as well. That would of course have swelled the catalogue into a volume of considerable size, and materially added to the cost. To both these items, there are possibly hundreds of Chrysanthemum growers who would exclaim *cui bono?* Hundreds of the varieties have disappeared from cultivation, and others are quickly following them; but a few of the prettier and more useful kinds will long linger in conservatories and occasionally turn up to tax our over-burdened memories. There is also the danger of the same name being applied to two or more different varieties. We do, indeed, notice such couplets as Golden Wedding and Noces d'Or, and Robert Owen and M. Robert Owen;

but the same name in two or more foreign languages may be sufficiently distinctive to be passed over in silence. Such a catalogue as that before us is all the more a necessity in order to keep us correctly informed.

A few alterations have been made in the compilation of this catalogue. The reflexed Japanese varieties have been dropped as a section because there are many instances in which the distinctions between them and the true Japanese type are so fine that many are unable to see them. We admit the truth of this; but while the incurved Japanese varieties have been retained as a section, some of them, such as Mrs. H. Weeks, require close scrutiny to determine in which section they should be placed owing to the variations in individual blooms, under different conditions and in different stages of development. Indeed, nature is so variable in her progeny as to defy classification in many cases. A section has been founded for hairy varieties, which at first sight are distinct enough, though the catalogue admits that they mostly belong to the incurved Japanese section. Their hairy or bearded character would be greatly concealed if the florets were reflexed, because the beard is confined to the back and tip of the florets. The hairy section includes no less than 22 selected varieties.

With the select lists belonging to the various sections, there is little room for fault-finding. They have been selected by a Catalogue Committee consisting of 30 growers and connoisseurs or experts, in all parts of the country, subjected to the censorship, of a Revision Committee of five, namely Messrs. D. B. Crane, H. J. Jones, W. H. Lees, A. Taylor, and the hon., secretary Mr. C. Harman Payne, whose duties evidently have been to record those having a large or reasonably large number of votes. To the descriptions we should have liked the catalogue to have recorded whether the varieties gave the best blooms from the first or second crown, or terminal bud, abbreviated to 1st C., 2nd C., and T., respectively. It would have been a great aid to beginners and others particularly in the case of new varieties, for the question is really an important one.

The alphabetical list has been amended in a manner for which we and all concerned cannot be too thankful. Instead of classifying the names under the Christian names of Mr., Mrs., Miss, M. &c., the surname is taken first as all true alphabetical lists or dictionaries should be. Even then there is a disparity of opinion in some cases, such as Globe d'Or and Perle d'Or. To obviate that difficulty, the names are repeated in reverse fashion, as Or, Globe d' and Or, Perle d'. The Revision Committee of the catalogue in question is not alone in this respect. Furthermore, the alphabetical list includes only new varieties raised or sent out since the spring of 1890. We advise our readers to carefully preserve their old catalogues as well as the various supplements, which will be handy for reference at any time in looking up the correct nomenclature of old, as well as new varieties.

Lessons of the Great Chrysanthemum Show.—Now that the great annual tournament of Chrysanthemums held under the auspices of the National Chrysanthemum Society is a thing of the past, we may take it for granted that a large number of gardeners throughout the length and breadth of the country have made observations and taken notes that will prove serviceable against another year. One thing was made apparent to most people, namely, that it is useless to expect a first prize in any leading class of Japanese varieties unless the bulk of their blooms consists of new or comparatively recently raised varieties. There is no question that size is a point that carries great weight with the judges; and gardeners, generally, acquiesce in that opinion themselves. Wherever competition was strong, the leading or prize-taking stands were very nearly of equal merit, and small or lightly built flowers were passed by, whatever their other qualities might be. An inspection of the Japanese varieties showed that the bulk of them, we should say, nine-tenths, have been raised or put into commerce within the last six years. The incurved or Chinese varietes on the contrary were more conservative, as they have been for many years past, because progress in that section is slow or greatly restricted. We noted some which originated away back in the forties, fifties and sixties, including Queen of England (1847), Alfred Salter (1856), Empress of India (1861), Empress Eugenie (1865), and Barbara (1869.) Such varieties go to prove that they are either the best of their kind or indispensable to a good representative collection.

The old champion growers of trained specimens would be difficult to beat in their own particular line; and very few ever try conclusions against them. The great amount of house-room required to house those monster specimens prevents a large number of cultivators from proving their skill in this particular direction. Singularly enough the reflexed section of Chrysanthemums was unrepresented in the classes for cut blooms during the first two days' exhibition, at which exhibitors seemed surprised and made amends for it on the 5th inst. We regard them as forming a very conventional section, badly defined and decadent. They are practically forbiden to increase in size, and new varieties that exceed the limits are dubbed as reflexed Japanese, too big for the reflexed type, too small for the Japanese, practically useless for any purpose, and hooted off the show boards accordingly.

Another strange incongruity we noted was Perle Dauphinoise, by many regarded as an incurved Japanese variety, but too small to be of any service on the exhibition table. Notwithstanding this, it appeared amongst the 24 incurved varieties forming part of the first-prize exhibit in the affiliated Societies' competition. It passed muster as an incurved or Chinese variety, *nem. con.*, beyond the feeble protest that it possessed a small drop of Japanese blood in it. C. H. Curtis came into the same category. Both added materially to the appearance of the stands. It is largely a question of cultivation as to whether Perle Dauphinoise finishes neatly and compactly, or rough. The same applies to several other comparatively new, incurved, sorts, which develop the best blooms from the second crown buds. There ought to be a great future before the single varieties, for many of them are really beautiful and deserve encouragement. We should like to see more rivalry in the tasteful arrangement and presentation of them.

Snow on the summit of Ben Nevis already lies to the depth of 17 in.

Mr. Wm. Hutchinson, gardener to W. H. Lumsden, Esq., of Balmedie, has been appointed head gardener to D. Tod, Esq., of Eastwood Park, Giffnock, Renfrewshire.

Edinburgh Seed Trade.—The Annual dinner of the Seed Trade Assistants of Edinburgh will be held in Aitchison's Rooms, 75, Queen Street, on Thursday evening, December 3rd, at 8.15 p.m. prompt, under the presidency of Mr. Sclater. It is desirable that all who intend being present should intimate their names to members of committe, or the undersigned, on or before 27th November, to enable the committee to make the necessary arrangements.—*A. Chalmers, Secretary and Treasurer.*

Messrs. George Bunyard & Co., Maidstone, are to stage 100 dishes of their far-famed hardy fruits at the forthcoming Edinburgh Chrysanthemum Show on the 19th, 20th, and 21st inst. The northern capital will thus have an opportunity of seeing what the southern one often sees.

Tunbridge Wells Gardeners.—There was a meeting of this society at the Club Hall, Camden Road, on the 3rd inst., under the presidency of Mr. Charlton. Some certificates were awarded for plants and flowers on the tables. Points were also gained by Mr. Booth and Mr. Palmer for Crotons; by Mr. Bridger for Apples; by Mr. Berwick for Dracaenas; and by Mr. Greengoe for Leeks. Some fungi were exhibited, and it was decided to give points for such in the future. An amusing discussion arose as to which fungi were edible, one member asking whether those who advised the eating of certain fungi would risk eating their specimens? No answer.

Fruit from the Royal Gardens.—At the Chrysanthemum and fruit show of the Royal Horticultural Society of Ireland, which opened at Ballsbridge, Dublin, on the 4th inst., a magnificent collection of fruit, consisting of nearly 200 dishes was exhibited by Mr. Owen Thomas, gardener to Her Majesty, Royal Gardens, Windsor. Mr. Thomas was sent over specially to see the fruit staged, and Her Majesty directed that at the close of the show the fruit should be sent to the Hospital for Incurables at Doonybrook, for distribution amongst the inmates.

Woolton Mutual Improvement Society.—The usual meeting of this society was held on Thursday of last week, Mr. G. Haigh occupying the chair. The subject for consideration was a paper by Mr. R. G. Waterman, entitled "Should we Import Fruit, Flowers and Vegetables?" the essayist gave statistics of the enormous quantities of horticultural produce that were imported, with the countries that they came from, and the manner that they were distributed. The value of many kinds was compared with that of our own raising, which led up to the most important point, "could the same be raised in England with satisfactory results to the producer and consumer?" To arrive at this position it was recommended that special care must be given as to suitable localities, soil, and shelter. That the most approved kinds be grown and that the cultural details be thoroughly understood. A very interesting discussion followed in which Messrs. R. Tod, T. Carling, J. McColl and others took part, the principal points touched upon being compensation for unexhausted improvements, railway carriage, and liberal cultivation. A vote of thanks to the lecturer concluded the proceedings.

Grand Yorkshire Gala Grants to Charities.—The other week a general meeting of guarantors and life members of the Grand Yorkshire Gala was held at Harker's Hotel, York, under the presidency of Sir Joseph Terry, J.P. The following resolution had been received from the Royal Horticultural Society:—"The council of this society having heard from members of the deputation attending the York Gala of the great kindness and hospitality extended to them by the Lord Mayor and Lady Mayoress of York and by the chairman and committee of the Gala, wish to express to his lordship and the Lady Mayoress, and to all the members of the committee their very best thanks and sincere appreciation of the courtesy shown to their deputation." The chairman moved "That the life members and guarantors of the Grand Yorkshire Gala beg to tender their grateful thanks to the Right Hon. the Lord Mayor (Ald. Milward, Esq., J.P.), and the Lady Mayoress for their generous hospitality in entertaining the deputation from the Royal Horticultural Society on the occasion of their last annual fête." On the motion of Mr. Hodgson seconded by Mr. Henry Scott, the following grants were made:—York County Hospital, £30; York Dispensary, £30; York Lunatic Asylum, £20; York Home for Nurses, £10; York Home for Friendless Girls, £5; and St. Stephen's Orphanage, £5. It was resolved to hold next year's gala on the 16th, 17th and 18th June.

Extract from a Lecture on "Foods" by Dr. Andrew Wilson.—"The consumption of cocoa happily increases year by year. I say 'happily,' because, as tea and coffee are not foods, while cocoa is a true food, any increase in the national nutrition means an increase in the national prosperity. Winter, besides, is close upon us, and I advise those who are susceptible to colds to fortify themselves against chill by attention to their food. The easiest way of effecting this end for many is to substitute cocoa (Epp's being the most nutritious) for tea and coffee."

Potatos in Ireland getting Black.—At a meeting of the Youghal Town Commissioners, held recently, some reports were brought in to the effect that the Potato crops had been fine, but much of the produce was already black. Mr. Merrick stated that it was not owing to the blight, but that the Potatos had got overheated in some way.

Upper Strathearn Horticultural Society.—The annual general meeting of this society was held in the Town Hall, Crieff, on Thursday last, Mr. John McKinnie, gardener, Roundelwood, presiding. There was a good attendance of members. As regards the financial aspect of the society, the total income including balance from last year, shows an increase of £15 os. 2d. This year the income is £63 19s. 11d., and when last year's balance, £13 11s. 1d, is added, the total of £77 11s. is reached. The total expenditure is £54 7s. 6d., which leaves a credit balance of £23 3s. 6d. in favour of the society. The election of office bearers was then proceeded with. Mr. A. G. Maxtone Graham, Jun., of Cultoquhey, was reappointed hon. president; Provost Finlayson was elected president; Mr. John McKinnie was reelected vice-president. Mr. J. A. Kippen was reappointed secretary and treasurer.

Corbridge and District Horticultural Society.—The first monthly meeting of the session of this society was held on the 27th ult., under the presidency of Mr. J. Cameron. As is usual on such occasions the president delivers an opening address and Mr. Cameron chose for his subject, "Storms and their effects on Gardening and Forestry." He quoted statistics from Mossman, showing the number of fine and wet days, total amount of sunshine, direction and velocity of winds, number of gales, snow, hail and thunderstorms, from observation taken over a considerable number of years, so that one could calculate upon the average to be expected annually. The varying conditions of our climate, the winds and frosts, show the amount of care and attention required by the horticulturist and aboriculturist in helping to mitigate in some measure the effect of storms. A large attendance of members was present and Mr. Cameron was listened to with close attention from beginning to end, when a hearty vote of thanks was accorded him.

Royal Horticultural Society of Ireland.—The annual Chrysanthemum and fruit show of this society was opened on the 4th inst. at their Ballsbridge premises, Dublin, and continued next day. The exhibits, both in point of numbers and general excellence, were far above the average. The various exhibits of Chrysanthemum blooms were particularly beautiful. Fruits and vegetables were also superior to those of last year. Mrs. M'Cann secured the leading prize for a group of Chrysanthemums arranged for effect with Palms or other foliage plants; she was followed by Mrs. Pease and Mrs. Wm. M'Comas in this order. A Challenge Cup (value £10) was offered by Lord Ardilaun for a group of Chrysanthemums not to exceed 50 sq. ft., and arranged for effect. Mrs. M'Cann was again to the fore. Mrs. Pease had the best four pots of incurved Chrysanthemums, the best four pots of reflexed and four Anemone-flowered varieties. Mrs. Cleary had the best four Japanese plants. Mrs. Pease was again first for an equal number of pompons. The Earl of Pembroke (gardener, Mr. Crawford), exhibited the best thirty-six blooms of Chrysanthemums (eighteen Japanese and eighteen incurved). Raymond de la Poer, Esq. (gardener, Mr. Fernie), took the second prize; and David Harrel, Esq. (gardener, Mr. Bradshaw), was third. The Earl of Pembroke again led the way for twenty-four Japanese blooms, distinct; and was followed by Lady E. H. Bury and Mrs. Goodbody in the order named. The Hon. C. F. Crichton had the best thirty-six Japanese in not less than eighteen varieties. The Countess of Pembroke was second; and Lady E. H. Bury, third. For twenty-four incurved blooms in not less than twelve varieties Lady Pembroke was first; and R. de la Poer, second. For a stand of twelve incurved blooms, J. E. Barry, Esq., was first. Her Majesty the Queen exhibited a fine collection of fruit. Messrs. Alex. Dickson & Son, Newtownards, and Messrs. Dicksons, Limited, Chester, staged collections of fruit. Mr. Saunders Cork, and Mr. W. B. Hartland. Cork, took prizes for fruit. Messrs. T. Rivers & Son, were commended for fruit.

Lord C. Beresford sued by his gardener.—At the Kingston-on-Thames County-court, recently, Aernst Knauer, a gardener, sued Lord Charles Beresford, Park Gate House, Ham Common, for £4 6s. 8d., as wages in lieu of notice. In June, Lady Charles Beresford is said to have gone to the plaintiff at work amongst the strawberry beds, and asked him why he was not attending to other work. He replied that he would go in a minute. Her ladyship regarded his conduct as insulting, and immediately dismissed him. Judge Lushington said he had claimed a month's wages, but was clearly a weekly servant. Plaintiff might have been disagreeable, but was evidently dismissed without sufficient reason, and the judge gave judgment for £1 4s. 6d., but without costs. Neither her ladyship nor the defendant was present.

Dutch Horticultural and Botanical Society.—At the Floral Committee Meeting of this society on September 12th last, First-class Certificates were awarded to Mr. Ph. Deys, of Haarlem, for Begonia tuberosa fl. pl. Ph. Deys, Jun.; to Mr. C. G. Van Tubergen, Jun., of Haarlem, for Cactus Dahlias, George Marlow, Valkyrie, Miss A. Nightingale, and Mrs. Montefiore; to Mr. C. G. Van Dijk, of Zeist, for Helenium autumnale superbum; and to Mrs. Wm. J. W. Wigman & Son, of Zutphen, for Cactus Dahlia George Marlow. Certificates of Merit were awarded to Mr. C. G. van Dijk, for Heliopsis scabra major, Kniphofia Prof. Comes, Cactus Dahlias Oporto Tait, Mrs. Broughton Stirling, and Mrs. Wilson Noble; to Mrs. Wm. J. W. Wigman & Son for Cactus Dahlias Mrs. Broughton Stirling and Arthur Cheal; and to Mr. C. G. van Tubergen for Cactus Dahlias Mrs. Wilson Noble and Miss A. Jones. The last named exhibitor also received a Botanical Certificate for Brunsvigia Josephinae. At the meeting of the 3rd October, First-class Certificates were awarded to Mr. L. Jorna, of Enkhuizen, for Begonia Scharffiana crossed with B. Credneri Enkhuizen's Glory; to Messrs. A. Glym de Vos & Co., of Utrecht, for Richardia species; to Mr. C. G. van Tubergen, Jun., for Canna hybrida aurea and Kniphofia hybrida Triumph; and to Mr. J. H. Tromp Meesters, of Steenwijk for Vanda sanderiana. A Certificate of Merit was accorded Mr. C. G. Van Tubergen, Jun., for Watsonia iridifolia alba.

PEOPLE WE HAVE MET.

To our readers at a distance the plants grown by Mr. A. Hemsley must be more familiar than the grower himself. That he is a grower of repute, the numerous large groups of Ferns, stove and greenhouse plants, reared by him and placed under the eye of the British public at the London shows and elsewhere, amply demonstrate. To the horticultural fraternity and others frequenting these shows, Mr. Hemsley is well known. He is, moreover, one of our oldest acquaintances on this side of the Tweed, and we have much pleasure in here presenting his portrait.

From his very boyhood Mr. Hemsley has been a practical gardener; he, in fact, commenced work at an early age, much earlier than the school board would now allow. He served the first ten years at the late Mr. G. Parsons, Hassocks Nursery, near Brighton, where his father was manager. While there he went through all the departments of gardening and nursery work; and during the latter part of his time there took a leading part in the propagating department. He also had charge of the vineries and Peach house, the latter being one of the first houses placed under his care, while he was yet a lad. There is no doubt that Mr. Hemsley laid the foundation of his wide experience at the Hassocks Nursery, and owes much of his knowledge and skill to the advice and assistance given him by Mr. Parsons, especially with regard to the carrying out of experiments and in hybridising.

At the death of Mr. Parsons, the whole of the nursery stock was sold off, after which Mr. Hemsley spent a few years at Brighton, in a florists and furnishing business. On leaving Brighton he joined the staff of the Royal Horticultural Society at Chiswick. This appointment was made in 1878, while the society was still conducting large summer shows at South Kensington, and growing large quantities of plants of a varied description at Chiswick for furnishing the shows and the large conservatory at South Kensington.

Mr. Hemsley was plant foreman in the glass department at Chiswick, in those busy days when everyone of the numerous glasshouses was filled to overflowing with plants of all descriptions reared and grown on to meet the requirements. We have on several occasions noted the tasteful and graceful groups of plants which he set up at Kensington, early in the eighties, and can affirm that his duties at those shows were carried out in something more than a perfunctionary manner. While the large exhibitions were being held, a number of the Chiswick staff had to turn out-of-doors while the morning was

Mr. A. Hemsley.

quite young, and Mr. Hemsley can still look back with pride upon those stirring times when he had to help load the vans at four a.m.

At Chiswick he was one of Mr. Barron's most active and intelligent helpers. The Gloxinias on one occasion had been a complete failure under the care of a deputy in one of the propagating departments, and next year Mr. Hemsley took them in hand. After making splendid progress for a time, the plants began to show symptoms of the old but unknown enemy, and we have seen Mr. Hemsley sweating over and trying to discover the disturber of his equanimity. He discovered and mastered the microscopical enemy—a Tetranychus—and the plants reached perfection, flowering magnificently. The Chiswick strain of Gloxinias in those days was second to none, and though they cost him a deal of watchful care, he never once failed with them after taking them under his own personal aegis. The tuberous Begonias, for several years, were one of the leading features of the plant houses, and both for quality of bloom and as an exemple of good cultivation, many a modern grower would have been proud of them. Many of them were seedlings of Mr. Hemsley's raising. He was also very successful with Chinese Primulas single and double. Of the former, Chiswick Red was the best red variety cultivated for a number of years. There was a fine collection of the true double varieties rarely now seen in cultivation with the exception of the old Alba plena, and one or two allied forms. Pelargoniums included the collection of species sent to Chiswick by the defunct Pelargonium Society. Show, fancy, zonal, and Ivy-leaved collections of these old fashioned flowers were all grown to great perfection by Mr. Hemsley. To these we should add Ferns, Orchids, Achimenes, and Fuchsias.

After being at Chiswick for nearly five years, he left on the 30th November, 1882, for Carlisle, but after a short period returned to London, where he was appointed manager to Mr. H. B. May, Dyson's Lane Nurseries, with whom he has now served something over thirteen years, and where he still remains. Ferns are now his chief care as a large section of the gardening fraternity well know; Crotons, Dracaenas, Aralias, Palms, Carnations, Heaths, and a host of other decorative and commercial subjects, are also grown to great perfection. His love for Ferns originated in Hassocks Nursery where a large collection of choice sorts was grown.

Many first-class new varieties of Ferns have been raised in the Dyson's Lane Nurseries. Carnations are also old favourites with him, and he has raised some grand varieties as well as Pelargoniums. Eternal vigilance is the price of success in gardening and Mr. Hemsley knows it. Though he prides himself in his practical work, he does not eschew literary work in connection with gardening, for he was one of the earliest contributors to THE GARDENING WORLD. He has been and is a contributor to other gardening papers both in this country and in America; but these labours are subsidiary to his practical work. Under the guidance of a thoroughly practical chief, and with the assistance of an efficient and intelligent staff of fellow workers, Mr. Hemsley has seen the establishment, with which he has so long been connected, considerably extended, and at the present time the name of H. B. May as a Fern grower is known to the whole world.

LATE VINES WITH GRAPES STILL HANGING.

THIS fruit will require very careful handling just now when the leaves are taking on their autumn tints and soon to fall from the vines. I consider this the most critical time for late Grapes. The bunches should be gone over twice a week to remove decaying berries, if any, as if left many days they soon contaminate their neighbours and spoil the shape of the bunch. The borders, too (I am speaking of inside ones which should be for all late Grapes), must be carefully examined, and if found at all dry, should have the straw or bracken removed and have a thorough watering, or shrivelling of the berries will surely take place. A bright day should be chosen for this, if possible, afterwards replacing the covering. This assists to retain the moisture in the border and a drier atmosphere above. The temperature is of equal importance; my experience tells me that 50° to 55° is quite high enough through the night, and I would prefer to see it a little below that figure in the morning if the night has been very cold, rather than much above it. I am speaking of such varieties as Hamburgh, Alicante, Lady Downes, etc. I would give Muscats from eight to ten degrees more, with a rise of 10° with sun heat, when air should be given top and bottom, but not too freely with this, if the wind is at all keen so as to create a draught. A rise of 5° is quite enough on dull cold days. I don't believe in too much fire heat; it only tends to shrivel the berries.

Some writers advocate cutting and bottling the Grapes about this date thinking they keep better than if left on the vines. This is not my opinion, unless they are in an unheated vinery; then I should by all means cut them; rather they should have been cut some two or three weeks since. With me Grapes keep well on the vines up to the end of December, when I consider they should be all cut and bottled, and the vines given three months rest by throwing the house wide open and pruning the vines. It is not every establishment that has a suitable place to put bottled Grapes in, hence the necessity of leaving them on the vines up to the date given; and I expect the majority of us have to fall on our latest vinery now the shooting season is on, in which case we shall be daily relieving the vines of their load.—*James Mayne, Bicton.*

FINSBURY PARK.

THE display of Chrysanthemums in Finsbury Park was opened to the public on the 10th October, about a week later than usual. The principal display is not now made in the conservatory as when it was first opened, but taken back to the old house which has been painted up and otherwise made smart. Tall Palms, Dracaenas, Ficus, standard Grevillea robusta, Eucalyptus citriodora, and other subjects are arranged round the sides of the building and form a background of greenery, in front of which banks and groups of Chrysanthemums form almost a continuous outline to the central winding pathway. Many of the plants are grown as bushes, and carry a large number of flowers of moderate size. The pompons are in front, but most of them are late. The whole assemblage has a bright and cheerful aspect.

In the old span-roofed house the Chrysanthemums monopolise the whole of the space and are arranged in one sloping, undulating bank, from end to end of the building. The plants generally are very dwarf, and one of the first things that strikes the eye, is a tall branching plant of Margot, draping every pillar that supports the roof of the house. Here as elsewhere in the London Parks a spirit of conservatism prevails amongst Chrysanthemums, which one seldom sees either in a nursery or private establishment where exhibiting is countenanced. For instance we expect to see such universal favourites as Viviand Morel, Charles Davis, Florence Davis (the green Chrysanthemum of some years back) and Avalanche, of which there are good blooms here; but here we come across such old favourites as Elaine, in fine form; the salmon-red Triomphe du Nord; and the yellow Mdlle. Lacroix, otherwise known as Mrs. C. E. Shea, not the more recent white variety.

The colour of Col. W. B. Smith is very rich and the whorled florets are always striking. The golden hue of E. Beckett, otherwise known as the Yellow Avalanche, is very fine. The rich maroon-crimson and the broad florets of G. W. Childs, are very prepossessing, and though the variety often fails, it has done well here. Marquis de Paris is a globular Japanese bloom somewhat after the style of Boquet des Dames in size, shape and colour. The large pink blooms of Madame C. Harman Payne are rather late. As the visitor passes along the house great masses of the old and beautiful L'Isle des Plaisirs may be seen fringing the eves of the house in the bays between the undulations of the bank of bloom. The broad florets of Amos Perry are conspicuous here and there. The rich golden-yellow of the new Phoebus is even more conspicuous, but the flowers are late.

Other types may be noticed such as the pompon Elise Dordan and the bright yellow Anemone M. Charles Lebocqz. Incurved varieties are by no means neglected. Amongst yellows we noted Mr. Bunn, Gloria Mundi, and the bronzy-yellow Globe d'Or. M. R. Bahuant with its chestnut-red flowers is still a favourite for early and mid-season work. On the whole there is a gorgeous display in a great variety of colours, neatly and effectively arranged by Mr. Melville, the superintendent.

CELEBRATION OF THE SIXTIETH YEAR OF HER MAJESTY'S REIGN.

As numerous suggestions are under consideration for celebrating the sixtieth year of Her Majesty's beneficent reign, may I venture to bring before the British people a long-felt need of the horticultural community.

Horticulturists have no common meeting place, no centre, and the establishment of a *Home of Horticulture*—a Royal Home of Horticulture if Her Majesty graciously appointed it so—would be an event worthy of this era in our national history. It is quite unnecessary to emphasise the inconvenience inseparable from flower and other similar shows held in buildings not structurally adapted for them, nor is it necessary to more than refer to the undesirableness of holding such exhibitions in places to which any exception can be taken. Our institute should be above any objectionable connections.

I would suggest the establishment of a Home of Horticulture which should be so designed as to afford facilities for further promoting the interests of other arts, painting, music, etc.

It is generally admitted that the best pictures are not always received at the academy, here they would find a welcome home. On behalf of music, the overflowing non-professional talent might here find ample opportunities for development, even for the assistance of philanthropic enterprises; such a trio might be advantageously united to their mutual benefit and to the improvement, enjoyment, and advancement of every one.

Having worked out this project in detail (particulars of which need not be here gone into) I beg to invite co-operation towards its attainment.

The aim is to bring together all horticultural interests to a metropolitan home presided over by life governors qualified in the first instance by donation. Every gardener would be eligible for election to the position of life governor whenever a vacancy occured, the qualification fee being only required from the first board of governors for defraying expenses in the initiatory stage of the society.

Suitable premises being found and furnished in every particular with due regard to the intention and requirements of the establishment, arrangements would be made for a continuous session of exhibitions, lectures, concerts, etc., and an annual convention be held perhaps in May to consider the year's work.

For the convenience of visitors, a properly conducted buffet with reception and reading rooms would form part of the scheme, also a library of books of reference upon horticulture.

We all know and appreciate the refining influence of beautiful flowers, hence the home to house such in our great metropolis might do a great deal to counteract the degrading tendencies of music halls, etc. Let us hope that another Joseph Paxton will come forth and erect a Crystal Palace in one of our central London parks as a Home of Horticulture for Great Britain. I trust you will kindly grant me space in your columns.—*James L. Wood, F.R.H.S., Cranbrook, Oakleigh Park, Whetstone.*

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Orchids from Bayham Abbey.—A boxful of bright and cheerful Orchids reached us last week from Mr. A. Methven, gardener to the Marquis of Camden, Bayham Abbey, Lamberhurst, Kent. Out of a batch of recently imported Cattleya labiata, scarcely two of the plants bore flowers exactly alike. One of the flowers sent had rich rose sepals and petals with a crimson-purple lamina and lilac margin. Another was similarly rich except that the dark colour on the lip was reduced to a small blotch. Very pretty was a third with soft pink sepals and petals, while the dark colour on the huge lip was reduced to a wedge-shaped blotch. All the Cattleyas were large and shapely flowers. Dendrobium Phalaenopsis schroderianum does well at Bayham Abbey, and some flowers of it accompanied the rest. Very fine was a variety of Cypripedium Charlesworthii with a large suborbicular, dark rose-purple dorsal sepal. C. leeanum superbum was in equally fine condition, the flowers in all cases being of great substance. The dorsal sepal of C. spicerianum was white with a claret midrib, and a small green blotch at the base. Very fine was Oncidium kramerianum, with broad, orange brown lateral sepals striped yellow like a tiger. The lip had a broad margin of the same rich orange-brown enclosing a large clear yellow blotch. Flowers of Dendrobium formosum giganteum were notable for their size, leathery character and purity.

PLANTS RECENTLY CERTIFICATED.

The undermentioned subjects received Certificates from the Royal Horticultural Society, at the Drill Hall on the 27th ult.

Orchid Committee.

CATTLEYA LE CZAR. *Nov. hyb. nat.*—This strikingly distinct Cattleya is supposed to be a natural hybrid between the autumn-flowering C. labiata and C. granulosa. The potency of the latter is very apparent in the form of the lip, but not in the peculiar granulation of the same. The colours are those of C. labiata. The sepals are of a soft dull rose, while the elliptic petals are of a soft purple, and slightly falcate. The lamina of the lip is obcuneate, bifid, with a broad claw and rich, dark, purple with a narrow, white edge; the side lobes are paler and netted with dark purple lines; and there is a small orange blotch in the throat. First-class Certificate. Messrs. L. Linden, L'Horticulture Internationale, Brussels.

CATTLEYA LABIATA R. I. MEASURES' VAR. *Nov. var.*—This is one of the prettiest and choicest of recent additions to the autumn-flowering C. labiata. The sepals and petals are pure white. The lip is also of the same hue, with the exception of a small area in the centre, and which is beautifully netted with a lively rose, not purple, and therefore new or rare for this species. First-class Certificate. R. I. Measures, Esq. (gardener, Mr. Hy. Chapman), Cambridge Lodge, Camberwell.

CYPRIPEDIUM REGINA. *Nov. hyb.*—The parentage of this distinct and handsome hybrid is quite apparent in the progeny. C. leeanum, itself a hybrid was the seed bearer, and this hybrid has been largely modified by C. fairieanum. The petals are sharply deflexed like those of the latter, or even to a greater extent, pale yellow and heavily striped with brown along the veins especially towards the edges of the upper side. The lip is glossy and heavily overlaid with brown on a yellow ground. The upper sepal is orbicular, and white, with a green base, and numerous

purple veins, the organ taking largely after C. leeanum. Award of Merit. Another acquisition by Messrs. J. Veitch & Sons, Chelsea.

CATTLEYA ELVINA. *Nov. hyb.*—The parents in this case were C. Trianaei and C. schilleriana, the latter supplying the pollen and showing its influence upon the lip. The sepals are oblong, the petals elliptic, and all of a soft purple. The lamina of the lip is large, obversely reniform, finely fringed at the edges and of a rich, dark purple, edged white. There is also an orange blotch in the throat. The pollen parent has introduced an element of great distinctness. Award of Merit. Messrs. J. Veitch & Sons.

RESTREPIA ANTENNIFERA.—The flowers of the plant exhibited by R. I. Measures, Esq., were much above the average in size; and the lateral sepals were heavily spotted with crimson on a yellow ground. The petals and upper sepal resemble the antennae of some insect. Botanical Certificate.

RESTREPIA LANSBERGII.—This is smaller in every respect than R. antennifera, and densely spotted with crimson-red on a yellow ground, in the case of the united lateral sepals. The small, tongue-shaped lip is red. Botanical Certificate. R. I. Measures, Esq.

Floral Committee,

SARRACENIA SANDERAE.—It this we have a beautiful pitcher plant, with tall funnel-shaped pitchers, that are white with venation consisting of a mixture of green, brown and red, arranged in squares like a chess board. The red shows off well by transmitted light; the lid is equally ornamented. Altogether it is a beautifully distinct hybrid between S. Drummondi alba, and S. Cooksoniana, the latter itself being a hybrid. First-class Certificate. Messrs. F. Sander & Co., St. Albans.

CHRYSANTHEMUM MRS. J. M. LEWIS. — The blooms of this Japanese variety are globular, 6½ in. to 7 in. in diameter, and 6 in. in depth. The florets are very broad, blunt, twisted in various directions and pure white. It will be a magnificent exhibition variety. Award of Merit. Messrs. H. Cannell & Sons, Swanley, Kent, and Mr. W. Wells, Earlswood Nurseries. Earlswood, Redhill, Surrey.

CHRYSANTHEMUM PRIDE OF EXMOUTH.—The florets in this case are gracefully decurved making a Japanese bloom of an entirely different character from the last, about 6 in. wide and 5 in. deep. The florets are pure white, variously interlaced or mixed and beautiful. Award of Merit. Messrs. H. Cannell & Sons, and Mr. W. J. Godfrey, Rolle Street, Exmouth, Devon.

CHRYSANTHEMUM MRS. OPORTO TAIT.—This is a closely incurved Japanese bloom, about 6 in. in diameter, with a few florets projecting in different directions as if protesting against the confinement and restraint put upon them. The florets are broad, and golden-yellow with a clear yellow reverse. Altogether it is a strikingly distinct and beautiful variety. Award of Merit. Messrs. H. Cannell & Sons.

CHRYSANTHEMUM MR. JAMES MURRAY.—This new incurved variety is somewhat after the style of Empress Eugenie, with a bloom about 4½ in. in diameter. The florets are of a soft rosy-pink, with a silvery shade. Award of Merit. Mr. Robert Owen, Floral Nurseries, Castle Hill, Maidenhead.

CHRYSANTHEMUM CALVAT'S AUSTRALIAN GOLD.—Here we have an incurved Japanese variety of an enormous size, varying from 7½ in. to 8 in. in diameter under favourable conditions. From the crown buds, the flowers vary a little in character, with whorled and interlacing florets of a clear light yellow with a paler reverse. The terminal buds give golden yellow flowers. Award of Merit. Mr. W. Wells, and Mr. W. J. Godfrey.

CHRYSANTHEMUM ELSIE TEICHMANN.—A plant of this bearing four or more, partly expanded blooms, was exhibited by C. E. Shea, Esq. (gardener, Mr. Henry Broom), Foots Cray, Kent. It is a Japanese variety about 6 in. in diameter, but may be larger when fully developed. The decurved florets are very broad, white, tinted with water green in the centre, incurved at the tips, of great substance and making a bloom of great depth. Award of Merit.

The following Chrysanthemums received First-class Certificates at the meeting of the Floral Committee of the N. C. S., held at the Royal Aquarium, on October 28th.

MRS. J. M. LEWIS.—For description, see plants certificated by the R. H. S. Messrs. H. Cannell & Sons, Swanley.

AUSTRALIE,—A huge Japanese variety, with long and substantial florets. The colour is rosy-amaranth, with a silver-rose reverse. Mr. W. Wells, Earlswood Nurseries, Redhill.

NATHAN SMITH'S WHITE.—A large white Jap, with florets stiff, semi-tubular, fluted at the tips and much divided. This is a very distinct form. Mr. Norman Davis, Framfield Nurseries.

MODESTO.—An incurved Jap of great depth and size, exhibiting a rich golden yellow. The florets are broad, massive, and fluted. Mr. Norman Davis.

WESTERN KING.—A white incurved Jap, with long, claw-like and pointed florets. The colour is very pale cream-yellow. Mr. Norman Davis.

JOHN NEVILLE.—A rich crimson-chesnut Jap., with sulphur-yellow reverse. The blooms are of great depth, and the florets long and drooping. W. Seward, Esq., the Firs, Hanwell.

GEORGE SEWARD.—A very large Japanese flower, in colour a bright gold, with slight crimson striation. The tips of the florets are spoon-shaped, and curve upwards. The reverse is buff. W. Seward, Esq.

ROYAL SOVEREIGN.—A golden-yellow Jap, of great size and depth, and a decided improvement on W. H. Lincoln. Mr. E. Beckett, Aldenham House Gardens, Elstree.

The undermentioned Chrysanthemums received First-class Certificates at the Floral Meeting of the National Chrysanthemum Society at the Royal Aquarium on November 9th.

GOLDEN ELSIE.—A new market Jap. of fine golden-yellow hue, very free and distinct, a sport from Elsie, Mr. Budgon, Southampton.

MRS. HUGH GARDINER.—A Japanese Anemone with rosy pink ray florets and rosy buff disc florets. Foliage strong and leathery. Mr. S. Ely, gardener to H. H. Gardiner, Esq., Nettlebed, Henley-on Thames.

MUSTAPHA.– A large incurved white Jap, measuring about 8 inches over, but of no great depth. Mr. S. Gibson, Morden Park, Mitcham.

DUCHESS OF FIFE.—A white Japanese incurved of great size and depth, with long pointed florets of medium width. Mr. E. Molyneux, Swanmore Park, Bishop's Waltham.

SARNIAN GEM.—A very fine new Jap., exhibiting a charming shade of crimson terra-cotta, with an old gold reverse. The tips of the broad florets turn up very prettily. Mr. Edwin Beckett, Aldenham House Gardens, Elstree, Herts.

MRS. C. Orchard.—A large creamy yellow Jap, with massive curling florets of great length. Mr. E. Beckett.

VEGETABLE CALENDAR.

MANURING AND TRENCHING.—It will now be necessary to decide upon next year's cropping of the principal vegetable quarters. To assist in this, a rough plan of the garden should be made, and the crops taken off the ground during the previous and preceding seasons noted down; and if to this be added the amount and nature of the manure applied, it will prove a useful reference. With the ground gradually becoming cleared of the root crops and early autumn Cauliflowers, space will be afforded for getting out accumulations of manure, and other refuse stored for this purpose. Every favourable opportunity should now be taken for digging and trenching, and as the latter operation is so advantageous to most crops; as much as possible of the ground should be trated in this way. On very heavy land a dressing of 4 in. to 6 in. deep, of fine coal ashes will do as much or more good than a heavy dressing of manure. This should be worked in evenly as the trenching proceeds, and the surface should be thrown up in rough ridges to get the full benefit of frost, and the desiccating influence of the weather. Land intended for root crops should be heavily dressed with burnt refuse, and if manure be added it should be light and well rotted, placing it as much as possible in the lower parts of the trenches. Light lands will be benefited with a good dressing of clay. This should be spread evenly and roughly over the surface, and allowed to stand until broken down by frost, when it will be in condition to blend more readily with the staple soil.

GLOBE ARTICHOKES.—These should now be protected from severe frost. First remove the outer leaves, and cut off the centre ones to within 1 ft. of the ground. Fork up the ground lightly around the stools without injuring the roots. Then mulch with long litter, fern, or dry leaves, packing the material firmly around the collars, but not into the centre of the plants.

CELERY.—The latest crops must be kept well earthed up, so as not to expose the growth to sharp frost, as decay sets in very quickly in the frosted stems, after they are earthed up. Some light dry litter should be kept handy for placing over the rows that are fully earthed up to prevent frost getting into the centre of the plants. Later on in the season heavier coverings may be necessary to prevent severe frost from getting through the upper parts of the earthing up.

LETTUCES.—These should still be planted in favourable positions, especially the Cabbage kinds. Where handlights or cloches are available, these may be arranged on light land in a sunny position and four or five plants pricked out under each, putting on the glasses as soon as the planting is completed. After this some dry leaves should be firmly packed between the glasses to prevent frost from penetrating the ground around the roots of the Lettuces. No air will be needed, and the slight sunshine striking on the glasses will create a genial warmth that will be communicated to the ground inside the glasses, and which will be sufficient to ward off sharp frost; but during severe weather coverings should be placed over the tops of the glasses to make secure. Under these conditions the plants will make great progress, and Lettuces of the tenderest kind may be had in mid-winter without much trouble or expense. Any full-grown plants placed in frames for protection must be looked over occasionally, and any inclined to decay should be removed, and a good current of air should be allowed through the frames on all favourable occasions.

CABBAGES.—Young plantations of these should be frequently hoed to loosen the surface and keep down weeds. The earliest beds may with advantage have the ground between the rows loosened with the fork and broken up finely; and when the surface is sufficiently dry, this may be drawn up around the stems to the base of the plants. This will give a slight protection to the stems during severe weather. —*J. R.*

THE ORCHID HOUSES.

A FEW HINTS.—Have you used Anthracite coal? No! Well then do so, it is at once the best and cheapest horticultural fuel in the market; We have used this class of heating material now for some three or four years and during hard weather can find nothing to beat it for keeping up the temperature to the required height. The best kind we find is what is called Anthracite cobbles—it is a little dearer to start with, but as a set-off there is absolutely no waste, as the knobs are just the right size for use, and, of course, require no breaking, another advantage.

Generally, the fuel bill is a very large item in the cultivation of all plants indoors, so that anything that can be done by the gardener to keep it as low as possible should be his aim. There is one thing about it, and that is, it must have a good draught, without which it is almost a failure.

LEAVES.—We have now commenced to collect all the leaves possible, for placing in the beds underneath the stages at the proper time.

There is one drawback to the use of leaves (what is there that has not its drawbacks?) and that is, you are, unless very careful, bound to take a quantity of slugs into the houses with them. To avoid this we mix a good quantity of salt with them before putting them to the use to which they are intended.

SHADING.—If not already done, the blinds should be taken down, properly dried, and stored away in a dry place. Should we get any bright weather, it is easy to shade a few plants that might be liable to suffer by placing a newspaper over them.

POTTING.—Except in rare instances, this work should now be finished. There are, however, a few plants of the white Laelia anceps that have missed flowering, and would be much benefited if repotted now; for they seem to make more roots during the autumn months than at any other time.

MANURE WATER.—We shall discontinue the use of stimulants for the next few months, except to flowering plants of Cymbidiums, strong-growing Cypripediums, &c.

Anticipating the wish of the Editor to make these notes short this week, I must write no more, for is not the "Autumn Queen" holding court for the time being?—*C.*

HINTS FOR AMATEURS.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Flowering Ranunculuses in August.—This will be a somewhat difficult task, *H. H. B.*, and one that as far as we are aware has never been practised, possibly because there are numbers of other flowers at that time of the year. The only way in which we can see a chance for you to obtain your desire is to carry out the same idea as that put in practice with Lilies of the Valley, viz., of retarding them by placing them in an ice-chamber. Whether they would stand this treatment must be decided by experiment. We see no reason why they should not, for the roots when planted in the open ground must often be frozen. The Turban varieties are rather stronger in habit than the Persian, and would stand the better chance. The roots should be potted up in autumn, in 6-in. pots for preference. Use a mixture of two parts of good loam to one part of leaf soil, and old horse droppings, with plenty of sharp sand. Drain the pots thoroughly, as the plants are very impatient of moisture. Place the pots in the ice-chamber and keep them there until within about six weeks of the date at which they are wanted to flower. We can only state the time approximately, as here again experiments must decide.

Lifting Gladiolus.—The corms must not be allowed to stay out of doors all the winter, otherwise they will be spoiled, *Eugene*. Lift them at once with the foliage attached, and hang them up in a shed or outhouse to dry. When they are dry, cut off the old stems and leaves with a sharp knife or pair of scissors, and pack the corms for the winter in dry sand or soil.

Chrysanthemum L. Canning.—This is one of the finest late blooming white Chrysanthemums we have, *Condor*, and would answer your purpose admirably. The plants run to about 3 ft. in height, and tend to take on a bushy habit. They are best grown naturally, and allowed to carry as many buds as they like.

The Cape Hyacinth.—*F. T. G.* asks for a little information about Galtonia candicans, the Cape Hyacinth, whether it is hardy, or requires lifting each year as Gladioli? and also what soil suits it and how it can be propagated?

The plant is perfectly hardy, and may thus be allowed to remain where it is planted all the year round without any fear. It will grow in almost any ordinary garden soil, although it prefers one of a light but rich character. Associated with Rhododendrons, or other dwarf shrubs requiring a peaty soil, it is thus in its element, and does exceptionally well. It is propagated by offsets, which are given off pretty freely. Plants may also be raised from seed, but this is rather a slow process, as the seedlings take about four years to grow into flowering strength.

A good Nectarine.—The old variety Pineapple is one of the best flavoured Nectarines grown, *G. Crimpton*, and as it is a good doer you would do very well with it. It will ripen with you early in September in an ordinary season. Lord Napier would possibly be an even better investment. The fruit is large, well-coloured, and the flesh white, and of excellent flavour. Its greatest recommendation, however, is its earliness, for in favourable situations it will ripen on an outside wall early in August. If you want a variety for outdoor planting, this is the one for you. Pineapple will do better under glass.

Chrysanthemum Cuttings.—As many people experience a difficulty in getting cuttings of special varieties the following idea may be of service to them. It is one that I practice with marked success. After the flowers have been taken off, the plants are cut down, and any of them that are shy in throwing up cuttings are knocked out of their pots, and planted in a bed of soil made up in a heated pit. The roots soon begin to run, and cuttings are thrown up for some distance round the plants with great freedom, and I thus have no difficulty in getting sufficient cuttings at one time for myself, as well as a few to give away to my neighbours. *F. W. Johnson.*

Freesias.—You may give your plants a little weak manure water twice a week now, *Reader*, as from what you say the pots must be well-filled with roots.

Poor Roman Hyacinths.—*X.* is grumbling because the flowers of his Roman Hyacinths are poor and flimsy, whilst they obstinately refuse to come up out of the leaves. He is inclined to blame the bulbs, and suggest one or two things he would like to do to the man from whom he got them. In order to get Roman Hyacinths thus early, the plants have to be forced hard, and this is sure to have some such result as that experienced by *X.* Moral! if you want to have good Hyacinths do not force them too hard.

Temperatures.—An ordinary greenhouse temperature through the winter would mean about 40° Fahr., as a minimum by night, and 45° during the day. A warm greenhouse would be 5° higher than this, *T. Wesley*. If you can keep your house somewhere about the latter temperature, you will find that damp will not trouble you very much, and that Chinese Primulas will give much more satisfactory results than they would in a lower temperature.

Choisya ternata.—You are too far north for this to stand the winter out-of-doors, and unprotected, *Durham*. In the south of England and other parts of the country the plant is hardy enough with the simple protection of a wall. In the north of England it is generally grown in pots for cool conservatory decoration.

Fern Walls.—There are several ways of making a fern wall, *J. Eastman*. One is to nail a quantity of virgin cork on to the wall in such a way as to form pockets sufficiently deep to hold the soil which the plants need. Sheets of cork can be obtained at a fairly cheap rate, and this will be the best plan for you to adopt. Another way is to cover the wall with 1 in. mesh wire, and to fill in the space between the wall and the wire with rough peaty soil in which the ferns may be planted. A third plan is to hang upon the wall a number of fern tiles, *i.e.* fancy pot-ware made like flattened pockets, and filled with growing Ferns. This last-mentioned idea is rather more expensive than the first two, but when carried out is very effective.

Agave americana is not hardy, *G. Emerson*, although it will stand two or three degrees of frost with impunity, for its skin is very tough and leathery. Your plant must be taken indoors at once though, for the wet will do it more harm than a slight frost. It ought to have been removed indoors at the beginning of October.

CRYPTOSPERMA FEROX.

THE general appearance of this Aroid would not lead one to suspect that it belongs to the same family as Lords and Ladies (Arum maculatum) of our hedges, and woodlands; yet such is the case. The forests of South America continue to furnish us with many strange and striking novelties, several of which turn up at the Temple Show almost every year as did that under notice, and which was introduced and exhibited by Messrs. Linden, L'Horticulture Internationale, Parc Leopold, Brussels. We are indebted to them for the present opportunity of illustrating this striking novelty. The leaves are acutely hastate, the three lobes or portions being very similar in appearance and form. Both surfaces are nearly of the same uniform dark green colour, or, if anything, the undersurface is slightly paler. The petioles are singularly spiny and dark green, marbled with deep red in a very charming manner. The flower stalk is also spiny, but not marbled with red. The spathe is grayish-white or greenish above, and of a brilliant brownish-violet beneath—a very singular combination of colours, indeed. The spadix is short, green, shaded with white and clouded with lilac. The foliage, however, is the ornamental part of this subject, which may be described as a stove fine foliage plant of unique aspect.

EARLY RECOLLECTIONS OF CHRYSANTHEMUMS.

I THINK it was November, 1841 or 1842, my father hoisted me up on his shoulder to carry me into the then new Corn Exchange, Norwich, to see a Chrysanthemum show; and I remember as well as possible seeing plants with one flower in 5-in. or 6-in. pots exhibited thus °°°; also monster Drumhead Cabbages. I had then never seen the like before, and both left a lasting impression on my mind. No one thought of striking cuttings until April, and then they grew and flowered them in 5-in. or 6-in. pots carrying just one flower. These were stood pyramid shape as above. There was no green baize nor paper to cover the stage, all bare boards in those days. The following were some of the varieties:—

Tasselled Yellow.	Cluster Pink.
Yellow Cluster.	Silver White.
Yellow Flame.	Early Blush.
Large Lilac.	Golden Yellow.

Changeable Pale Buff.

About four or five years after this I made my way up to London with eager desire to see the streets paved with gold I had heard so much talked about in the country. One Sunday morning to my surprise wooden pavements were pointed out to me as showing the riches of London in the street. I could find no Chrysanthemums, hardly anyone had heard of them. After staying eighteen months I returned home.

The exhibition of 1851 became everybody's talk, and in anticipation I again ventured to London in the autumn of 1850, at Stoke Newington. Here I was sent by my employer to see the Chrysanthemums, grown by Mr. James at the Rochester Castle Hotel, Stoke Newington, in his skittle alley. Flowers were so scarce in those days that any we could get were admired intensely. I also went to the show held in the old, red-brick, low-pitched, dark Manor Rooms, with leaden casement and small diamond-shaped glass windows, in Church Street, and saw monster specimen plants of the loose half-incurved class, which occupied the room round by the walls. There were few people and I do not remember seeing a solitary cut bloom. A few Chinese Primulas were stood about here and there. Nothing here surprised me like the Drumhead Cabbages I saw at Norwich. Taylor wrote his celebrated book on the growth of the Chrysanthemum for the production of specimen blooms about 1853. This was sold in almost every seed-shop and it quite altered the old mode of cultivation. Only two books on Chrysanthemum culture had previously been written, one about 1840 and the other in 1843.

I continued to visit the Stoke Newington Show, following them in three different distinct buildings. Well I remember in a schoolroom on the east side of the Stamford Hill Road, opposite the present Abney Park Cemetery, a quantity of the lovely Mrs. Geo. Rundle. When first exhibited, no white "incurve" had before been seen to equal that, and its loveliness ran through all ranks of Chrysanthemum growers. Mr. W. Heal, the exhibitor, and the raiser, G. Rundle, Esq., of Devonport, were the theme of conversation through the year; and the following November at nearly all shows, fine specimen plants were seen and admired by the British public over a wide area of the country; for it was these bush plants which formed the shows in those days, and their cultivation was carried to a great extent. Six plants *as per engraving* (p. 170) was the great class in those days, and I must say, required more art and real skill than the cut flowers do at the present day.

About the year 1854, the society called a meeting at the Rochester Castle, with the object of passing a law that unless there were 2 in. of stem clear above the soil and between the branches, they would be disqualified. This was to prevent two or more plants in a pot, and to show which were really the best cultivated.

The South of London began to get jealous of North London becoming so famous that shows were held at Horne's Kensington Assembly Rooms. Four or five of the Stoke Newington and Stamford celebrities came and cleared the board of the best prizes. I was an exhibitor and got 15/- for a large specimen plant. I think after this the great cattle show building at Islington was decided on, and the old society organised a large show there. By this time several good growers had sprung up South

of the Thames in James Weston, whose pompons, perhaps, for symmetrical form have never been excelled; Glover, of Tulse Hill; and Beecher, of Plumstead, the crack grower of the south. I think two of the above named, if not the third, took first prizes. This show financially nearly broke the back of the great North of London Society. Plants were dwarf and the building unduly large. I do not think I ever saw plants look so dumpy, out of place and unfavourable, before or since. There were no green baize, no Palms or edgings, and to fill the building they were so much extended that they looked as if they had been purposely scattered. At this show I do not think there was a single board of cut flowers, but there may have been; if there was, there certainly were none of Mr. Lees' flowers there, as I can vouch for.

Meanwhile, the love of the Chrysanthemum was taking a firmer hold on the public; shows sprang up in all directions; Salter, of Versailles Nursery, Hammersmith, was introducing new kinds of great merit; Adam Forsyth, of Shacklewell, doing the same, and showing fine specimens at all the principal shows. Mr. G. Eyles was then at the Crystal Palace, and a show was arranged there the next season to mend the disaster at Islington, and a very fine show there was, the result being the largest and best ever held up to that time. James George, now of Putney, had the old Christine nearly 10 ft. over. Mr. Chas. Turner was then exhibiting and showed Julie Lagravere, remarkably fine, causing quite a sensation. I came in for a prize for a large plant of Drin Drin; this was about 1859. The late Samuel Broom, Temple Gardens, and I persuaded twenty-nine to assist in getting up a society for Brixton Hill. I was much against its being held at the King of Sardinia, a public house. I had to establish one at a schoolroom and soon got all the support and promises from the gentry; and they gradually abandoned the pewter pot and came over to the school. I thus in the face of great opposition, wholly and alone, absolutely established the Brixton Hill Society, which from that year to the present has had the longest and best run of prosperity, certainly of any local society in the South of England, and is today a model association of whose happiness and welfare I am always proud to hear.

The great event following this was Mr. Fortune sending over Japanese varieties. The following are the descriptions with which they were first introduced:—

1. Aurantium.—Clear golden yellow, of immense size and very double: this superb plant belongs to the ribbon flowered group, and is particularly distinguished by the breadth and massiveness of its wax like petals.

2. Comet.—Bright orange-yellow, changing to chestnut-red; petals very long and curiously twisted and curled, which gives to this flower the appearance of a large bunch of gold thread; good habit, free-flowering, and very double.

3. Leopard.—Bright Indian red, with large yellow spots covering the surface of the petals,—a most novel and singular combination of colour, resembling the curious markings of some of the Orchid family.

4. Red Dragon.—Red-chestnut tipped with yellow and sometimes spotted gold; the flowers, which are very double and of immense size, are composed of long subulate petals of the most novel and elegant form, and very free flowering.

5. Robt. Fortune.—Bright-orange or amber, large and very full; a splendid flower, flowering very late. One of the best.

6. Tarantula.—A most singular flower, with a close button like disc, and a single spreading ray of long, slender, tubular, golden florets, 7½in. in diameter.

7. The Daimio.—Pale pink changing to rose-lilac flowers, very large, double and of great substance; a showy and attractive variety of the ribbon-form section.

8. Wizard.—One of the most beautiful, flowering in the form of loose tassels of a bright red-maroon colour; dwarf habit, free blooming and early.—*From H. Cannell's Floral Guide for 1869.*

The result was a lot of prophesying as to their future success. At that time, and for a long time previously, and even after, we were contemptuously called "Glennyites." George Glenny who wrote "The Properties of Flowers," and the weekly article in *Lloyd's* demanded that all flowers must be round, smooth and mechanically made, and the colours defined. The public firmly believed in his dictum and were infected by his love; consequently flowers, with long petals in the form of long strips of paper or long silk, could not have been more contrary to the general public taste in those days. Dr. Sharp, of Waltham Cross, whom I used to visit, was one of the best amateur growers and a great raiser particularly of the reflexed section, Hutt being at this time the great Pompon grower of the North.

In the year 1862, I visited Salter's Nursery, Hammersmith. Messrs. J. & C. Lees' Nursery was on the very spot where Olympia now stands, and here long greenhouses stood a short distance from the road with a quick hedge running pretty well half a mile towards the west. How different then to now! Salter's Versailles Nursery was directly opposite where the railway station is now, on the other side of the main road to where Lees' formerly was. I was surprised at the few plants, (perhaps fifty seedlings) in a long French-looking conservatory; but what they had were good, and the elder Mr. Salter spoke very freely and pleasantly about his having been the first to introduce the pompons.

I called in at the New Horticultural Gardens to see one of the first shows in the new conservatory at South Kensington. The late Mr. James, then at Isleworth, took first for six plants. Messrs. Veitch or Standish had a dozen stands of cut flowers, flat on the board; no raised cups in those days. These were the first wonderful Japanese kinds of which I have given descriptions. In the centre of the stand was a very fine incurved bloom of John Salter. The contrast was wonderful; not one, so far as I can remember, saw the least beauty in the long twisted silk kinds. My friend with me observed: "Good job the introducer's name was Fortune, for he will never make one out of them"; neither did he, for there was no sale for these kinds for years after. I believe it was only myself who could see a future before them, or the slightest hope of their being made acceptable to the public. The secret of disbudding brought size and they became popular. I continued advocating and growing them and issued the following:—(Extracted from my *Floral Guide for* 1869), which are, I think, it may be truthfully said the first published instructions how to grow the

Japanese Varieties.

"These are certainly very novel in appearance and are distinct from the ordinary kinds of Chrysanthemums, and most of the varieties do not fully develop their flowers until about Christmas, and are there-

Cryptosperma ferox.

fore valuable on that account. They are no good for small specimen plants, as their habit is rather long and they require to be located similar to the cut bloom varieties, that is to say, to let the plant grow upright with about two shoots and all the buds rubbed off, except about two or three, that is to say, the earliest and the latest. They require good cultivation. These mixed with Azaleas and other greenhouse shrubs in mid-winter have a grand appearance and will excite the curiosity and admiration of every one, for their colours are very striking, resembling somewhat the plumage of tropical birds; others have the appearance of tassels made of various kinds of beautiful coloured silk and others of narrow strips of paper. If damp is kept from them they will continue blooming a long time."

I think it was the Stratford Society, which held fine shows in those days, whose members first adopted my suggestions and began to thin out their buds and grow them, as I directed, to 8 ft. or 10 ft. high, with one or two flowers. This, I believe, was carried into effect at their show the following year, and so they got to be more acceptable. Shirley Hibberd and Samuel Broom, of the Temple Gardens, wrote books, and gave lectures in all directions. In 1865 Woolwich organised and held several splendid exhibitions in the Town Hall, and Napoleon and the Empress Eugénie drove over from Chislehurst to see it in 1872. The judges and committee had just sat down to dinner when news arrived; all started up and were just in time to see the carriage drive away; our regret may be imagined as we had left the table laden with good things nearly a mile away.

Montgredian, Esq., of Forest Hill, fortunately had a sport from Mrs. Geo. Rundle of a lovely cream colour. I purchased and sent it out in 1872, calling it Geo. Glenny. Soon after this the latter also sported and gave us a lovely bright yellow, afterwards called Mrs. Dixon or Golden Geo. Glenny. This was very generally grown, and exhibitions consisted very much of what were called the "Rundles." About the same time I showed the first single-flowered Chrysanthemum at a meeting of the Royal Horticultural Society.

Following this—about seventeen years ago—Simon Delaux sent over a set of splendid large distinct kinds. English growers re-named them and caused great confusion. There was a hubbub, but French names were persisted in by the Hackney Society. This event brought about the Floral Committee, and the beginning of all the good work of the National Chrysanthemum Society we now see going on.

After this the Hackney Society, with Mr. Edward Sanderson as president and Mr. R. Ballantine as vice-president, gave new life to the Chrysanthemum in London by holding its meetings at the Four Swans, Bishopsgate Street, in order to be more central. Saunders and his brother were the first great growers and exhibitors of the "incurves" as cut blooms, and were for many years champions.

Mr. Rainbow was secretary; ultimately the late Mr. W. Holmes filled this office, held floral committees, gave certificates, and used to exhibit. It was he who suggested that they should remove the old society's show to Westminster, as they had outgrown all buildings at Hackney. After exhibiting at Hackney two or three years, I followed on at the Aquarium, and for two or three years many very pleasant incidents could be related. Success was surprising. Certainly the most important alteration was when, at my suggestion, the name was altered from "Hackney" to National Society. This, the then president, Mr. Sanderson, the Orchards, late of Amherst Nursery, and many other members, most strenuously and determinedly opposed. However, Mr. W. Holmes could see numerous advantages that would arise from it, and he ultimately carried it. Now we have only to search and we shall find it has the largest number of members and the greatest income of any society of its kind the world has ever seen.—*Henry Cannell, Swanley.*

Specimen Chrysanthemum (See p. 168).

Eighteen best large flowering for specimens for exhibition.

Alma	Mrs. G. Rundle
Bixio	Christine
Abbé Passaglia	Jewess
Gloria Mundi	Cherub
Dr. Sharp	Cardinal Wiseman
Lady Hardinge	Prince Albert
Mrs. Wm. Haliburton	Princess of Wales
Lady Slade	Golden Beverly
Julie Lagravere	Golden Christine

Eighteen best pompons for exhibition.

Andromeda	Miss Dix
Bob	Christabel
Cedo Nulli	Lizzie Holmes
General Canrobert	Rose Trevenna
James Forsyth	Adonis
Golden Cedo Nulli	Lilac Cedo Nulli
White Trevenna	Atala
Salamon	Viola
Miss Julia	Mrs. Hutt

Twelve best for Standards. Pompons.

Trophee	Autumna
Andromeda	Mrs. Astie
Bob	Stella
Fanny	Firefly
Sidonie	Aglaia
Mrs. Wyness	Bijou de l'Horticulture

Ten best pompons for small plants

Andromeda	Jessie
Modele	Minnie Warren
Bijou de l'Horticulture	White Cedo Nulli
Drin Drin	Yellow Cedo Nulli
General Canrobert	Lilac Cedo Nulli

Fourteen best cut blooms. Large varieties.

Golden Beverley	Talbot
White Globe	Venus
Princess Beatrice	Princess of Wales
Hercules	Beverley
Lady Slade	Golden Nugget
Mr. Wyness	Jardin des Plantes
Fingal	Bronze Jardin des Plantes

Twenty-four best cut blooms, large flowering.

Abbé Passaglia	Themis
Nil Desperandum	General Bainbrigge
Sir Stafford Carey	King of Denmark
Prince Alfred	Orange Perfection
Cherub	Dr. Lindley
The Countess Warwick	Lady Palmerston
General Slade	Sir Geo. Bowyer
Mr. Gladstone	Donald Beaton
Aurea multiflora	Beauty of St. John's Wood
Robert James	Prince of Wales
Butterfly	Hereward
Iago	Lord Derby

Twelve best Anemones for cut bloom. Pompons.

Madame Montels	Mr. F. Smee
Miss Nightingale	Mr. Astie
Antonius	Astrea
Firefly	Pearl
Rose Marguerite	Roquelaure
Madame Chalonge	Queen of Anemones

Best twelve Anemones. Large flowered, cut blooms.

Louis Bonamy	Emperor
Fleur de Marie	George Hock
George Sand	Miss Margaret
Lady Margaret	Mrs. Pethers
Gluck	Queen Margaret
Empress	King of Anemones

This list was compiled by Mr. James Weston, Clapham Park.—*From Cannell's Floral Guide for 1869.*

JUBILEE CELEBRATION

OF

THE NATIONAL CHRYSANTHEMUM SOCIETY.

The second show in connection with this important event was opened on Thursday, the 5th inst, and continued next day in the Royal Aquarium, Westminster. Enormous crowds of enthusiastic visitors attended the show each day, and this should have a beneficial influence on the financial results. Clear and fine though cold weather prevailed, so that the exhibition was better favoured in the matter of light than usually happens on the occasion of the annual show at a period when London fog is usually prevalent. Excitement over the results of judging of the big classes for the Challenge Trophy and the Holmes Memorial Cups, was just as keen on Thursday as it had been in the leading classes on the previous Tuesday. The renewal of the show had a great effect in brightening up the tables, so that there was little evidence of fading blooms even on the last of the four day's continuous display.

Competition of Societies.

The National Competition of Chrysanthemum and Horticultural Societies brought out four fine entries. This was confined to one class for forty-eight blooms (twenty-four incurved, and twenty-four Japanese varieties, distinct). The Portsmouth Chrysanthemum Society was the winner of the first prize—the Challenge Trophy for a year and £10. The contributors of blooms in this case were Mr. Agate, The Nurseries, Havant, and Mr. Penford, gardener to Sir Frederick Fitzwygram, Leigh Park, Havant. The twenty-four incurved varieties were the best in the exhibition. Particularly notable were Mrs. R. C. Kingston, C. H. Curtis, Major Bonaffon, Emily Dale, Empress of India, Globe d'Or, Jeanne d'Arc, James Agate, Pincess of Wales, and Queen of England. Scarcely inferior of their kind were Lord Rosebery, Prince Alfred, Brookleigh Gem, Golden Empress, Baron Hirsch, C. B. Whitnall, Lord Wolseley, Violet Tomlin, Lord Alcester, Wm. Tunnington, Madame Darrier, and Robert Petfield. Good Japanese varieties were Madame Carnot, Edith Tabor, Reine d'Angleterre, Ethel Addison, Mons. Panckoucke, Viviand Morel, International, and Etoile de Lyon. The second award went to the Bromley and District Chrysanthemum Society, whose Japanese blooms were better, including grand samples of Viviand Morel, A. H. Wood, Inter-

national, Thérèse Rey, Sunflower, Graphic, Edith Tabor, Australie, G. C. Schwabe, etc. The incurved varieties were much weaker. The Southgate District Chrysanthemum Society took the third award with a very even lot of smaller blooms.

HOLMES MEMORIAL CHALLENGE CUPS.

Mr. W. H. Lees, gardener to F. A. Bevan, Esq., Trent Park, New Barnet, repaired his loss of the first two day's show, by taking the first prize for thirty six incurved blooms, distinct—a Challenge Cup and £10. Some of his finer blooms were Mrs. R. C. Kingston, Major Bonaffon, Queen of England, C. H. Curtis, J. Agate, Mons. R. Bahuant, Globe d'Or, Lord Rosebery, Robert Petfield, Perle Dauphinoise, John Lambert, Bonnie Dundee, D. B. Crane, Miss Haggas, Barbara, Madame Darrier, Baron Hirsch, and Empress of India. Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, was a good second, having grand blooms of Globe d'Or, C. H. Curtis, J. Agate, Empress of India, and Major Bonaffon. Mr. F. G. Foster, Brockhampton Nurseries, Havant, took the third award with some good blooms. Mr. B. Calvert, gardener to Col. Archer Houblon, Hallingbury Place, Bishop's, Stortford, came in fourth.

Mr. W. H. Lees again took the lead in the class for forty-eight Japanese blooms, distinct, taking the Challenge Cup and £10. He evidently had reserved his forces for the second show, having magnificent blooms of Mutual friend, Australie, Mrs. W. H. Lees, M. Chénon de Léché, Charles Davis, Lady Saunders, Hairy Wonder, Madame J. Bernard, Madame Carnot, Modesto, Viscountess Hambleden, Edith Tabor, Le Moucherotte, Phoebus, Miss Elsie Teichmann, A. H. Wood, Mrs. C. H. Payne and Mrs. H. Weeks. Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was accorded the second place. He staged many fresh and beautiful blooms, including Australie, Mons. Chénon de Léché, Mrs. W. H Lees, Madame Carnot, Lord Brooke, Mons. Panckoucke, Mutual Friend, Etoile de Lyon, Mrs. Chas. Blick, Phoebus, and others. Mr. W. Higgs took the third award with grand blooms of Hairy Wonder, Phoebus, Madame Carnot and Charles Davis. Mr. L. Dunmall, gardener to P. Waterer, Esq., Fawkam, was fourth.

SPECIAL JUBILEE CLASSES.

Some prizes were offered by the society for the best display of Chrysanthemums by foreign members, but the latter did not come up very strongly. A Silver Jubilee Medal was accorded to M. Ernest Calvat, Grenoble, France. Some of his most promising blooms were Proviseur Poirier, Mme. Ed. Roger, M. G. Chabanne, and Etoile de Glacier. A green tint pervades the incurved Japanese Mme. Ed. Roger. A Bronze Medal was accorded to Mr. A. Scalarandis, Royal Gardens, Monza, Italy.

Mr. W. Robinson, gardener to the Right Hon. Lord Justice Lopes, Westbury, Wilts, secured the Silver Cup offered by Mr. F. H. Clemow, of Anderton's Hotel, for twelve Japanese blooms. He had magnificent blooms of Primrose League, Mrs. Hume Long, Madame Carnot, Pride of Exmouth, Pride of Madford, Hairy Wonder, Charles Davis, Viviand Morel, etc. He was followed by Mr. W. Slogrove, gardener to Mrs. Crawford, Gatton Park, Reigate, who had a solidly built and fresh-looking dozen. Mr. J. Brookes, gardener to W. J. Newman, Esq, Park House, Totteridge, was a very good third; and Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone Park, Ipswich, had also a handsome lot. There were seventeen entries in this class.

A Silver Cup was offered by Mr. G. P. Linford, Aquarium Tavern, Westminster, for twenty-four Japanese blooms in not less than eighteen varieties, and this together with a money prize was taken by Mr. Jas. Stredwick, Silver Hill, St. Leonards, who had only one weak bloom in his stands. Very fine were Charles Davis, E. Prass, Mme. Chas. Molin, and Viscountess Hambleden, the latter being of a charming pearly pink. Mr. H. Love, Melville Terrace, High Street, Sandown, I.W., had a very even lot, taking the second place. Mr. Geo. Heal, Compton, Guildford, was a good third; and Mr. W. Amies, South Ashford, Kent, was fourth. There were six entries here, and all good.

OPEN CLASSES.—There were eight entries for six blooms of any white variety. The competition resulted in Mr. Jas. Gibson, gardener to E. H. Watts, Esq., Devonhurst, Chiswick, being placed first with magnificent samples of Mme. Carnot; Mr. B. Calvert, gardener to Col. Archer Houblon, Hallingbury Place, Bishop's Stortford, came second with Mdlle. Thérèse Rey; and Mr. T. H. Lodge, gardener to Mrs. Meset, Hockerill, Bishop's Stortford, third, with Mrs. Chas. Blick. Mr. W. Mease showed the best twelve large reflexed blooms in Christine, Mrs Forsyth, Cullingfordii, Cloth of Gold, Fred Hart, Pink Christine, Crimson King and Dr. Sharp. Mr. W. Robinson, gardener to the Rt. Hon. Lord Justice Lopes, came in second; and Mr. R. Notcutt, Broughton Road Nursery, Ipswich, third.

Mr. H. Prickett, gardener to T. Morgan Harvey, Esq, Bohun Lodge, East Barnet, staged a very even lot of large flowered anemones, winning thereby the first award. Walter Raleigh, Queen Elizabeth, Thorpe, Jnr., Owen's Perfection, Lady Margaret, and Dame Blanch, were some of his strongest varieties. Mr. J. Maule, gardener to H. T. Mathews, Esq., The Mount, Hadley, was second; and Mr. A. Skeggs, gardener to A. Mosleyn, Esq., third. In the smaller class for twelve Anemones, Mr. C. Light, gardener to the Rev. A. C. Johnson, Capel St. Mary, Ipswich, succeeded in obtaining the first prize, followed by Mr. W. Skeggs, and Mr. J. Maule.

Mr. T. Carryer, gardener to A. G. Meisener, Esq., Adenholme, Weybridge, led the way for three blooms each of twelve Pompons, distinct, showing Rubra Perfecta, La Vogue, President, Toussaint Marizot, and Prince of Orange in excellent form. Mr. M. E. Mills, gardener to F. Lloyd, Esq., Coomb House, Croydon, was second here.

Twelve singles in bunches of three blooms each, in distinct varieties proved a very popular class. Mr. J. Myers, gardener to the Earl of Sandwich, Hitchingbrook, Huntingdon, headed the list. Purity, Gertie Sedgely, Ewan Cameron, Kate Williams, Jane, and Golden Star were some of the most conspicuous varieties. The second prize was carried off by Mr. G. W. Forbes, gardener to D. Nicols Esq., Regent House, Surbiton; and Mr. W. Wells. Earlswood Nurseries, Redhill, third,

Mr. W. Robinson staged six grand blooms of Viviand Morel, which put him at the top of the list of those exhibiting six Japs. of one variety of any other colour than white. Second came Mr G. W. Forbes; and third Mr. James Watt, gardener to H. Bell, Esq., Fitzjohn's Avenue, Hampstead. Mr. W. Robinson won yet another first for six Japanese incurved blooms, distinct. Mr. R. Jones, gardener to C. A. Smith Ryeland, Esq., Barford Hill, Warwick, led the way for six blooms of an incurved variety with C. H. Curtis. Mr. F. G. Foster, Brockhampton Nurseries, Havant, appropriated the second prize.

AMATEURS' CLASSES.—Six incurved blooms, distinct, were best shown by Mr. R. Knight, 63, Hardinge Road, Ashford, Kent, who had Major Bonaffon, Baron Hirsch, Lord Alcester, Jeanne d'Arc, C. H. Curtis, and Brookleigh Gem; Mr. C. E. Wilkins, Wellington, Swanley Junction, was second; and Mr. W. Amies, South Ashford, Kent, third. Mr. Knight, also had the best six Japanese, distinct, with Viviand Morel, Phoebus, and Madame Carnot, specially strong. Mr. M. Silsbury, Providence, Shanklin, Isle of Wight, was second; and Mr. James Stredwick, Silver Hill, St. Leonards, third. Mr. James Stredwick, led the way in a keenly contested class for six blooms of any one Japanese variety. He had Chas. Davis in good condition. The second award was appropiated by Mr. C. E. Wilkins, and the third by Mr. Martin Silsbury, who both had good material.

SINGLE-HANDED GARDENER'S CLASSES.—Mr. W. N. Apthorpe, 94, Hill Road, Cambridge, had the best six incurved blooms, and was followed by Mr. C. E. Wilkins, and Mr. W. H. Cullom, Merle Bank, Caterham Valley. In the larger class for twelve "incurves," Mr. C. E. Wilkins, was the strongest exhibitor. Alfred Salter, Queen of England, and Lord Alcester, were some of his best samples. Mr. W. N. Apthorpe followed, so that here the positions were reversed.

The last mentioned exhibitor was successful in placing to his credit the premier award for six "Japs.," distinct, Mutual Friend, and Graphic, being in excellent condition. Mr. H. Edwards, gardener to Dr. Bond, 3, Brookside, Cambridge, was second, and Mr. B. Stonestreet, gardener to E. B. Hunt, Esq., Hayes Gate, Southall, third. Mr. H. Edwards likewise had the premier stand of twelve Japs., which contained excellent samples of Viviand Morel, Phoebus, Madame Carnot, Mdlle Thérèse Rey, and Chas. Davis. Mr. W. N. Apthorpe occupied the second position; and Mr. Edwin Smith, Ingleside, Chatham, the third.

TABLE DECORATIONS.

These formed a most popular feature of the second show. In the class for a table of wreaths, sprays, crosses, etc., illustrating the decorative value of the Chrysanthemum, there were four entries. Mr. H. O. Garford, Floral Depot, Stoke Newington, was placed first with a most effective exhibit, certainly the best of its kind that we have ever seen at the Aquarium. From an imposing and tastefully dressed epergne in the centre four brass arms decorated with Myrsiphyllum gracefully arched towards each corner of the table, and held suspended at their apices four floral baskets. The wreaths that surrounded this central figure were very massive and exceedingly well-executed. Messrs. Harwood, Bros., Balham, were placed second with a much heavier exhibit, and Mrs. W. Green, Jun., Harold Wood, Essex, came in third.

Two vases of Pompon or Anemone Chrysanthemums arranged with foliage for effect were best shown by Mr. Mark Webster, gardener to E. J. Preston, Esq., Kelsey Park, Beckenham. Mr. A. Meredent, gardener to Dr. Paul, Camberwell House, Camberwell, was placed second.

In the classes open to gardeners and amateurs only Mr. Mark Webster, scored another first for two hand bouquets of Chrysanthemums. Mr. Arthur Pentney, gardener to A. J. Howard, Esq., Worton Hall, Isleworth, occupied the second position.

Miss E. Pentney, Vale Cottage, Hanger Hill, Ealing, won the chief honours for a hand basket of Chrysanthemums in the ladies classes. Miss Pentney had displayed considerable taste and skill in making up her basket. Miss Sedgeley, Caterham Valley, won the second prize; and Mrs. W. Green, Junr., the third.

The premier award in the class for one vase of six blooms of any variety of Japanese Chrysanthemums fell to the lot of Mr. R. E. Wilson, 32, Margravie Gardens, West Kensington. Amateurs only were permitted to compete here.

POT PLANTS.

As at the first show the specimen Chrysanthemums found a place in St. Stephens Hall, and very imposing they looked. In our report of Tuesday and Wednesday's exhibition, we have already commented upon the marvellous amount of cultural skill of which these plants bore unmistakable evidences. Mr. J. Brooke, gardener to W. Reynolds, Esq., J.P., The Grove, Highgate, was placed at the head of competitors for four trained specimens of any varieties. Col. W. B. Smith, Mdme. Bertier Rendatler, Chinaman, and Maiden's Blush, were Mr. Brooke's choice. Mr. D. Donald, gardener to J. G. Barclay, Esq., Knott Green, Leyton; and Mr. W. Davey, gardener to C. C. Paine, Esq., Cedar House, Stamford Hill, were awarded second and third prizes respectively. Six standard trained specimens were best shown by Mr. D. Donald, who had grand samples of Chinaman, William Tricker, Good Gracious, Col. W. B. Smith, Pink Christine, and Miss Alice Luckman. Mr. W. Davey was accorded the second prize here. The last-named exhibitor was the most successful in the competition for four trained specimens of any varieties, showing Stanstead Surprise, Elsie, Madame Edouard Rey, and Col. W. B. Smith. Mr. D. Donald, and Mr. G. H. Cooper, Croydon, followed in order of mention.

The prizes offered for six trained specimens of pompon varieties brought out some superb material. Mr. D. Donald led the way most decisively with William Kennedy, White Martha, Frances Boyce, William Westlake, Soeur Melaine, and Yellow Martha. Mr. J. Brooke followed him in the second place, and the third award was appropriated by Mr. G. H. Cooper.

Mr. D. Donald finished up a most successful undertaking by winning first place for a single specimen trained in the pyramidal fashion. Soeur Melaine was the variety chosen.

MISCELLANEOUS.

The miscellaneous or non-competitive exhibits were not renewed on the third day as in the case of the specified classes. There were, however, a few additional lots.

A Silver Medal was accorded to Messrs. J. Veitch & Sons, Chelsea, for their fine group of Chrysanthe-

mums set up on Tuesday, the 3rd inst. We had overlooked this in last week's report.

Mr. W. Wells, Earlswood Nurseries, Earlswood, Red Hill, Surrey, occupied a side table in one of the galleries with a collection of Chrysanthemums in their various sections. Amongst others we noted a new incurved Japanese variety named Lord Justice Lopes. The blooms were of huge size (8¼ in. in diameter) with moderately broad silvery-pink florets. It was raised by Mr. Wells. Good incurved blooms were Mrs. Airdrie and Les Ecrins, the latter being old gold in colour and of large size. Esau, a pink and heavily bearded variety was in good form

CHRYSANTHEMUM SHOWS.

THE PEOPLE'S PALACE, WHITECHAPEL.

October 29th.

THE horticultural society in connection with this grand institution opened a three days show on the above date, when the judges, Messrs. R. Ballantine and R. Dean expressed great satisfaction with the quality of the display. The society has about 400 members, annually distributes thousands of cuttings supplied by wealthy friends, and gives instruction in rearing and tending them. Hence many of the adjacent courts and alleys show most gratifying results, and evidence that great pride is taken in the culture of the autumn flower.

PECKHAM.—*October 29th, 30th, 31st.*

THE second annual show was held at the Public Hall, and proved to be much more successful than its predecessor. The competitions were very keen. The groups were remarkably fine and the cut blooms were certainly equal to the best shown by some of the older societies. The best prizes were taken by Messrs. Eldridge, Clarkson, Alexander, Briant, W. Barnes, Dowie, Edwards, Goater, Haddon, Harrison, Martin, Nichols, and Sheldon, Mrs. Barnes and Miss Eaton. The excellent arrangements reflect great credit upon the hon. secretary, Mr. Barnes.

BATTERSEA.—*October 30th and 31st*

HERE again one was almost surprised to find such grand blooms and charming groups, grown as they had been in low lying, narrow streets. The prize-winners will doubtless see worse flowers take awards at bigger shows. The leading prize-takers were:—Mr. J. Portbury, Ripon House, Putney; Mr. W. J. Wright, gardener to H. A. Tufnell, Esq, The Grove, Prince's Road, Wimbledon Park; Mr. C. Bentley, gardener to Major Bosworth, Cedar Court, Roehampton; Mr. Hermann Kloss, 98, St. John's Hill, S.W.; Mr. W. Riddle, 75, Montholme Road, S.W.; Mr. W. G. Bond, 17, Francis Street, S.W.; Mr. J. Green, 127, Latchmere Road, S.W.; Mr. C. Awbery, 13, Avenue Road, S.W.; Mr. Bolton, 11, Eversleigh Road, S.W.; Mr. White, 121, Latchmere Road, S.W.; Mr. C. Hemstead, 26, Wilson Street, S.W.; Mr. J. O. Langrish, 167, Elsley Road, S.W.; and Mr. A. Hart, 25, Worfield Street, S.W.

The traders who at considerable trouble and expense helped to adorn the Battersea Town Hall on this occasion were given Diplomas of Merit, and this honour was accorded to Mr. Robert Neal, Trinity Road Nurseries, Wandsworth Common; Mr. Norman Davis, Framfield, Sussex, Messrs. Greenfield, Grainger & Co., Riversmead Nurseries, Dunt's Hill, Earlsfield; Mr. A. Clark, Garratt Lane, Earlsfield; Mr. Maile, Falcon Road, Battersea; Mr. C. R. Fischer, 30, High Street, Clapham; Mr. Wm. Colchester, Ipswich; One and All Co., Strand; Messrs. Darby & Sons, and Mr. C. Soar. A fine collection of Cacti was staged by Mr. C. Awbery, 13, Avenue Road, S.W.; and a very pretty table ornament by Mr. Duke of 8, Orbell Street, S.W., was not overlooked by the judges or visitors. Mr. Langrish the Hon. Sec., Mr. Coppin (Battersea Park) and a good committee may again congratulate themselves upon the successful show.

BARNSTAPLE.—*November 3rd and 4th.*

THE Barnstaple Chrysanthemum and poultry show, the largest held in the provinces was opened on the 3rd inst., in the Market Hall, Barnstaple. In the poultry classes there were 820 entries, pigeons numbering 1,810; cage birds 286. The Crystal Palace show was this year held earlier than usual, so that it should not clash with the Barnstaple show. Nearly all the leading fanciers were represented, and the show was a grand success. The following were the leading awards:—

The Chrysanthemum section for a group of Chrysanthemums, Mrs. J. R. Chanter was first. For Chrysanthemums in pots, Mrs. J. Chanter. For thirty-six cut blooms, Japs., V. Stuckey, Esq., was first, as well as for eighteen cut Japs. For six cut Japs., Sir W. R. Williams took the lead. For thirty-six incurved varieties, V. Stuckey, Esq. was to the fore. In the class for Primulas, Sir W. R. Williams took the lead. For Pelargoniums, J. H. Lockley, Esq. took the first prize. Rev. D. Churchward had the best Ferns.

Sir John Ferguson Davie secured the leading prize for Lady Downes Grapes, also for the best twelve dishes of Apples, and the best Pears. Trade exhibits included an exhibit from Messrs. Ireland & Co., nurserymen, Barnstaple. The Ichthemic Guano Company had a stand of their renowned fertiliser.

COVENTRY.—*Nov. 4th and 5th.*

A MOST successful show has been held here on the 4th and 5th. The quality and quantity of blooms was far in advance of former years; the competition was very keen. G. Singer, Esq., of Counden Court, Coventry, Mr. T. Blake gardener), was awarded a special prize for produce grown with "Pure Ichthemic Guano."

BROMLEY and DISTRICT.—*Nov. 4th and 5th.*

THE Grand Hall at Bromley was again the venue of this, one of the prettiest and best organised local shows it has ever been our lot to visit. Conspicuous success has attended the labours of the honorary secretaries this season, for the numerous entries contained a great deal of splendid material. It is rather unfortunate, perhaps, that the show clashed with the Jubilee Celebrations of the N. C. S., but we presume this could not well be avoided. The Grand Hall is a most suitable building, and not only did the blooms upon the show boards appear to great advantage, but the stage had not been forgotten, for it had been tastefully decorated for the occasion by Messrs. John Laing & Sons, Forest Hill, S.E.

A conspicuous feature was the groups of Chrysanthemums occupying a space of about 50 sq., ft. After a keen contest the first award was borne off by Mr. J. Lyne, gardener to H. F. Tiarks, Esq., Foxbury, Chislehurst; the second by Mr. Chas. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent; and the third by Mr. Edward Dove, gardener to H. E. Fry, Esq., Bickley, Hall. Mr. J. Lyne was also the most successful exhibitor of a group of foliage and flowering plants covering an area of 30 sq., ft. This was a very pretty exhibit. Mr. J. Amey, Hog's Hill, Chislehurst took the second; and Mr. William Pascoe, gardener to Captain Torrens, Baston Manor, Hayes, the third place.

In the premier open class for cut Chrysanthemum blooms, the twenty-four Japanese, distinct, and the twenty-four "incurves," in eighteen varieties were best shown by Mr. C. Payne, gardener to C. J. Whittington, Esq., Elmhurst, Bickley Park, who had a remarkably fine lot. Graphic, A. H. Wood, Mrs. W. H. Lees, Madame Carnot, Edith Tabor, Mdlle Thérèse Rey, Dorothy Seward, James Bidincope, and Mons. Chénon de Léché among the Japs; and C. H. Curtis, Lord Alcester, Empress of India, Lord Wolseley, and William Tunnington, among the "incurves" were some of his best blooms. Mr. Walter Harvey, gardener to R. B. Smith, Esq., Chislehurst, was second; and Mr. R. Leadbetter, gardener to A. G. Hubbuck, Esq., Chislehurst, third.

In a smaller class for twelve Japs., and twelve "incurves," Mr. C. Payne, scored another first, and was followed in this case by Mr. E. Mills, gardener to Frank Lloyd, Esq., Coombe House, Croydon; and Mr. S.B. Wheadon, gardener to J. Leyton, Esq., The Red House, Bickley. Twenty-four Japanese blooms, distinct were best shown by Mr. Chas. Blick, who had Phoebus, Mutual Friend, Herbert Cutbush, Good Gracious, and Chas. Davis very strong. The second award fell to the lot of Mr. J. Blackburn, gardener to J. Scott, Esq., Elmstead Grange; and the third to Mr. George Prebble, gardener to M. Hodson, Esq., Shirley Cottage, Shirley.

The following exhibitors secured first prizes in their respective classes:—Mr. R. Leadbetter, for eighteen blooms comprising six Japanese, six incurved, and six reflexed; Mr. George Prebble, for twelve "incurves"; Mr. Walter Harvey, gardener to R. B. Martin, Esq., Chislehurst, for six "incurves"; Mr. Chas. Blick, for twelve Japanese; Mr. C. Jordan, gardener to H. Hockier, Esq, Coney Hill, Hayes, for six Japanese; Mr. R. Leadbetter, for six Anemones; Mr. E. Mills, for twelve Pompons, three blooms of each; Mr. Walter Harvey, for six blooms of any incurved variety, with Empress of India; Mr. Chas. Blick, for six blooms of any Japanese variety, with Phoebus; and Mr. R. Leadbetter, for six reflexed blooms.

In the division for those who had not taken a prize for Chrysanthemums prior to 1896, Mr. W. Harvey secured a first for six Japanese blooms, distinct, and also for six "incurved."

Mr. E. Legg, The Cedars, Bickley, upheld the honour of single-handed gardeners by beating everyone for twelve Japanese, and likewise for six "incurves"; whilst Mr. Chas. Craker, gardener to J. Ross Anton, Esq., Bickley, took a similar position for six Japanese. Mr. Wm. Weeks, Bromley, came out at the top of the list in the amateurs' division for twelve, and also for six Japanese with some capital samples.

Mr. J. Blackburn, secured the special prize offered by A. J. Hubbuck, Esq., for twelve Japanese, to consist of three each of Avalanche, Sunflower, and Edwin Molyneux.

Vegetables were honoured with a room to themselves. The first prize for a collection for cottagers was won by Mr. Joseph Lawson, Chislehurst. Mr. Turle, Beckenham, and Mr. Chas Blick, also contributed first-prize collections.

Mr. J. Lyne, contributed the best three bunches of black Grapes, and likewise three of white. This exhibitor was still further credited with the first prize for a nice little collection of fruit.

NOTTINGHAM AND NOTTS.—*Nov. 6th and 7th.*

THE seventh annual exhibition of the Nottingham and Notts Chrysanthemum Association was opened on the 6th inst. in the Mechanics' Large Hall by the Mayoress (Mrs. Bright), supported by the Mayor (Ald. Bright) and other notable people, and continued over the next day. The association is affiliated with the National Chrysanthemum Society. The exhibits were classified in three divisions, the first being open to all England, the second to members residing within ten miles of the Market-place, and the third to artisan members. The exhibition surpassed in quality anything that has hitherto been seen there, and the entries were far more numerous. The Mayor, in commenting upon the show, said that, in his opinion, the show grew larger and more beautiful every year. He heard that a large proportion of the blooms came from the Hunger Hill Gardens and the Porchester Estate, and he was at a loss to know how the gardeners there had succeeded so splendidly. The show well deserved increasing support from the public of Nottingham. Alderman Bennet, in returning thanks to the Mayoress for opening the show, stated that he could say without fear of contradiction that the show was one of the finest outside London.

In the open class the premier award for twelve incurved and twelve Japanese blooms, distinct, was carried off by Mr. J. W. Goodacre, gardener to the the Earl of Carrington, Elvaston Castle, Derby. Amongst the finest of his incurved blooms were Mr. C. H. Curtis, Major Bonaffon, and the Princess of Wales family, all of which were of exceptional merit. Amongst the Japanese types Duke of York was considered the best ever seen, and Mrs. W. H. Lees was good. Mr. Silas Cole, gardener to the Right Hon. Earl Spenser, Althorp Park, Northampton, was a good second, being strong in incurved varieties. Mr. W. Ball, gardener to Richard Enfield, Esq., Bramcote, came in third. Mr. C. J. Mee secured the first prize for a collection of cut blooms, taking in addition the National Chrysanthemum Society's Jubilee Medal. The blooms were cut with stems and foliage, and included such varieties as Lord Alcester, Mme. C. H. Payne, Charles Davis, Etoile de Lyon, W. Tricker, and Mary Anderson. Mr. J. Taylor, gardener to R. Halford, Esq., J.P., was second. An innovation was a class for groups of Chrysanthemums for the decoration of balconies, and here Mr. J. Foljambe got the better of his antagonist, Mr. T. Simpson, who was second. Mr. Foljambe showed fine examples of Mrs. Geo. Rundle,

Mme. de Sevin, George Glenny, and Viviand Morel. Mr. E. Yarnell, gardener to J. W. Turner, Esq., had the best four plants of any variety, showing grand samples of Viviand Morel, Baron Hirsch, Charles Davis, and Souvenir de Petite Amie. Mr. F. Malin, gardener to R. Wilkinson, Esq., was second. The same order was maintained for one bush plant, as well as for a specimen Chrysanthemum bush grown, and for table decoration of Chrysanthemums. The latter class gave the judges a considerable amount of trouble, the exhibits being most tastefully arranged in baskets, epergnes and vases. Mr. C. J. Mee had the best bouquet of Chrysanthemums.

There was keen competition amongst gentlemen's gardeners residing within ten miles of the Market-place for the Silver Cup offered by Mr. Hall for six incurved and six Japanese varieties. The cup was secured by Mr. Fred Cox, with fine blooms of Mme. Carnot and Alfred Salter. He was followed by Mr. J. Bell, Mr. F. Walsh, and Mr. G. Bacon respectively. Mr. R. J. Walters, gardener to J. W. Leavers, Esq., J.P., took the lead in the class for twelve incurved varieties, followed by Mr. G. Bacon, Mr. F. Cox, and Mr. F. Walsh respectively. Mr. G. Price, Wilford, led the way in the class for twelve Japanese; and Mr. R J. Walters, Mr. H. Ecclestone, and Mr. E. Cox followed in the order given. The artisans' exhibits were most creditable. Mr. J. H. Goodacre took the champion prize for an incurved bloom; and Mr. Silas Cole for a Japanese bloom.

Messrs. Dobbie & Co., Rothesay, N.B., sent a collection of plants and flowers not for competition. Mr. Merryweather, Southwell, and Mr. William Colchester, Ipswich, sent collections of fruit. The latter also had a display of Pure Ichthemic Guano and other fertilisers.

STIRLING, *Nov. 5th and 6th.*

The structural character of the Albert Hall, tended greatly to enhance the beauty of this show, the seventh of this kind, having been established in 1889. The number of entries exceeded any previous record, being 347 for the current year, and in 1894 and 1895, 313 and 327 respectively. Mr. Lunt (who hails from the south), secured the Association's Silver Cup for twenty-four superb blooms of the Japanese section, characterised by grand examples of Mutual Friend, Viviand Morel, and W. H. Lincoln. Judging from this gentleman's choice collection at Keir Gardens, Bridge of Allan, the horticultural world is likely to hear more of his exploits at Glasgow and Edinburgh shortly. Mr. Alex. Todd was the most successful exhibitor in pot plants, securing three first prizes. Mr. Pearson, of Viewforth, obtained first honours for an exquisitely arranged table of Chrysanthemum blooms and foliage plants. Incurved varieties were not bravely shown, although some good blooms were to be seen. Vegetables were shown in first-class style, and Mr. Waldie, of Dollarbeg, secured the greatest number of prizes. The whole of the arrangements were most courteously dispensed by the Secretary, Mr. Henry Kinross, of Park Crescent, and judging from the assiduity displayed by the governing body, this enterprising society has a great future before it.—*Sprite.*

[We regret that through lack of space, the report sent to us by our correspondent has been greatly curtailed.—Ed.]

BY TELEGRAM.

BELFAST, *Nov. 10th and 11th.*

Ulster Horticultural Society's show held in the St. George's covered market, Belfast, was the finest ever held here. The entries exceed by over a hundred those of last year. A large and fashionable company attended, and the undertaking proved a splendid success. It was opened by the Countess of Dufferin and Ava.

The first prize of the Belfast City Challenge Cup, and £5 for a group of Chrysanthemums containing not less than thirty pots, was carried off by Mr. W. Robertson, Netherleigh, who was followed by Mr. A. D. Benson, Edgecombe. For a group containing not more than twenty pots, Mr. R. Tennant, Rush Gate, was placed first. The second award fell to the lot of Mr. J. Lepper, Fairacre. A group of stove and greenhouse plants was best shown by Mr. Hugh Dickson, Belfast.

In the classes for cut blooms for Mr. T. H. Torrens, White Abbey, led the way for thirty-six Japanese blooms in twenty-four varieties. Lady Emily Howard, Bury, Tullamore; and Countess Pembroke were second and third respectively. Mr. J. Torrens was credited with the first award for twenty-four blooms distinct. There was no second award, and the Baroness Von Stieglitz was placed third. In the large class for forty-eight blooms, comprising thirty-six varieties, Mr. Hugh Dickson was first; Mr. M. Campbell, Blantyre, second; and Mr. D. H. Matthews, Belfast, third.

The Marquis of Downshire was the most successful exhibitor of a collection of eight dishes of fruit, Pines excluded. Second came Lieut.-General Pakenham, Crumlin; and third Lord O'Neill, Antrim. The Marquis of Downshire also had the best Black Grapes. Mr. W. Robertson was second, and Lady Emily Howard, Bury, third. The competition for two bunches of White Grapes found the exhibitors differently arranged. First came Lady Emily Howard, Bury; second, the Marquis of Downshire; and third Lord O'Neill. Lieut-General Pakenham showed the best twenty-four dishes of Apples, and was followed in order of merit by Mr. H. J. Nicholson, and the Marquis of Downshire. Lieut. General Pakenham was also first for six dishes of Pears. Mr. Jas. Cleland, Crossgar, was second here, and Lord Deramore third.

Mr. W. Robertson, Netherlie, headed the list of competitors for a collection of vegetables of twelve kinds. Lord Deramore, and the Marquis of Downshire were second and third respectively.

Trade exhibits were fairly numerous and very attractive. Messrs. Cutbush & Son, Highgate, London, N., staged a nice collection of miscellaneous plants and fruit, including a grand lot of Malmaison Carnations, and Begonia Gloire de Lorraine. Mr. Hugh Dickson, Royal Nurseries, Belfast, contributed a collection of Irish-grown Apples and Pears, of exceptional size, and splendidly coloured. Messrs. Alexander & Sons, Newtownards, staged a 150 grand dishes of Apples and Pears in fine style. A lot of beautifully-executed wreaths, crosses, and other floral designs from the same firm were highly commended. A fine display of plants grown with pure Ichthemic Guano was made by the Ichthemic Guano Co., Ipswich.

DEVIZES, *Nov. 10th.*

In this show which was opened on Tuesday the first prize for twenty-four "incurves" was won by Mr. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate; Mr. Bishop was second; and Mr. Inglefield, Tedworth House, Marlborough, third. Mr. Salter was also placed first for twenty-four Japs, and was followed by Mr. Robinson and Mr. Inglefield in the order named.

IPSWICH, *Nov. 10th and 11th.*

The Ipswich and East England Chrysanthemum Show opened on Tuesday. Cut blooms, whilst short in quantity, were of immensely good quality, curiously enough. The cup class, in which the chief prize was offered by C. H. Berners, Esq., Wolverstone Park, the leading honours were taken by Wr. W. Messenger, his able gardener, who staged a superb board of thirty-six Japanese, with well finished and wonderfully well coloured blooms. Mr. R. C. Notcutt, Broughton Road Nurseries, Ipswich, took the lead in the class for twenty-four Japs.; Mr. George Gilhert, Floral Nurseries, Ipswich, came second; and was followed by Mr. T. King, gardener to J. A. Burness, Esq., Melton Lodge, Woodbridge.

Twelve incurved blooms were best shown by the Rev. A. C. Johnson, Capel Rectory, Suffolk; whilst in both the classes for six Japanese and six incurved blooms Mr. T. Edgar Mayher, Hillside, Sproughton, took leading honours. In the former class this competitor also obtained the special prize offered by the raiser for the best bloom of Edith Tabor. A similar special in the thirty-six class was won by Mr. W. Messenger with a grand specimen. Vases of cut Chrysanthemums were a pleasing feature, and were well staged in the ladies' classes. A keen competition took place, Mrs. C. E. Fisher, County Police Station, Ipswich, being first for the most tastefully arranged basket of cut flowers; Mrs. W. A. Ellaston, Stoke Hall, second; and Miss E. Elliston, Museum Street, third. For the most tasteful arrangement of cut blooms set up with any kind of foliage, Miss Maud Miller, Bosmere House, Ipswich, was adjudged first, and the degree of excellence between the remaining competitors was so marked as to make it a matter of difficulty to rightly place them. Miss G. Foster-Melliar, Sproughton, was awarded second prize; and Miss Florence Penraven, Fonnerean Road, third; whilst Miss Olive Mayhew, Hillside, Sproughton, also contributed a charming piece of work.

A similarly well contrasted exhibit was sent in the class for autumn foliage and berries.

The groups of pot plants were well put up, and mustered thirteen in number. Fruit and vegetable classes were filled to repletion. Mr. Edwin Molyneux, Mr. W. Earley, and Mr. W. Allen were the judges.

BRIGHTON, *Nov. 10th and 11th.*

The Brighton and Sussex Horticultural Society held their fourteenth annual exhibition of Chrysanthemums at the Dome and Corn Exchange, on Tuesday and Wednesday, November 10th and 11th. The competition at this show is generally very keen, and a grand exhibition results, this year being if anything better than ever.

Groups are usually a great feature of this show and create a great deal of interest—they are staged in three classes open to all comers. Four groups were put up for the larger class, the first prize £5 and a Silver Gilt Medal, presented by Mr. H. J. Jones, Ryecroft Nursery, Lewisham, being awarded to Mr. George Miles, Victoria Nurseries, Lewisham. This was a novel and effective design, the centre being a bank of choice blooms, surmounted by and interspersed with Palms, &c., brought down nearly to the ground, and surrounded by a flat bank of foliage and small Chrysanthemums. In this bank Chrysanthemums about 4 ft. high were placed about 3 ft. apart, and Asparagus plumosus and Ferns here and there. The second prize in this class went to Mr. G. Sims, gardener to C. J. Inwood, Esq., The Retreat, Brighton; while Mr. E. Meachen and Mr. B. Lister were third and fourth.

There were three entries in the class for 9 ft. groups, Mr. W. J. Turner, Hove, gaining first prize; Mr. Rapey, the second; and Mr. J. Hill, the third. The remaining class for groups was restricted to Chrysanthemums only. Six groups, however, were exhibited, Mr. T. Fairs, Hassocks, being awarded first prize; and Mr. J. Miles, Brighton, the second; Mr. J. Rolfe, Worthing, and Mr. J. Hill gaining third and fourth respectively.

Trained plants were well shown, quality and quantity being very marked. There were eight classes devoted to these exhibits, the principal prize-takers being Mr. J. Hill, Withdeane; Mr. E. Meachen, Withdeane; Mr. W. E. Anderson, Preston Park; and Mr. B. Lister, Brighton.

The big class for cut blooms succeeded in bringing forward ten exhibits, Mr. Thos. Daney, gardener to E. J. Pope, Esq., St. Leonards' Forest, Horsham, securing the first prize, and, in addition, the president's challenge bowl, and the N.C.S. Jubilee Bronze Medal. This stand was noticeable for the freshness and quality of the blooms, among which fine specimens of Duke of York, Mme. M. Ricoud, Charles Davis, Souvenir de petite Amie, and Miss Elsie Teichmann were more especially noticeable. Mr. W. Wallis, Hartfield, was second in this class; Mr. G. Hart, Buckingham, Shoreham, third; and Mr. Jas. Schedwidze, St. Leonards, fourth. Seven exhibits were staged in the class for twenty-four Japanese, Mr. Jas. Schedwidze taking first; Mr. M. Tourle, Nekfield, second; Mr. W. Wallis, third; and Mr. Hart, fourth.

Six exhibitors competed in the class for twelve Japs. Mr. P. J. Palmer, Chichester, being first with a lot of well finished blooms, among which M. Chénon de Léché, M. Panckoucke, and G.C. Schwabe were among the best.

Of "incurves" there was not an extensive show, the largest class being for twelve blooms. Mr. J. R. Hensman, Turner's Hill, was first here with a fine stand of exceptionally good blooms. Mr. Foster, Havant, secured second; and Mr. Wallis, third The smaller open classes did not bring up a very keen competition, the class for six Japs. being the largest with ten entries.

In the class for arrangement of flowers suitable for table decoration the most striking exhibit was that by Mrs. S. Johnson, Worthing, which secured first prize. The class for a vase of Chrysanthemums containing not more than nine blooms and not less than six varieties, formed quite a very attractive and interesting feature of the show, the first prize being a Silver Medal presented by Mr. H. J. Jones,

Lewisham. This was won by Mr. H. Elliott, Lancing. The tables of cut Chrysanthemums arranged with foliage for effect were well represented, and the baskets of Chrysanthemums were also very much admired.

Amateur classes came up well, and several very creditable exhibits were shown, among which Mr. W. H. Tanner's stand of twelve Japanese blooms was very fine, the blooms being equal to any shown by professional growers. This exhibit gained the first prize.

In the local classes the principal competition was for the Brighton Amateur Challenge Trophy, confined to growers within three miles radius of the pavilion. Four competitors entered, whose exhibits were very even in quality. Mr. J. J. Tilley, 32, Cuthbert Road, Brighton, led the way; Mr. W. C. F. Gillam was second. The last-named exhibitor secured a first in the local class for twelve Japs.

Fruit was not shown to so great an extent as in last year's show. The class for three bunches of white Grapes brought up six exhibits, Mr. J. Muddell, Sedgwick Park, Horsham, being first for three bunches of Muscat of Alexandria. Mr. J. R. Heasman, took the corresponding prize for three bunches of Black Alicante. Mr. G. Goldsmith, Horsham, was first for four dishes of dessert Pears, with Pitmaston Duchess, Beurre Alexander Lucas, Beurré Diel, and Doyenne du Comice, Mr. G. Hart, Shoreham, gained first for one dish of dessert Pears, with Marie Louise, Mr. Goldsmith, gained first for four dishes of dessert Apples, and also for four dishes of culinary Apples.

Collections of fruit, not for competition, were shown by Messrs. J. Laing & Sons, Forest Hill, S.E. Messrs. J. Cheal & Sons, Crawley, Sussex; and Messrs. W. Balchin & Sons, West Brighton.

Messrs. H. Cannell & Sons, Swanley, Kent, exhibited a stand of about forty new varieties of Chrysanthemums, among which Australie, Australian Gold, Edith Smith—a variety similar in colour to International, but of a more refined character—Sir William Hart Dyke, a fine yellow with short stiff petals—and A. H. Wood—a sport from Primrose league, of a fine yellow colour—were the more noticeable.

Vegetables were staged in the Gymnasium and another room, and a good competition for the various prizes offered by seedsmen and others, resulted.

The show was opened to Subscribers at 1 o'clock, and the weather being fine and bright, the prospect of a good attendance was then favourable.

SOCIETIES.

ROYAL HORTICULTURAL. *November 10th.*

The exhibits on Tuesday last consisted chiefly of Orchids, Chrysanthemums and vegetables. The Chrysanthemums were shown in groups and also in the cut state.

A Silver Floral Medal was accorded to Messrs. J. Veitch & Sons, Chelsea for a beautiful group of Orchids arranged with Palms and Maidenhair Ferns. Pretty and attractive were Cattleya Mantinii, C. M. superba, Laeliocattleya Pallas, L. statteriana, L. Lady Rothschild, L. Nysa, and C. Fabiola. The intense crimson lip and yellow tube of Laeliocattleya Nysa formed a beautiful and striking contrast. Very beautiful also were Cypripedium Milo, C. Niobe, C. Minosa, and C. arthurianum. The whole group consisted entirely of hybrids. A collection of cut sprays of Orchids was exhibited by W. Thompson, Esq. (gardener, Mr. W. Stevens), Walton Grange, Stone, Staffs. He had many beautifully blotched and marked varieties of Odontoglossum crispum, O. c. Andersonianum, and allied forms, and O. Pescatorei, in long arching spikes. His spikes of O. grande were fine, and his varieties of Cattleya labiata magnificent (Silver Banksian Medal).

Messrs Hugh Low & Co., Upper Clapton, N.E., staged numerous varieties of Cattleya labiata, Miltonia Roezlii, and M. R. alba, all in fine condition. R. Gulzow, The Melbourne Nurseries, Bexley Heath, also staged a small group of Orchids including Vanda sanderiana, Cattleyas, Cypripediums, and Dendrobiums.

A Cultural Commendation was accorded to Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, for a magnificent spike of Cymbidium traceyanum bearing eighteen of its huge, richly lined and spotted and sweet-scented flowers. The flower-bearing portion was 2½ t. long. It was the finest we have seen.

The first white variety of Cattleya maxima ever seen was shown by Hamar Bass, Esq. (gardener, Mr. J. Hamilton), Byrkley, Burton-on-Trent. It turned up in an importation made by Messrs. F. Sander & Co., bnt its presence was unknown till it flowered with Hamar Bass, Esq.

Messrs. F. Sander & Co., St. Albans, staged a varied and beautiful collection of Orchids, including Cattleya labiata in great variety, the beautiful Dendrobium Johnsoniae, Oncidium tigrinum with panicled inflorescence, the interesting Cymhidium elegans and various other things (Silver Banksian Medal).

Fred. Hardy, Esq. (gardener, Mr. Stafford), Tyntesfield, Ashton-on-Mersey, exhibited a beautiful variety of Cattleya hardyana, and a new Cypripedium, Fred. Hardy, of beautiful appearance. A fine piece of Pleione maculata alba was exhibited hy G. W. Law Schofield, Esq (gardener, Mr. E. Shill), New Hall, Hey, Rawtinstall. He also showed fine painting of Orchids.

Laeliocattleya Minerve, L. Meteor and L. Homere, were all exhibited by Chas. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming. A fine raceme of Odontoglossum Uro-Skinneri was shown by Hawthorn Kitson, Esq. (gardener, Mr. W. Bonstal), Elmet Hall, Leeds. A Cultural Commendation was accorded to H. S. Leone, Esq., Bletchely Park, for a splendid well-flowered piece of Laelia praestans Bletchley Park var.

Near the entrance to the hall appeared a superb group of Chrysanthemums from Mr. H. J. Jones' establishment, at Ryecroft Nursery, Lewisham, S.E. As an exhibitor of groups Mr. Jones has but very few equals, and on this occasion he well sustained his reputation. The outline of the group was charmingly undulated and lightened with several fine specimens of Cocos weddeliana, and Maidenhair Ferns formed a suitable groundwork. Some very fine blooms of such Chrysanthemums as Le Moucherotte, Mons. Chénon de Léché, Edith Tabor and Madame Carnot were on view, and many other leading sorts were represented. A Silver Gilt Flora Medal was deservedly awarded by the committee for this great effort. Mr. Jones also exhibited a stand of a dozen cut blooms.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., received a Silver Banksian Medal for a group of Chrysanthemums, chiefly of the single, and decorative sections. Exquisite, Florence, Milly Agate, Mary Anderson, and May Wells, are a few of the best. The new incurved Rena Dula was also represented by some dwarf and well-flowered plants. Ferns and foliage plants were introduced in sufficient quantities to set off the flowers to advantage.

Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford, filled a long table with cut Chrysanthemums. Three blooms of a sort were placed in each vase, and the utilisation of Cocos weddeliana, Cyperuses, and Ferns was tastefully and well carried out. Excellent samples of Chas, Davis, Miss Dorothea Shea, Viviand Morel, A. H. Neve, William Seward, Gloriosum, Robert Owen, Mrs. Libbie Allen, and Hairy Wonder, were very conspicuous (Silver Flora Medal).

Cut Chrysanthemums were not forgotten. Mr. W. J. Godfrey, Exmouth, Devon, staged four dozen show blooms in first-class condition. Reine d'Angleterre, Miss Rita Schroeter, Pride of Maidenhead, The Egyptian, and Indiana were a few of the best. A stand of cut Carnations including such forms as Vesper, Miss Mary Godfrey, Jubilee, and Dean Hole, was also contributed by Mr. Godfrey (Silver Flora Medal).

Mr. Robert Owen, Maidenhead, had a few very nice Chrysanthemums, amongst which Royal Standard, Duke of Wellington, and Picturatum were some of the most noteworthy. The curious and distinct Japanese decorative forms Mignonette and Chevelu Violet were likewise worthy of mention. Mr. Geo. Lane, gardener to Miss A. S. Ridge, Highfield, Staines, sent three blooms each of Chrysanthemums Miss A. S. Ridge and Triomphe d'ere,

A Silver Flora Medal was awarded to C. E. Shea. Esq., The Elms, Foots Cray, for four dozen cut Chrysanthemums, amongst which some really fine samples were much in evidence. H. L. Sunderbruck, Thos. Wilkins, Mrs. C. E. Shea, Hairy Wonder, Wilfred Marshall, M. Chénon de Léché and Mad. Ad. Chatin were some of the strongest blooms.

Messrs. Young & Dobinson, Holmesdale Nurseries, Stevenage, Herts, received a Bronze Banksian Medal for a group of cut Chrysanthemums and some seedling Gloxinias.

A very commendable feature was a small batch of Lycoris aurea prettily set up with Maidenhair Fern and Panicum that was contributed by Mr. Reynolds, gardener to the Messrs. de Rothschild, Gunnersbury House, Acton, Middlesex (Silver Flora Medal).

Vegetables were strongly represented by a large collection of vegetables which occupied the whole of one of the large central tables. For this exhibit, Messrs. Dobbie & Co., Rothesay, N B., and Orpington, Kent, were awarded a Silver Banksian Medal. Parsnips and Carrots were represented by some clean and well-grown specimens. Turnip, Golden Ball, also exhibited to the full its wondrous symmetry of shape, and its rich and attractive colouring. Onions were especially large and heavy samples, and Dobbie's International surprise Leek was shown of surprising length. Dobbie's Victoria Kale, as here shown, is a sturdy, vigorous, and closely curled form. Some huge sticks of red and white Celery also found a place in the exhibit.

The fruit committee awarded a Silver Knightian Medal to Mr. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, S.E., for a collection of Grapes containing grand bunches of Trebbiano, Gros Colman, Gros Maroc, Alicante, Mrs. Pearson, and Alnwick Seedling. In addition to the large size of the bunches, the colouring and finish of the herries were remarkably good.

The Veitch prizes for the best flavoured Apple and Pear brought out a number of dishes. In the class for Apples a dish of Cox's Orange Pippin sent by Mr. J. W. Herbert, gardener to J. S. Charlesworth, Esq., Nutfield Court, was placed first. Mr. Geo. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, came second with a dish of Ribston Pippin. Beurre d'Anjou, as shown by Mr. C. Herrin, Dropmore, headed the list of Pears, the second prize falling to Knight's Monarch, shown by Mr. Robert Maher, Tattenden Court.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Cinerarias Dying.—*W. A. Parsons*: The specimen you sent us was swarming with mites, which would account for the wasting and decaying condition of your plants. What fosters and encourages their presence it would be difficult to say without knowing the conditions. The mites are quite different from those generally known as red spider. We should advise you to see that every part of the house is kept clean and tidy. No decaying rubbish nor neglected corners should be permitted to afford harbourage to the pest. All the plants that are really badly injured now should be conveyed to the ruhbish heap as it is impossible for them to recover or look respectable. The next thing you might do is to thoroughly syringe the underside of the leaves and every part of the remaining plants with a strong solution of soft soap or Gishurst's Compound, with an admixture of flowers of sulphur. This might be done during the afternoon and the plants again syringed with clean water next morning. The operation might be repeated after a day or two, if you have any suspicion that the plants are not thoroughly clean. Lay the plants on their sides during the operation to prevent the water running into the soil and making it unduly wet. If these operations should fail, we should advise you to leave off growing Cinerarias for a year till you get rid of the mite.

Names of Fruit.—*C. A.*: Apples.—1, Queen Caroline; 2, Minchall Crab; 3 and 6, Cox's Orange Pippin; 4, Trumpington; 5, Flower of Kent; 7, Sturmer Pippin; 8, Hawthornden; 9, Court of Wick; 10 and 11, Dumelow's Seedling. Pears.—1, Beurré Clairgeau; 2, Beurré d'Aremberg; 3, Hacon's Incomparable; 4, Marie Louise; 5, Althorp Crassane.

Minerals and Flowers.—*Rubens*: The answers to the questions you speak of sending about a fortnight ago, appeared in the issue for October 24th, p. 126.

Border Carnations—*W B.G.*: It would be difficult to say whether any variety is likely to become highly popular with the general public. Only gardeners and specialists generally can recognise the difference between a good and a bad Carnation. Good varieties may hecome popular with such men; but pleasing the general public is quite another thing. Pleasing and distinct colours take the public eye most readily, so that the hest thing to do is to select strong, free growing or free flowering varieties of beautiful colour, quite independently of form or refinement. The Old Clove is popular on account of its fragrance. Amongst yellows nothing is better for border work than Germania. The bright scarlet of Jim Smyth has a taking appearance. Raby Castle is very floriferous and much used for bedding purpose. Queen of the Bedders, a red variety is also more or less extensively used for the same purpose. Select distinct, pleasing and light, as well as bright colours, always bearing in mind that expensive varieties for the purpose you mention are quite unnecessary, and have no weight with the general public.

Names of Plants.—*Box without name*: 1, Juniperus virginiana; 2, Thujopsis dolobrata; 3, Cupressus lawsoniana lutea; 4, Buxus japonicus aureus; 5, Crataegus Pyracantha (The Fiery Thorn); 6, Juniperus sinensis.—*W. A. Parsons*: Dracaena latifolia var.

Communications Received.—A. D. W.—G. Gordon.—G. Russell.—E. J. Ashelford.—J. G. Pettinger.—A. P.—Omega.—R. H. S.—Pteris—D. N.—W. James.—T. P. B.—R. Lemworth.—F. Giles.—M. M.—S. T. G.—Carduus.—B.—Samson.—F. R.—Clara.—Scottish Horticultural Association.

TRADE CATALOGUES RECEIVED.

Dammann & Co., San Giovanni a Teduccio, Naples, Italy.—Price List for Seed Merchants of Vegetable and Flower Seeds, Forrage Plants, Conifers, Palms, Trees, &c.

H. Cannell & Sons, Swanley, Kent—Cannell's Chrysanthemums.

LONDON SEED TRADE.

November 10th, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a firm market for Clover seeds with occasional orders for best English Red Clover. American White Clover and Alsike are in request at advancing figures. Ryegrasses firm.

ORNAMENTAL TREES AND SHRUBS.

R. B. LAIRD & SONS,

BEG TO DIRECT ATTENTION TO THEIR VERY FINE STOCK OF THE ABOVE.

Their Nurseries, at Pinkhill, Murrayfield,

Will at all Seasons be found attractive and of interest to Horticulturists.

CATALOGUES FREE.

PINKHILL NURSERIES, MURRAYFIELD, MIDLOTHIAN.

Something CHOICE in "MUMS."

George Warren,

Yellow Sport from MADAME CARNOT.

THIS needs no flourishing description, as it will be seen at the meetings of the N.C.S. and R.H.S. within the next week or so. All I need say at present is that this will be distributed in April next. Good plants, in small pots, at **21/-** each. Orders will be dispatched strictly in rotation as received. (No Trade Discount allowed, as stock is limited). Full particulars in my Special List, January 1st, 1897.

CALVAT'S AUSTRALIAN GOLD,

1/6 each, and nearly **1,000** other best Chrysanthemums fully described in my New Catalogue now ready, post free.

Wells' Book on "'Mums" 1/2 each from

W. WELLS, Earlswood Nurseries, Redhill, Surrey.

DAVID W. THOMSON'S

Flower Seeds Specialties.

THOMSON'S DWARF WHITE ANTIRRHINUMS.
THOMSON'S DALKEITH CALCEOLARIA.
THOMSON'S SUPERB BEGONIAS.
THOMSON'S UNRIVALLED CELOSIAS.
THOMSON'S CINERARIAS.
THOMSON'S CYCLAMEN.
THOMSON'S PANSY.
THOMSON'S PETUNIA.
THOMSON S PRIMULAS.
THOM.ON'S EAST LOTHIAN STOCKS.

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THOMSON'S IMPROVED PROLIFIC LONG POD BEANS.
THOMSON'S SUPERB RED BEET.
THOMSON'S SELF-PROTECTING BROCCOLI.
THOMSON'S IMPROVED HORN CARROT.
THOMSON'S MARKET CARROT.
THOMSON'S INCOMPARABLE WHITE CELERY.
THOMSON'S MAMMOTH GREEN COS LETTUCE.
THOMSON'S SUPERB CURLED PARSLEY.
THOMSON'S EXCELSIOR TOMATO.
THOMSON'S DUKE OF YORK MELON.

See Catalogue of Selected Seeds for 1897, Post Free on application in December.

Nurseries—WINDLESTRAWLEE.

Seed Warehouse—

24, FREDERICK STREET, EDINBURGH.

SPECIALITIES—

BEGONIAS.

JOHN DOWNIE CRAB APPLE

(Pyramid and Standard).

ORNAMENTAL TREES AND SHRUBS.

STOVE AND GREENHOUSE PLANTS.

ROSES. FRUIT TREES. ETC.

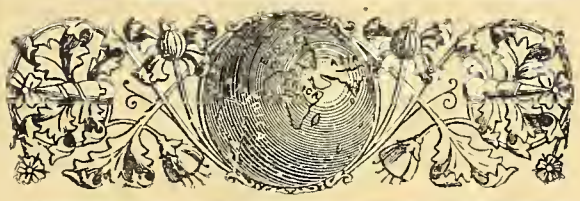
Catalogues on application.

JOHN DOWNIE, Edinburgh.

GARDEN AND OLD FASHIONED ROSES.

Twenty-five distinct varieties for 22/6, such as have been exhibited in such fine form during the past season. Strong bush plants including Barden Job, Laurette Messning, Copper Austrian, Jancet's Pride, York and Lancaster, Gustave Regis, Crimson Rambler, Persian Yellow, L'Ideal, Rose de Meaux, &c., &c., forming a very charming collection of the best old-fashioned and garden roses. New rose list post free.

GEO. COOLING & SONS, The Nurseries, BATH.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, NOVEMBER 21st, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 23rd.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, and Mr. J. C. Stevens.

TUESDAY, November 24th.—Royal Horticultural Society, meeting of committees at 12 o'clock.
Leeds Chrysanthemum Show.
Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

WEDNESDAY, November 25th.—Sales of Dutch Bulbs by Messrs. Morris, and Mr. J. C. Stevens.

THURSDAY, November 26th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.

FRIDAY, November 27th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens, and of Orchids by Messrs. Protheroe & Morris.

SATURDAY, November 28th.—Dumfermline Chrysanthemum Show.

THE CHRYSANTHEMUM PROGRESSING NORTHWARDS.—In view of the fact that the chief Chrysanthemum displays of the season have shifted their centre of interest from London to Edinburgh and other cities in the North within the course of a fortnight, it may be germane to the

subject to make a brief review of the data as to whether the popular autumn flower is earlier or later than it used to be. It might be easy to prove that Chrysanthemums flower much earlier than when first cultivated in this country if we were to make a census of all the most popular of modern varieties; but the more we consider the subject, the more evident it becomes that the question is one of the selection of varieties to suit any given purpose. Furthermore, the leading Chrysanthemum shows have been fixed for certain dates, so that cultivators aim at retarding some varieties and urging others forward so as to be in prime condition at the date of any given show or shows. This is done by keeping the plants warm or cool in each respective case, and by timing the buds, which is perhaps the most important factor in the case. Another proof of our contention is that Chrysanthemums may be had in very respectable condition during any month of the year, by the volition and skill of the cultivator.

The Purple Chrysanthemum or Old Purple was introduced from China to France by M. Blancard, a Merchant of Marseilles in 1789. This was introduced from France to the Royal Gardens at Kew, from M. Cels of Paris, in 1790, and was the first of the large-flowering types to reach our shores. It first flowered in November 1795, with Messrs. Colvill in the King's Road, Chelsea, who were in those days the leading or only Chrysanthemum specialists in London or its suburbs. In 1818 we find that their collection of Chinese Chrysanthemums flowered during the months of October and November, and that the season had been peculiarly favourable to the development of this autumn race of flowers. The plants even in those days were grown in pots for the convenience this method afforded of shifting the plants about for indoor display and shelter from the vicissitudes of climate.

As recorded by a correspondent in another column, Norfolk was celebrated for the impetus which growers there gave to Chrysanthemum culture at least as early as 1826. Mr. George Harrison of the Downham Nursery, Norfolk, recorded his experiences with the autumn flower in the *Floricultural Cabinet* for February 14th, 1834, p. 84. He grew as many as 900 plants in 38 varieties, and put them in a greenhouse in autumn, where they flowered during the month of December. Previous to that the Horticultural Society of London had been growing Chrysanthemums; for Joseph Sabine, Esqr. read a paper on the varieties of Chinese Chrysanthemums in England, at a meeting of the society on the 20th February 1821, when he described the 12 known varieties, and said that the cuttings were taken in August, kept in cold frames during the winter, put out of doors next spring, and taken into the greenhouse when they had formed their buds, which usually occurred about the beginning of October. Fourteen unflowered and consequently unproved varieties were then grown in the neighbourhood of London, and mostly in the society's garden at Chiswick. Mr. Cannell in quoting from his *Floral Guide* for 1869, in THE GARDENING WORLD of last week, gives us another view of the subject in connection with the introduction of the so-called Japanese race of Chrysanthemums by Robert Fortune. He represents them as tall growing plants that did not properly develop their flowers till about Christmas. Joseph Sabine, writing in 1821, mentions the fact of there being early and late varieties, so that selection and the particular method of treatment must be held responsible for the apparent earlier flowering of modern Chrysanthemums. The earliest introductions were termed Chinese, but they had quilled, tasselled, tubular and ribbon, or shred-like florets, and therefore in all respects identical with Fortune's introductions to which the term Japanese was applied. The term Chinese is now generally applied to the incurved Chrysanthemums which originated about 1836. We have early and late varieties in both sections, and both alike fluctuate in earliness or otherwise, from year to year in accordance with the character of the season. The progress of the shows from south to north is a distinct evidence of the effect of climate, as determined by latitude in this country; but curiously enough the Chrysanthemum shows in France are relatively later, although so much further south than England.

Mr. A. Urquhart, head gardener to Mrs. Croall, Southfield, Liberton, Midlothian, has been appointed head gardener and manager to —Allan, Esq., Stormont Castle, Belfast.

A ramble round Ibrox in search of new varieties of plants is said to be the title of a new *brochure* on the subject by four worthy gentlemen well known in West Scotland.

Messrs. H. Cannell & Sons, Swanley, were awarded a Silver Gilt Medal at the Ghent Exhibition last Saturday for thirty-six blooms of Chrysanthemums belonging to various sections.

Late Grapes Still Hanging.—I omitted to mention in my article last week that as soon as the majority of the leaves had fallen from the vines the temperature was lowered to about 45° Fahr.—*J. Mayne.*

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, S.W., on Tuesday, November 24th, from 1 to 4 p.m. At 3 o'clock the Rev. Prof. Henslow, M.A., will give a floral demonstration.

"Mummers" will be glad to know that the best of all Chrysanthemums (Madame Carnot) has sported into a lovely canary-yellow variety and is fixed. The entire stock is in the hands of Mr. W. Wells, Earlswood, and probably before this appears in print will be seen at the meetings of the N.C.S.

The Threatened Scarcity in India.—We understand that the Secretary of State for India has shipped some thousands of sacks of vegetable seeds suitable for growing in the districts of Northern India that are threatened with scarcity. The selection, packing, and shipping was accomplished by Messrs. Carter, the Queen's seedsmen, London, in the short space of nine days.

Royal fruit exhibit at Dublin.—The main feature of the Chrysanthemum show at Ballsbridge, Dublin, on the 4th inst. was the flowers and fruit from the garden of Her Majesty the Queen. The *Freeman's Journal* says: "There is so little seen of Her Most Gracious Majesty the Queen in this country, that her Chrysanthemums, her Grapes, and her head gardener were naturally the subject of much loyal curiosity."

Chrysanthemums at Budleigh Salterton.—The Budleigh Salterton Chrysanthemum Society was instituted in 1890, and held its sixth annual show on the 4th inst. The entries numbered over 100, which was a good muster for this village of East Devon. The competition in the classes for table decorations, and the best arranged basket of Chrysanthemums was keen and contested; and so tastefully were the numerous exhibits set up that they entailed a considerable amount of time and trouble on the part of the judges, Mr. J. Mayne, Bicton, and Mr. W. Swan, Bystock, to determine their order of merit. Mr. Hillman had the best group of Chrysanthemums, the best twelve and six Japanese blooms, distinct, the best twelve and six incurved blooms, distinct, and the best six Japanese of one variety. Mr. Mann was second in nearly every case. There were also classes for fruit and for amateurs not employing professional help.

Canna Italia and C. Austria are the result of a hybrid between the well-known garden variety Madame Crozy and the wild species C. flaccida. The flowers take after the character of the latter parent in being large, and rather limp or flaccid in texture.

A big Potato.—Mr. Richard Bryers, of Rainford, is reputed to have raised what is probably the largest Potato tuber this season. When in full growth the plant was fourteen yards in circumference. The tubers on the root numbered fifty-one, and the largest one weighed 3 lbs. This giant Potato was measured by independent and expert authority.

At the Norwich Show.—The judges and members of the committee sat down to a luncheon at the "Crown and Anchor Hotel," under the presidency of Mr. T. Edgar Mayhew. A few toasts were drunk, including "The Judges," proposed by Mr. W. Messenger, and responded to by Mr. Molyneux; "The Exhibitors," given by Mr. H. E. Archer, and acknowledged by Mr. George Gilbert; "The Press," given by Mr. A. E. Stubbs, and responded to by Mr. Wm. King, of the *East Anglian Daily Times;* and "The Chairman," proposed by Mr. R. Smith.

Music and Flowers.—The cultivation of music as well as that of flowers are kindred arts, and it is perhaps nowhere better exemplified than at those shows where good music is provided during the exhibition. At Glasgow, for instance, we have it on the authority of a correspondent that one gentleman noted in horticultural ranks has been invited to join the Glasgow Select Choir, a most august body of high position in musical circles. This is in itself no mean compliment to the sister art of horticulture and to the talented gentleman who has been the recipient of so distinguished an honour.

Waterlow Park.—The conservatory has just been rebuilt in this London park, which was first opened to the public five years ago. It is greatly improved in appearance, and at present includes over 2,000 Chrysanthemums, consisting of 250 varieties. The display is magnificent, and fully maintains its former high reputation. There is also a fine collection of dwarf Chrysanthemums in one of the adjoining vineries. During the season just closed 200 lbs. of Grapes, 250 pecks of Pears, 45 pecks of Apples, 20 pecks of Plums, and 500 ducks' eggs have been sent to various hospitals and convalescent homes in the neighbourhood.

Birmingham Gardeners' Association.—At the meeting of the 2nd inst., there was an admirable exhibition of Celery. Mr. Snead, Edgbaston, was first; Mr. G. Stacey, Harborne, was second; and Mr. Worrall, Edgbaston, was third. A meeting was then held under the presidency of Mr. W. B. Lathom, when Mr. W. Gardiner, Harborne, gave a botanical and physiographical description of the Celery plant, and alluded to the specific diseases to which the plant was subject. The comparatively little-grown Celeriac was also dealt with. Apples were shown by Mr. Gardiner. Messrs. John Pope, Spinks, Walter Jones, Stacey, Snead, and others took part in the discussion.

Orchids at the Sale Rooms.—There was some lively bidding at the Central Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on Friday, the 6th inst., when several white varieties of Cattleya intermedia were put up for sale. Numerous pieces of a large white variety supposed to be C. i. Parthenia were first put up. Sir F. Wigan, Clare Lawn, East Sheen, bought the first plant, a fine one, for 27 gs. The largest and finest white variety was secured by —Mundy, Esq., for 52 gs.; he also bought other plants for 26 gs. and 36 gs. respectively. E. Ashworth, Esq., Wilmslow, Cheshire, bought two plants for 4 gs. each. R. H. Measures, Esq., The Woodlands, Streatham, secured fine pieces for 32 gs., 32 gs., 28 gs, and 18 gs. respectively. Major Mason secured a plant for 12 gs. R. I. Measures Esq., Cambridge Lodge, Camberwell, secured another for 11 gs. Some plants of C. intermedia Snowflake were also put up; Sir F. Wigan bought one of these for 20 gs.; — Steel, Esq., secured another for 7 gs.; and a third fell to the bidding of E. Ashworth, Esq., for 4½ gs. R. H. Measures secured a specimen of C. i. Innocenta for 12 gs.; — Steel, Esq., another for 9 gs.; and E. Ashworth, Esq., a third sample for 5 gs. These figures speak for themselves.

Experimental Fruit Farm.—The Duke of Bedford has something like 600 experiments in hand on his fruit farm at Woburn, Bedfordshire. Some of these show the result of good and bad methods of preparing the soil, planting, pruning, etc. There are likewise plots illustrating good methods to be adopted by cottagers, market gardeners, and farmers. Some trees have been planted too deeply and afterwards properly replanted, the result telling its own tale. Deep digging about the roots of trees whereby the rootlets are destroyed are compared with others subjected to restorative treatment.

NORFOLK AND NORWICH HORTICULTURAL SOCIETY.

THE president of the National Chrysanthemum Society, at the dinner following the exhibition of that society on the 3rd inst., is reported to have stated that "the first Chrysanthemum show held in England took place at Stoke Newington in 1846."

The National Chrysanthemum Society certainly originated from a small society which held its first show at Stoke Newington in 1846, but that place does not comprehend England, nor does the National Chrysanthemum Society, even in conjunction with its predecessor, the Stoke Newington Society, constitute the oldest association of Chrysanthemum growers in this country.

The Norfolk and Norwich Horticultural Society held its first exhibition on November 25th, 1829, when a considerable number of Chrysanthemums in pots were exhibited, one grower showing no less than fifteen varieties, which was a remarkable feat, seeing that only forty-eight varieties were known (so I believe) in 1826. The Norfolk and Norwich Horticultural Society, for the first twenty-three years of its existence, held six exhibitions (called meetings) a year, and the sixth in each year was a Chrysanthemum show. At its sixth meeting in 1830, held on November 17th, no less than 164 pots of Chrysanthemums were exhibited. In the following year this show was held on November 16th, and then attained very considerable proportions, as fourteen members exhibited between them 387 Chrysanthemums in pots, one exhibit comprising seventeen varieties and another as many as twenty-five. At the same show three other members exhibited collections of Chrysanthemums, and from the fact that the description of the show in the society's minute book does not speak of these three collections as consisting of pot plants, it is to be supposed that they were cut blooms.

This show was held annually for seventeen years before the Stoke Newington Society came into existence.

That the claim of the National Chrysanthemum Society is an erroneous one, is clear, and its being made is no doubt due to the fact of that society's jubilee being in course of celebration.—*John E. T. Pollard, Hon. Sec., Norfolk and Norwich Horticultural Society.*

PLANTS RECENTLY CERTIFICATED.

THE undermentioned were accorded certificates according to merit by the Royal Horticultural Society on the 10th inst.

Orchid Committee.

LAELIOCATTLEYA NYSA SUPERBA, *Nov. var.*—Those who looked over the group of hybrid Orchids exhibited at the Drill Hall by Messrs. J. Veitch & Sons, Chelsea, could not have failed to be struck with this beautiful variety of bigeneric hybrid. The parents were Laelia crispa and Cattleya Warscewiczii, the latter being the pollen bearer. The sepals and petals are of a pale lilac, and the petals are slightly folded after the style of L. crispa. The lamina of the lip is oblong, bifid, and of a rich crimson-purple with a lilac edge; the tube is bright yellow on both surfaces with a crimson band along the centre of the interior. The great beauty of the lip takes after that of the pollen parent. First-class Certificate.

CATTLEYA MAXIMA ALBA, *Nov. var.*—This is the first albino or white variety of C. maxima which has been seen, and turned up in the collection of Hamar Bass, Esq. (gardener, Mr. J. Hamilton), Byrkley, Burton-on-Trent. It came out of an importation of the type by Messrs. F. Sander & Co., St. Albans, but the novelty flowered with Hamar Bass, Esq., before its real character was known, so that the lucky possessor may well be proud of it. With the exception of a lemon-yellow band below the middle of the lip the flower is pure white. First-class Certificate.

CYPRIPEDIUM CHARLESWORTHII FRED HARDY, *Nov. var.*—In this we have another exceedingly choice albino whose distinctness leads one at first sight to think is a new species or a natural hybrid. The upper sepal is white with a small green and purple blotch at the base, which is somewhat narrowed and constitutes the only misleading organ of the flower, as to its true affinity. As the plant gets established and strong, the dorsal sepal will no doubt become wider. The petals are pale yellow, tinted with a greenish hue. The lip also is greenish-yellow with darker veins, and polished or glossy. The staminode is white, with the boss or knob in the centre, tipped with yellow. Award of Merit. Fred Hardy, Esq. (gardener, Mr. Thos. Stafford), Tyntesfield, Ashton-on-Mersey.

Floral Committee.

CHRYSANTHEMUM MRS. C. ORCHARD.—In this we have an incurved Japanese variety of great merit, and varying from 6 in. to 7 in. in diameter according as the florets are closely or loosely incurved. The bloom is sulphur-yellow in the centre, varying almost to a creamy-white outwardly. The florets are broad and massive. Award of Merit. Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham.

CHRYSANTHEMUM MA PERFECTION.—This is tantalisingly close on the borders of the Chinese section, but is truly an incurved Japanese variety, about 6 in. in diameter, and beautifully compact. It is a pure white and very choice flower with medium to broad florets. Award of Merit. Mr. H. J. Jones.

CHRYSANTHEMUM DUKE OF WELLINGTON.—Here again we have an incurved Japanese variety of globular and massive appearance, and measuring about 6½ in. in diameter. The florets are very broad and soft salmon-red, with a yellow reverse which is most in evidence. Award of Merit. Mr. Robert Owen, Castle Hill, Maidenhead.

CHRYSANTHEMUM MIGNONETTE.—This is a decorative variety of the first water with small, globular, soft yellow flowers that ultimately assume a bronzy-red like Mignonette. The slender florets are hair-like, ultimately much interlaced and forming globular balls with a light and fluffy look about them. Award of Merit. Mr. Robert Owen.

AMORPHOPHALLUS VARIABILIS.—This species is a native of Malaysia, and of very singular aspect, but without the disagreeable odour of most of its kind. The spathe is green, heavily overlaid with bronzy-purple, and measures 10 in. across one way and 8½ in. the other. The spadix is a singular looking organ with a large, club-shaped or conical purple head above the very numerous flowers. Botanical Certificate. Messrs. J. Veitch & Sons.

CHRYSANTHEMUM MME. PAUL LECROIX.—The blooms of the Japanese variety are 6½ in. to 7 in. across, pale yellow in the centre, and fading to a creamy-white outwards. The florets are broad, massive, and drooping. Award of Merit. P. O. Knowles, Esq., Friar Park, Henley-on-Thames.

CHRYSANTHEMUM MR. HUGH H. GARDINER.—For description see p. 167. Award of Merit. H. H. Gardiner, Esq. (gardener, Mr. S. Ely), Nettlebed, Henley-on-Thames.

CHRYSANTHEMUM NOTES.

GLASGOW BOTANIC GARDENS.

THE display of the autumn flower is very much larger this season—about 3,000 plants, being 500 in excess of previous years, while the higher quality of former displays has been surpassed by the magnificent lot of plants now at their best. The addition of many of the new varieties makes it all the more interesting to visitors on the lookout for novelties. Mr. Dewar has raised some splendid seedlings that bear comparison with the best-named sorts. A pure white Jap., that he has in splendid condition just now, is Mrs. D. Dewar, a large flower with finely-twisted drooping petals. He also has some fine yellow incurved varieties that are not yet named. In September we noticed, amongst the grand lot of early flowers, a seedling of great merit for early work, which he has named Mary Elton in compliment to a relative of his grower, Mr. Elton.

The plants are arranged in the Winter Garden, where they can be seen to the best advantage by the large crowds that daily visit the gardens. The Town Council generously provide the music on the opening days of the show.

A central group of large dimensions (35 ft. in diameter) occupies the space under the entrance dome. The plants are raised in the centre so that the highest blooms are about 16 ft. from the floor level, and gradually slope down to 2 ft. from the ground. The mass of colour would be quite overpowering, were it not for the beautiful drapery of climbers hanging from the roof all round the circle, while overshadowing the whole group is a Giant Kentia with dark green leaves of large dimensions. This group contains about 800 plants with three or more blooms on each, and of splendid quality as regards size, colour and form. The dome is flanked by span-roofed houses on either side, which have been gay since September; while along the side of the main corridor leading to the central dome are nicely arranged lines of well-bloomed plants in hundreds. The large number of varieties grown—about 400—enables visitors to see all the best sorts in cultivation at the present time. Among the newer varieties, Edith Tabor, a fine broad-petalled yellow with drooping petals, is very fine. Calvat's Boule d'Or is a splendid incurved Jap. Another grand form is Pride of Madford. Older and better known sorts are Mrs. Briscoe-Ironside, Lillie Love, and Mrs. W. H. Lees, extra large and one of the very best. Mutual Friend, Niveus, Mdlle. Marie Hoste, Mme. Carnot, and Souvr. de Petite Amie are grand whites.

The yellows are largely represented, of fine quality and include, Duchess of York, Mons. Panckoucke, Sunflower, and Phoebus. The hairy section is interesting, especially such as Hairy Wonder, Beauty of Truro, the Boehmers, pink and white varieties. Largely grown are Commandant Blussett, Baron Hirsch, Globe d'Or, C. H. Curtis, Empress of India, Louise, Amiral Avellan, Mrs. E. S. Trafford, Col. W. B. Smith, etc.

Altogether the display is most excellent, and highly creditable to the popular Curator, Mr. Dewar, and his assistants.—*R.*

THE HIGHGATE NURSERIES.

As most of our readers are aware the Highgate Nurseries are so favourably situated as to be above a great deal of the fogs and damps which perplex and worry Chrysanthemum growers in the lower levels of the great city. The effect of this is unmistakably evident in the freedom with which the blooms open, as well as in their improved colour. Messrs. W. Cutbush & Son grow about a thousand plants for flowering, of which fully one half are allowed to develop show blooms.

The house in which the majority of the plants is accommodated has been exceedingly gay for some weeks past. The feature that impressed us most favourably was undoubtedly a grand batch of that superb white Jap., Mrs. Charles Blick. The plants in question were obtained from late struck cuttings. This was rather from necessity than choice, as there had been a great demand for plants of this variety during the early part of the present season. The late cuttings, however, have exceeded expectations, and produced a capital lot of stuff. Each plant carries a single bloom of large size, and as a 32-sized pot has been considered sufficient for its needs this is by no means bad work.

Turning to the general collection we found incurved varieties were conspicuous by their almost entire absence. Prince Albert, a very pretty purple variety of good form, and rather above medium size was one of the exceptions. Richard Parker required another few days to come to its best. It closely resembles Golden Empress of India in colour and build. Avalanche was in better form than we have yet seen it this season. This well-known white variety has not been behaving particularly well this year and good blooms appears to be all too few. William Tricker was carrying some bright blooms of fair size. Edith Tabor a fine yellow Jap. of recent introduction was very conspicuous. Several plants of it were scattered throughout the house. Robert Prefet possesses the same style as Pride of Madford but is scarcely such a good doer. Col. Chase has given excellent results. The Highgate blooms are of medium size, with very numerous drooping florets, and exhibited a delicate shade of flesh pink. In build they closely resemble Chas. Davis, the florets being of about the same size and consistency. Violetta which was sent out by the Messrs. Cutbush

about four years ago is after Etoile de Lyon, but is rather deeper in colour and of much taller habit. President Borel, Mdlle. Thérèse Rey, Mons. Panckoucke and Gloire du Rocher were all represented by some capital samples.

THE EARLSWOOD NURSERIES.

In his well-appointed establishment at Earlswood, Mr. Wells has taken advantage of the pure air of the Surrey hills to develop a collection of Chrysanthemums that is famous throughout the country. In such a position he enjoys advantages which those cultivators nearer the great city do not enjoy, and we had unmistakable evidence of this on our visit, for when we left the city, Londoners were busily engaged in rubbing their eyes and clearing their throats of that abominable compound known as London fog, but after a few miles run on the L. B. & S. C. Railway, we found the inhabitants of Redhill and district revelling in the beams of an unusually bright November sun.

To quote Mr. Wells' own words, "there are no secrets at Earlswood, and the 'Mums are always open to inspection." It is almost unnecessary to add that the good people of Redhill are not slow to take advantage of this, and constant streams of visitors are to be seen in the large span-roofed house where the majority of the show blooms are to be seen.

The present season has been an unusually trying one. First came the phenomenal drought and heat of the earlier part of the summer, and second the deluge of rain throughout the latter half of the summer, and the whole of the autumn. Up to the middle of August the Earlswood plants had been in superb condition. So vigorous were they that a top-dressing of very rich compost, in which there was a liberal admixture of cow-manure was given about that date. Scarcely had this been applied than down came the rain. How it continued is now a matter of history. Anyway, the results were that the plants made undnly gross and sappy growth, and while it was difficult to time the opening of the mid-season flowers the blooms themselves were not so good as previous conditions had led Mr. Wells to reasonably expect.

Despite all these drawbacks, however, there have been plenty of first-rate blooms to be seen, many of them as good as have ever come under our notice, either at exhibitions or on the plants in their home quarters.

Plants in Small Pots.

Those of our readers who have seen some of Mr. Wells' numerous exhibits of groups of Chrysanthemums can scarcely have failed to notice the small plants between two and three feet in height, grown in six inch pots, each of them carrying a single large flower. This system of cultivation cannot be too highly recommended to those who require material for the front ranks of exhibition groups or for home decoration. The great drawback to the value of Chrysanthemums when grown to produce large blooms, for decoration within the mansion is undoubtedly the huge size of the pots which are employed. By striking cuttings in March a six inch pot may be made to fulfil all the wants of the plant and by limiting each plant to a single bud a grand bloom is forthcoming. This system is practised with conspicuous success by Mr. Wells. Cuttings are struck in boxes late in March, and potted up into large sixties as soon as they are well rooted. From this size they are transferred to a six-inch, in which they flower.

That grand new yellow Jap., Calvat's Australian Gold, answers to this method of treatment most readily, and although the blooms had lost their pristine splendour when we saw them we could see what splendid material they had been. Mr. Wells has a large stock of this, and we have no doubt from the merits of the variety that it will be needed to supply orders. Mons. Chénon de Léché (Calvat) is, without doubt the most popular variety sent out last year. The charming rosy buff hue the blooms exhibit, and the characteristically upturned tips of the florets is at once charming and conspicuous. Both it and that grand white Souvenir d'une Petite Amie do well in small pots.

Show Blooms.

Taking into account the richness of the collection with regard to number of varieties it is obvious that with the space at our disposal we can only mention a few of the *creme de la creme*. Chas. Davis, Viviand Morel, Louise, Phoebus Graphic, President Borel, Oceana, Col. Chase, Thomas Wilkins, Etoile de Lyon, and John Shrimpton, are all well known Japanese varieties and as such will not require detailed description. It must suffice to say that they have been in excellent form with Mr. Wells this year. Mrs. Hermann Kloss throws a huge bronzy orange and chesnut flower that must be included if only for the sake of its colour. Mrs. H. Weeks has done remarkably well; here we get a large white or delicate flesh-pink flower according to which bud is taken, with massive incurving florets. Edith Tabor, as a yellow, has few to equal it, and certainly none to surpass it. Edwin Bevan is not so often met with as it might be. It is certainly one of the best of the late varieties, and exhibits a deep crimson-cerise hue that is most brilliant and striking. Silver King is a huge rosy mauve flower, with very broad and rather flat florets. Its greatest fault is that it is a veritable Goliath in stature. Decidedly a novelty is Autumn Leaves which has a medium-sized creamy-white flower splashed and striated with ruddy bronze. Latest Fad, a similar departure is mottled and splashed crimson and bronze upon a yellow ground. Both these varieties are decidedly pretty. Le Moucherotte is rather later this year in coming to its best, but there is no mistaking the charm of its bronze-gold florets which droop over prettily in their later stages. With Mrs. J. Lewis, a gigantic white form which received an A.M. at the hands of the R. H. S., and a F.C.C. from the N. C. S., at the commencement of the present exhibition season we must leave the "Japs.," and pass on to the consideration of the

"Incurves."

J. Agate is one of the first selections for a white variety, but it is a pity that it grows so exceedingly tall on the slightest provocation. Ma Perfection a new white, was not so well incurved here as we have seen it elsewhere. Sir Trevor Lawrence on the other hand was carrying exquisitely shaped blooms which needed little or no dressing. Harold Wells, a creamy-yellow sport from Sir Trevor Lawrence is of faultless form, although we noticed that it is scarcely contented for one of the blooms was showing a tendency to revert to the earlier white form. Such is Chrysanthemum nature, however. Jeanne d'Arc, D. B. Crane, Mrs. Airdrie, Globe d'Or, C. H. Curtis, Lord Wolseley and the Queens were all represented by first-class samples.

Singles.

For some time past Mr. Wells has taken a great interest in these, and he has given us some of the handsomest varieties we have as the result of his labours. Jane is a pure white, with long and narrow rag florets. Its yellow form is a beautiful flower but of rather inferior constitution. Bessie Rice, vermillion scarlet; Miss Annie Holden, bronzy-yellow; Mayblossom, crimson maroon; and Miss Wolsey, crimson cerise, are all very pretty and well worth growing. The old varieties, Miss Mary Anderson, and Purity have been the parents of all the singles Mr. Wells has sent out, although both these two varieties have not yet been surpassed in beauty and general utility by any of their progeny. That charming little form Miss Rose must not be left out in the cold. For conservatory decoration in small pots it has yet to be beaten.

ST. JOHN'S NURSERIES, PUTNEY.

It is really astonishing how great the demand for cut Chrysanthemums has become of late years, so great indeed that not a few market growers pay special attention to its cultivation for this purpose. Of this number Mr. George Stevens is one of the most conspicuous members, and his establishment at St. John's Nurseries, Putney, affords accommodation for many thousands of plants, grown solely for the purpose of supplying his various florists' shops with the necessary materials.

It must not be supposed however that a market plant simply means one which has been grown bush fashion, with very little or no disbudding. On the contrary we found very many plants bearing really fine flowers that would have done credit to any show table in the kingdom. Large blooms of this kind command a ready sale, for although they may not be so graceful and elegant as the smaller ones there is no getting away from the fact that they possess a most imposing individuality, and a charm and effect entirely their own.

Madame Carnot has done well with Mr. Stevens, as indeed it seems to have done in most places. Some magnificent blooms of it were much in evidence. During the last few weeks owing doubtless, in great measnre to the prevailing cold and wet, the plants have shown a tendency to develop mildew. Edwin Molyneux, once the very best of its kind, is a most intractable subject, and really seems, as Mr. Stevens says, to have run itself out, owing no doubt to the persistency with which it has been cultivated. Such is the penalty of fame. Than Source d'Or there is no more useful variety in cultivation. On bush plants which are not subjected to disbudding the blooms appear in large graceful sprays of bright orange that are very handy for cutting. It pays, however, for a certain amount of disbudding, although it is not a success as a large flower. Chénon de Léché comes best at Putney on terminal buds, for then the blooms possess a much richer and better colour.

W. H. Lincoln has not done quite so well as last year. It wants a bigger pot than we have given it said Mr. Stevens—a 12 in. size is what it really needs to do it well. Some very fine specimen flowers of President Borel, John Shrimpton, and Phoebus attested the value of these varieties and their undeniable claims to inclusion in every up-to-date collection. Autumn Tints sent out by Mr. H. J. Jones in 1893 is at once a pretty and distinct form. The florets are long, drooping, deep yellow in colour, heavily splashed, and suffused with crimson. The whole bloom indeed bears a close resemblance to the vivid tints put on by some autumnal foliage. Florence Davis was represented by a large batch of excellent material, This variety finds an exceedingly ready sale, for in addition to the demand there always is at this season of the year for white flowers, the gracefully curling and twisted florets form an additional charm, and the blooms sell with exceptional rapidity. A sport, as yet unnamed, from this variety which Mr. Stevens has, promises to be a good thing. The blooms are white as in the parent with just a suspicion of green about them, but the florets are long, narrow, and tubular, and the whole flower thus possesses a spidery appearance which is most facinating. Amos Perry is a golden-yellow Jap. that has been giving an excellent account of itself this season.

Amongst the incurved section Baron Hirsch appeared to great advantage, although rather duller in hue than we have seen it in other districts not so surrounded with smoke. The Queens likewise are very popular, and are grown well by Mr. Stevens.

Late flowering varieties are a special feature of the establishment, and one might travel a great way before seeing a batch of plants to equal in promise those at St. John's. There are about 1,200 plants of L. Canning alone. They are all wonderfully equal in height, running to about 3 ft., and they have been grown naturally, without stopping or disbudding or any such thing, they are bushy specimens thickly set with buds that will be a mass of flower in January and February. Eight-inch pots have been allowed the plants, and they have certainly made the most of the space. Elsie is also grown in considerable quantity for it does well as a late bloomer when treated in the same way as L. Canning. Just now the plants are being very carefully looked after, in order that they may come on gradually, for as more than one cultivator has learned by experience there is a penalty to pay if Chrysanthemums are hurried on too much.

EARNOCK, LANARKSHIRE.

There are probably few places in the West of Scotland more worthy of mention than Earnock, the seat of Sir John Watson, Bart. The arts of horticultural and landscape gardening have been prominently and effectively employed in contributing beauty and elegance to this lovely residence. The natural features lend considerable aid in giving expression to the best combinations of the artistic mind. The pleasure grounds which are of considerable extent may be fairly termed as composed of two distinct kinds of scenery. That which forms the immediate vicinity of the mansion embraces the quiet and peaceful repose, which results from the presence of wide sweeping tree and shrub covered lawns, and is so intensely suggestive of the old English manorial seat. The other part is more in character with our own Scottish landscape scenery and embraces in a modified measure, the delineations of that grandeur and nobility peculiar to the scenery of a highland glen. These too strongly contrasting

features of the landscape are rigidly and masterfully confined each to its own sphere.

The mansion is situated on the face of a gently sloping lawn amid noble specimens of old knarled and lichen covered Oaks, Chestnuts, and other fine trees and ornamental shrubs. In the close environments of the mansion, large clumps and parterres of the finest types of hybrid Rhododendrons form very conspicuous and important features in the decorative arrangement. To form an approximate idea of the extent to which this beautiful shrub has been used here, it is only necessary to say that we understand, Sir John Watson has expended some thousands of pounds on this well worthy subject. Over and above this, the soil being naturally of a heavy clayey texture, necessitated very material alterations and additional expenditure. They thrive uncommonly well, and truly little imagination is needed to conceive the brilliant effect which must be displayed in their season of inflorescence.

is so well shut off from the other, that the visitor is quite unprepared, in his brief transition from the latter, for the picturesque scene, that all at once opens out on the view. From the lawns and shrubberies that surround the mansion, he enters on a scene so unexpected, and so little anticipated in the features of the antecedent scene, that his highest admiration is excited.

We will not endeavour to describe the happy combination, for we feel we cannot give them adequate justice. Let it, therefore, suffice to say, that this part owes much of its characteristics to the attrition of ages on rock and stone by the agency of a tortuous stream which rumbles deep down through the dell. The water-course is bridged across in appropriate places by rustic structures that give access to a highly romantic part of the dell and Pinetum on the opposite side.

The conformation of all the parts on either side, notwithstanding the irregular and sharply defined

"The Martyr's Trees" that occupy a prominent position in the dell. They point out the place of sepulture of three fugitive covenanters from the eventful battle of "Bothwell Brig." By reference to a tablet with inscription detailing the tragic incident, and erected near the spot by Sir John Watson, we are told that on the eve of that day, two brothers and another were here overtaken and shot. A very interesting seedling from one of these trees, about 4 ft. or 5 ft. high, and about as many inches in girth grows on a wall quite near, and is ascertained to be, whatever more, 150 years old. It certainly affords a striking instance of the tenacity of life this species of Pine inherits.

As might be anticipated from what has been already said, the glass edifices at Earnoch are well in evidence. In adddition to the two large vineries and the Peach house, there is here a fine Palm house which contains a beautiful and varied assortment of large and small Palms, and a large plant

THE CONSERVATORY, EARNOCH, LANARKSHIRE.

Together, with an exquisite fountain which perpetually plays on the lawn, we were much interested in some herculean statues of historic subjects that were in appropriate situations, and among these we observed notably "The Bruce" standing beside his charger conversing, evidently with the Abbot of Inchaffrey; "The collapse of the courser of Mazeppa"—"Like a storm through the valley they fly,—like the storm which up-piled in the mountain depths lie—like the thunderbolt free"; and Mazeppa as king of the cossacks, soliciting the aid of Charles XII. for the independence of the Ukraini, in the act of presenting some luscious fruit from his wallet to this celebrated king. Each of these models weigh from five to seven tons, and are hewn out of solid stone.

The other part of the grounds is perhaps the most attractive to the horticulturist, and not the less so to the antiquary and the admirer of nature.

The glass structures, flower garden and Pinetum fittingly occupy their respective places in this portion. As already stated, this part of the ground

nature of the dell, as well as the strongly introduced element of art, results in the production of an intensely agreeable and harmonious whole. On one of the outstanding prominences, the conservatory (see illustration), a large ornamental structure is built, and surrounded by trees and choice Coniferae. We noted here three of the largest Irish Yews we have ever met with, and also a gigantic Ghent Azalea. From all parts of the dell, this elevated structure has a very imposing and picturesque appearance. It was filled with over four hundred Chrysanthemums of large size, with exceptionally large blooms.

The Pinetum forms a goodly part of the dell in this neighbourhood and is composed of comparatively young trees, but for vigour and robustness they cannot be excelled—a fact that clearly indicates the adaptability of the soil and situation for this beautiful class of ornamental trees. No better proof of this could be advanced than that furnished in the case of a fine specimen of Taxus adpressa which is here, as well as in that of three giant Scotch Firs called

stove full of choice and rare plants; among others is an excellent plant of the noble Palm, Stevensonia grandifolia, and also the finest batch of the graceful Adiantum farleyense that we have seen for many a year.

Besides these, there are several other structures such as ferneries, greenhouses, Melon and Tomato houses, Azalea and intermediate houses, etc.; and in the process of construction, a large, span-roofed pit for forcing Strawberries and French Beans.

Mr. Moir, the head gardener, is an enthusiastic horticulturist and worthy of the responsibilities which here devolve upon him, and seems to be singularly successful in interpreting and carrying out the conceptions of his liberal employer. He has a full share of the comforts which all the employees on the estate of Earnoch enjoy, and we feel it our duty in connection with the welfare of the profession to make reference specially to the very excellent character of his house. In size, elegance of design, and internal and external convenience, it possibly has few equals. The surroundings are tastefully laid out with the finer species of Coniferae.—*D. Chisholm.*

CHRYSANTHEMUM SHOWS.

JERSEY.—*Nov. 4th and 5th.*

THE Chrysanthemum show, held under the auspices of the society of Jersey gardeners, was opened in the Oddfellows' Hall, on the 4th inst. by Sir George Bertram, who said that during the last twelve years there had been decided progress in Jersey in matters horticultural. Many more people now took an intelligent interest in gardening, and he thought it was due in a very great measure to the formation of that society. In speaking of the acclimitisation of plants, he said he had proved that many could be grown on the island with little or no protection. In his life he had had two hobbies, cricket and horticulture. Circumstances compelled him to give up the former and cling to the latter.

Special prizes offered were fairly numerous, one being for twenty-four Japanese blooms and twelve incurved. The first prize, a silver cup, was secured by Mr. J. Le Piez, gardener to N. Allain, Esq., Blanc Pignon, with a magnificent lot. Mr. Palmer, gardener to R. B. Colley, Esq., and Mr. G. H. Ebdon, took the second and third prize respectively. Mr. Richardson, gardener to P. Bailhache, Esq., secured the silver cup offered for two Japanese, two incurved and two pompons, trained specimens. Mr. J. Le Piez carried off the first prizes in two other special classes. For a dinner table laid for eight persons, with Chrysanthemums and foliage, Mr. E. Bull secured the dinner set of fifty-six pieces. Other useful articles were also competed for. Prizes were offered to elicit the production of show boxes better adapted for the purpose than those in use, and Mr. J. Le Piez was again first, but the judges considered his plan no improvement on the boxes in use.

Mr. A. J. de Ste Croix, gardener to G. H. Hammond-Spencer, Esq., had the best group of Chrysanthemums, with an edging of green. Mr. J. E. Williams, Jun., gardener to T. L. De Faye, Esq., showed the best group with foliage. Mr. W. Nicolle, gardener to Col. Turner was first for a smaller group. A special prize for seven fine baskets of Chrysanthemums fell to the lot of Mr. J. Ereaut, of The Beeches, Wellington Road. Mr. W. Richardson secured the first prizes for one incurved, one Japanese and one pompon respectively. Mr. J. Le Piez had the best eight plants in 6-in. pots; and Mr. C. F. de Ste Croix had the best three. These two gardeners won a large number of prizes, but Mr. J. Le Piez, having gained the highest number of points in the Chrysanthemum classes, was awarded the N.C.S. Jubilee Bronze Medal. He was accorded three First-class Certificates for various exhibits; and Mr. J. Batho had one for twelve Cannas. Mr. E. J. Ashelford and Mr. H. Batho are the hon. secretaries, and the show gave them credit.

[We regret that this got crowded out for want of space last week.—ED.]

ASCOT.—*Nov. 4th and 5th.*

THE entries here were nearly double the number of those forthcoming last year, and the show as a whole was undoubtedly the best that has been held at Ascot for many years. Generous support is accorded to the society from many of the local gentry, and both the patrons and the secretary are therefore suitably rewarded by the success of the undertaking.

The premier award for twenty-four Japanese blooms was borne off by Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate, with a fine lot of samples. There was a keen fight for the second place, and although Mr. Thomas Dennes, gardener to W. S. Cookson, Esq., Binfield Park, Bracknell, won, very little separated him from the claimant of the third prize, Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester.

There were nine entries in the class for twenty-four "incurves" of distinct varieties. Here also the first award fell to the lot of Mr. C. J. Salter, who had a remarkably even lot of blooms. Mr. W. Salter was second; and Mr. W. L. Farmer, gardener to H. P. Laschellas, Esq., Highams, Windlesham, third.

In the smaller classes for cut blooms, eighteen "incurves" and eighteen Japs. were best shown by Mr. Lane, gardener to Miss Durning Smith, King's Ride, Ascot. Mr. Wilson, gardener to R. C. Christie, Esq, Rihsden, Updown Hill, Bagshot, was first for twelve "incurves," distinct; and also for a similar number of Japanese, showing some excellent material in both cases.

Four trained specimen Chrysanthemums were best shown by Mr. J. F. Paul, gardener to Mrs. Bowring, Forest Farm, Windsor, whilst the leading group of plants was shown by Mr. W. Lane. Mr. W. L. Farmer was credited with the first prize for a group of miscellaneous plants occupying a semi-circular space of 6 ft. diameter.

Mr. W. Lane submitted the best collection of nine distinct kinds of vegetables. In the class for a collection of vegetables in which the prizes were offered by Messrs. Sutton & Sons, Reading, Mr. G. Worsfold, gardener to E. D. Mansfield, Lambrook, Bracknell, led the way.

HARROGATE, *November 5th.*

THE second annual show of the Harrogate Chrysanthemum and Paxton Society was held in the Drill Hall, Harrogate, on the above date. The number of entries did not nearly approach that of last year, the reason, no doubt, being that Harrogate growers are well up in their work. This, I think, many from a distance found out last year, more especially in the cut bloom classes; and the results probably damped their ardour a little. The main class was for groups of Chrysanthemums, arranged in 60 ft. superficial space, in the form of a half circle. There were three entries, where last year there were five. The leading prize was taken by E. Becket Faber, Esq., J.P., Belvedere, Harrogate. Mr. J. G. Pettinger, Strawberry Dale Nurseries, took the second award; and Mrs. Whitham, Stafford House, Harrogate, came in third. E. Becket Faber, Esq., again took the lead in the class for a group of miscellaneous plants arranged for effect in a space not exceeding 100 square feet. He was also first for a group not exceeding 60 square feet. Mr. Townsend, Mr. J. Foxton, and Mr. J. G. Petinger also took prizes in these three groups, but were unable to beat E. B. Faber, Esq., with the great resources at his command. The groups generally would have done justice to a much larger show.

Mr. Anderson, gardener to A. Milnthorpe, Esq., of Cattall, Harrogate, took the leading honours in the cut bloom classes for thirty-six varieties of Chrysanthemums (eighteen incurved, and eighteen Japanese); and took several first prizes in other classes. Specimen plants of Chrysanthemums were well represented, as were bouquets, sprays, and baskets of flowers. Apples were also a noticeable feature. A band of music played at intervals; and this, accompanied by Mr. Nicholson, the Yorkshire humourist, pleased the general public after the groups and cut flowers had been inspected.

PLYMOUTH, *Nov. 10th and 11th.*

THE West of England Chrysanthemum Society held its annual exhibition in Plymouth Guildhall, on the above dates, and judging by the high-class character of the exhibits and the large numbers who visited the show, the committee certainly have every reason to consider their arduous labours are duly appreciated; and whilst giving a grand display to the public, have certainly in a large measure assisted in developing the superior culture of this truly "Queen of Autumn" flowers. Messrs. Wilson and Damarel, the busy secretaries deserve a word of praise, for they have again brought to a successful issue one of the finest shows ever held in the west of England. The fact that so many societies are able to secure the finest hall in our towns and cities for show purposes speaks volumes for horticulture, and that they continue to hold the exhibitions in them speaks well of gardeners, and all connected with the show. This fact was forcibly impressed upon us when standing on the platform just after the judging was over, and gazing upon the masses of colour, whether of fruit or flowers, or uniformly and well-balanced groups that filled both sides of the hall. Pleasing, certainly; artistic, to be sure it was; useful without a doubt, and if so much could be spared to be exhibited, how much more must have remained at home to decorate the many mansions and conservatories whence they were brought. So may it be for many years to come, and may the exhibits ever improve in number and quality; but what an advance to the old shows at the Manor Rooms, Church Street, Stoke Newington, of some forty years ago, and the incurved blooms Mr. James used to exhibit in the windows of the Rochester Castle. I remember them well and am astonished at the advances made, and still we are progressing.

The groups were very effective, that of C. Watts, Esq. (gardener, Mr. S. Chilwell) being awarded first —a tasteful arrangement—flowers and foliage well intermixed and yet light and attractive. Mr. J. Webber, of the Vinstone Nurseries, Plymouth, was a good second, having also grand blooms but lacking somewhat in arrangement. The third group, also a good one, was exhibited by Admiral Parker. Other winners of prizes for groups were C. Norrington, Esq., first, with good blooms and well staged; J. Webber, Esq., second; and C. Hosking, Esq., Compton, third.

For cut blooms of forty-eight Japanese, not less than twenty-four varieties, Mr. Foster, gardener to H. Hammond-Spencer, Esq., was first with blooms of superior quality and freshness. Very fine were Madame Carnot, Mons. Chénon de Léché, a wonderful bloom, Mutual Friend, Robert Owen, Primrose League, Australie, Miss Elsie Teichman, Mr. J. Hollingsworth, A. H. Wood, Mme. Ad. Chatin, well up; John Seward, Beauty of Castlewood, Charles Davis, and Mons. Panckoucke. The second prize was secured by Mr. Page, gardener to G. B. Fortescue, Esq., Boronnod, whose blooms were also fine but rather less in size. The third prize went to Mr. Styles, gardener to Miss Fripp, Teignmouth; many excellent blooms were to be seen in this exhibit also.

H. Hammond-Spencer, Esq., was again first with twenty-four incurved blooms, well set and fresh; H. E. Murray, Esq., second; and Miss Tripp, third. With twelve Japanese the Rev. E. Hutchins, Teignmouth, was first; Sir J. Jenkins second; and the Misses Carew third. H. Hammond-Spencer, Esq., was first in classes for six Japanese, any colour, and also six incurved any variety, other successful exhibitors being G. B. Fortescue, Esq., Miss Tripp, and Mrs. Bridson. For twelve large flowered Anemones, G. B. Fortescue, Esq, was first; the Rev. E. Hutchins second. Six specimen plants, three, and single plants besides single Chrysanthemums were numerous and good, first prizes being taken by G. Hoskins, Lady Blatchford and S. H. Phillips, Esq. The latter gentleman was first also for twelve and six single, and six semi-double Primulas, twelve Cyclamen and six zonal Pelargoniums, good plants being shown in each class. Dr. Aldous was first for six Orchids having Cattleya labiata, Oncidium Rogersii and O. Crispum among his best plants. A grand display of Orchids was made by Mr. Hodges, of Argyle House, Plymouth, filling up a large space at the end of the hall. He had splendidly flowered plants of C. labiata among them being several of exceptional merit both as regards colour and size of bloom. Oncidium tigrinum also was well represented whilst in the centre was a well-flowered plant of Cycnoches chlorochilum with its quaint yet interesting swan-like flowers. Arching over all were many Dendrobium Phalaenopsis in various shades of colour, the whole well interspersed with light and feathery Ferns and foliage.

Apples and Pears were numerous and well coloured, a little smaller in size to what is often the case down here. Miss Fripp was first with twelve dishes, six of Apples and six of Pears; Admiral Parker second; and F. Bradshaw third. Blenheim Orange was well shown by Mr. T. Steward, Saltram Gardens, beating several competitors. Other first prize winners of fruit were Mr. F. Bradshaw, for Cox's Orange Pippin; Admiral Parker for King of the Pippins; Rev. J. Hall-Parlby for Rihston Pippin; Mr. E. Allen, for Marie Louise Pear; Mr. J. J. McAndrew, for Duchesse d'Angoulême; and Admiral Parker for Beurré Clairgeau. C. Norrington, Esq., was first for Black Grapes; Lady Blatchford second; and Miss Fripp third.

Mr. W. J. Godfrey, Exmouth, had a fine display of cut blooms, also Carnations and zonals. Messrs. R. Veitch & Son, of Exeter, staged a collection of Apples and Pears. Messrs. Slater, Exeter, also exhibited a fine lot of fruit; whilst Messrs. Jarman, of Chard, Smale of Torquay, Messrs. Lethbridge & Westlake, of Plymouth also showed fine stands of vegetables, flowers, fruit, and floral designs. In the competing class, however, for the latter, Mr J. Tomlinson, Devonport, who was first, had a very meritorious display. On the evening of Tuesday, Mr. Smale of Torquay, lectured to a large crowd in one of the rooms adjoining the Hall on the "Cultivation of the Chrysanthemum," a number of lantern slides being effectively used during the delivery of the lecture.

CROYDON.—*Nov. 10th and 11th.*

THE ninth autumn show of the Croydon Horticultural Society was opened by the Mayor (Councillor Moss) accompanied by the Mayoress. There was a large attendance of visitors and the show has been fairly described as the most successful yet held by the society. Both groups and cut blooms showed a decided advance over those of last year. The exhibits of cottagers and allotment holders were again a feature.

In the open classes, the Champion Challenge Cup, value 25 gs., for thirty-six Japanese blooms, was awarded to Mr. L. Gooch, gardener to Councillor T. Wickham Jones, of South Norwood, who was the only competitor. Mr. W. Sparshott, gardener to Mrs. Hall, Park Hill Rise, had the best group of Chrysanthemums. Mr. W. J. Ely, gardener to R. Lincoln, Esq., Selhurst, was second; and Messrs. J. Winter & Sons, Bon Marche Nursery, Norwood, came in third. Mr. G. H. Cooper, Sydenham Road, Croydon, had the best four trained plants; and was followed by Mr. C. Lane, gardener to E. H. Coles, Esq., Caterham. The latter came to the front for nine foliage plants; and was followed by Mr. J. Brand, gardener to W. S. Warren, Caterham, and Mr. J. Munro, gardener to J. S. Bucknall, Beckenham.

For twenty-four cut blooms (twelve incurved and twelve Japs.) Mr. G. Prebble, gardener to M. Hodgson, Shirley, let the way with some grand samples. Mr. J. Wyatt, gardener to J. Perry, Esq., Caterham, was second; and Mr. M. E. Mills, gardener to F. Lloyd, Esq., Coombe House, came in third. The latter was first for eighteen bunches of pompons. Mr. J. Kechler, Elgin Road, had the best two vases of six blooms; and was followed by Mr. J. Epps, Jun., Upper Norwood, and Mr. T. Williams, gardener to Percy J. Reed, Esq., Radcliffe Road, in the order given.

Certain classes were open only to gardeners and amateurs within four miles of the Town Hall, Croydon. Three prizes were awarded for groups of Chrysanthemums, and Mr. R. Gladwill took the first. Mr. M. E. Mills had the best group of miscellaneous plants. The Bronze Medal of the N. C. S., for twelve incurved blooms was secured by Mr. M. E. Mills, who was followed in this case by Mr. G. Prebble and Mr. T. Williams. Mr. G. Prebble came to the front for twelve Japanese blooms; and Mr. S. Gooch was second. Mr. C. Perrett, gardener to Mr. Fuller, Duppas Hill, was the only exhibitor of six reflexed blooms, and six Japanese Anemones. Mr. M. E. Mills again took the lead for six blooms of one variety. Mr. C. Twinn was first for six Japanese blooms of one variety. Mr. G. Prebble was first in the class for six Japs., and six incurved. Mr. J. Galvin, gardener to Mrs. Davies, Purley, had the best Chinese Primulas.

Fruit classes were well represented. In the open class Mr. H. Alderman, gardener to Mr. Hatfield, Morden, took the first prize for a collection of Apples. Mr. W. Jones, gardener to J. Brougham, Esq., Wallington, was second. Mr. M. Mills was third. Mr. J. Dingwall, gardener to F. Stanley, South Norwood, was first for four bunches of Grapes. Mr. W. Jones, took three leading prizes in the gardeners' classes for Apples and Pears.

LIVERPOOL.—*Nov. 11th, and 12th.*

THE seventeenth Annual Autumn Exhibition of this society was held in St. George's Hall and was very satisfactory. The weather being fine the attendance was large. The quality of the cut blooms of Chrysanthemums was quite up to the usual standard. Fruit usually good at Liverpool, was excellent, and formed a remarkable feature of the show. The arrangements were very good, and were carried out under the direotion of Mr. W. Dickson, secretary. Cut blooms received most encouragement and were staged in large quantity.

The great class in the show was for twenty-four incurved and twenty-four Japanese Chrysanthemum blooms, distinct varieties, for which was offered the Association's Silver Challenge Vase, value 20 gs. and 10 gs. cash. There were seven competitors. The first position was won by Mr. R. C. Townsend, gardener to Col. R. S. Lloyd, Aston Hall, Oswestry. Mr. C. Osborne, gardener to Hy. Tate, Esq., Jun., The Beeches, Allerton, was second; Mr. J. Heaton, gardener to R.P.Houston,Esq.,M.P.,Aigburth,third; and Mr. Geo. Eaton, gardener to W. H. Shirley, Esq., Allerton, fourth. Mr. R. C. Townsend's stand was a remarkably fine one, with blooms possessing much merit.

For eighteen incurved, distinct, Mrs. Nicholson, Oswaldcroft, Wavertree, was first with excellent blooms including the leading varieties; Thos. Gee, Esq., Allerton was second; and A. S. Mather, Beechwood, Woolton, third. For eighteen Japanese, distinct, Mrs. Nicholson was again first; J. H. Ismay, Esq., Caldey Manor, was second; Thos. Gee. Esq., third. For twelve incurved distinct, J. W. Hughes, Esq., New Herp, Allerton, took first; and A. A. Bencke, Esq., West Derby, was second.

For twelve Japanese, distinct, E. J. Proctor, Esq., was first; H. Cunningham, Esq., Gorsey Cop, was second; and Edmund Peel, Esq., Ruabon, third.

Anemone-flowered, reflexed, and pompons were splendidly shown, the winners being Messrs. J. W. Hughes, Esq., W. H. Shirley, Esq., and John Findlay, Esq. Chrysanthemums in pots were contributed in large numbers, and exceptionally good on the whole, the principal prize-winners being J. A. Bartlett, Esq., Mossley Hill; J. G. Kitchen, Esq, Hayton; and H. Cunningham, Esq. Groups were very fine, W. H. Watts, Esq., Elm Hall, Wavertree, winning with a splendid group of good flowers and foliage, and carrying away the medal presented by Mr. H. J. Jones, nurseryman, Lewisham, and three guineas cash.

Fruit was well shown, the various classes being well filled; the Grapes were of excellent quality and numerous, likewise the Apples and Pears. Ferns and other miscellaneous plants were in unusually fine condition and well contested. Orchids were shown in greater number than usual and of the highest class, the first prize falling to H. Watts, Esq.; the second, being very close, was won by Jos. Smith, Esq., Newstead, Wavertree.

Trade exhibits were well represented "not for competition." Messrs. Thomas Davies & Co, The Nurseries, Wavertree, exhibited some fine specimens of forcing Lilacs, Rhododendrons, Staphyleas, Lily of the Valley crowns, and Mushroom Spawn, which received much attention, and for which they were awarded a First-class Certificate. Certificates were awarded to Messrs. R. P. Ker & Sons, Liverpool, for Cyclamen; to Messrs. Fishlock Bros., Liverpool, for floral decorations; to Mr. John Forbes, Hawick, for their new Carnation Yule Tide; to Messrs. John Cowan & Co. for a group of Orchids; to Mr. W. Mason, Birkenhead, for Edwardian floral decorations; and to Messrs. Dicksons, Chester, for a collection of Apples. Mr. Wm. Colchester, Ipswich, exhibited a fine stand of plants grown by his pure Ichthemic Guano. and for which he was awarded a well-deserved First-class Certificate. It received the greatest attention and was admired by all, many of the Chrysanthemum growers testifying to its valuable qualities.

The judges for Chrysanthemums were Mr. Wm. Tunnington and Mr. Garnett; for fruit, Mr. Jameson and Mr. Hathaway; and for plants, Mr. Barnes and Mr. Paul, all of whom gave the highest satisfaction.

BIRMIMGHAM.—*Nov. 11th, and 12th.*

A GRAND display was forthcoming on the occasion of the Birmingham Chrysanthemum Society's thirty sixth exhibition at the Town Hall,on the above dates. Although the falling off of the exhibits with regard to number was to be regretted it was fully compensated for by the high quality of the material on view. Cut blooms, especially the Japs., made a brave show, as did also the groups and specimen plants. The vegetables, too, were characterised by exceptional merit, and with their producers were well deserving of a note of praise.

The "incurves" came out strongly, and Mr. J. Copon, gardener to Mrs. Phipps, Northampton, staged a weighty two dozen, winning thereby the first award. W. Tunnington, J. Agate, Mrs. R. C. Kingston, Lord Alcester, and Queen of England were some of his finest samples. Mr.C.Crookes, gardener to the Dowager Lady Hindlip, Droitwich, was second; and Mr. J. H. Goodacre, gardener to the Earl of Harrington, Derby, third.

Two dozen Japanese blooms were best shown by Mr. W. Pearce, gardener to S. Loder, Esq., Weedon, who thus headed the list of the twelve competitors for honours. He had Silver King, Mrs. Chas. Blick, Thos. Wilkins, International, Graphic, Miss Elsie Teichmann, Rose Wynne, and President Borel, in excellent order. Mr. C. Crookes followed in the second place, to be followed in turn by Mr. W. H. Lees, gardener to F. A. Bevan,Esq., Trent Park, Barnet.

Mr. C. Crookes improved his position for eighteen "incurves" by coming out first. Included in his set were fine samples of Miss M. A. Haggas, Brookleigh Gem, and Jeanne d' Arc. Mr. Lees contributed the best eighteen Japs. Madame Carnot, Phœbus, International, Modesto, Chénon de Léché, Australie, and Etoile de Lyon were a few of his leading blooms, although all of them were very fine. Another first, this time for twelve "incurves," was carried off by this well-known exhibitor. Mrs. R. C. Kingston, Robert Petfield, Bonnie Dundee, Major Bonaffon, J. Agate, and M. P. Martignac, were represented by grand samples.

There were eight entries for groups, each occupying an area of 100 square feet. Mr. O. Brasier, the gardener to Lady Martineau, Edgbaston, was the most successful competitor here, Mr. J. O. Macdonald, gardener to L. H.Kendrick, Edgbaston, was second; and Mr. W. Thomson, gardener to A. Whitfield, Esq., Molseley, third. For the smaller group, occupying forty square feet, Mr. Maldrem, gardener to G. Cadbury, Esq., Northfield, was placed first.

In the vegetable classes, Mr. Pope, gardener to the Earl of Carnarvon, Highclere, was very successful being credited with the first awards for Messrs. Sutton & Sons', collection, and also for Messrs. Webb & Sons', Stourbridge, collection. Mr. E. Winchester, gardener to F. Impey, Esq., Northfield, led the way for the collection in which the prizes were offered by Messrs Pope & Sons.

In the fruit classes Mr. Harris, gardener to Lady Somerset, Ledbury, scored a first for six bunches of Grapes, and Mr. Herman, gardener to the Earl of Denbigh, Lutterworth,showed the best three bunches of Muscats. Mr. T. Kean, gardener to F. Williams, Esq., Barford, had the best eight dishes of Pears; and Mr. Bannister, gardener to H. St. Vincent-Ames, Esq., showed the most meritorious six dishes of dessert Apples.

The miscellaneous exhibits included contributions from Messrs. Thomson & Co., Spark Hill; Mr. R. Owen, Maidenhead; Messrs. H. Cannell & Sons, Swanley; Mr. W. J. Godfrey, Exmouth; and Messrs. Perkins & Sons, Coventry.

CANTERBURY.—*Nov. 11th and 12th.*

THE annual show of the Canterbury Chrysanthemum Society was in every respect an advance on the previous year, both in quality of bloom and number of exhibitors. In the class for twelve Japanese varieties, the leading honours were secured by Mr. E. Hazelden, who was followed by Mr. H. Hickman and Mr. J. Hazelden, in the order given. Mr. A. Southam had the best stand of six Japanese blooms and was followed by Mr. H. Hickman. Specimen plants were fairly numerous, and the prize-winners were Messrs. T. Norris, A. Elvey, J. Couchworth, W. Summers, R. Noble, H. Hickman, and E. Hazelden. Incurved varieties were also well represented, and the first prize for twelve blooms, distinct, was taken by Mr. E. Hazelden, who was followed by Mr. J. Hazelden. Mr. A. Southam and Mr. G. Lucas were first and second, respectively, for six incurved sorts. Mr. H. Hickman showed the best twelve reflexed blooms; and Mr. E. Hazelden was second. Groups of Chrysanthemums with foliage plants, arranged on an area of 54 square feet, were exhibited by Mr. E. Hazelden, Mr. H. Hollman and Mr. J. Hazelden, who took the prizes in the order here indicated.

Amongst vegetables, the Potatos took a prominent position and were excellent in quality. A plate of the Snowdrop variety was the best in the show. Apples were well to the front and in good variety. There were three competitors for the prizes offered by Messrs. Sutton & Sons, Reading; and seven for those offered by Mr. M. Greenwood, Canterbury. In all cases the samples staged were very good.

Miscellaneous groups were exhibited by Messrs. E. J. Dines, A. Ebury, Lucas, and E. Hazelden. Mr. Geo. Mount, Canterbury, had a magnificent lot of fruit not for competition, and very tastefully arranged. Mr. Greenwood had a good assortment of horticultural sundries on a stall, prominent amongst which was to be noticed Ichthemic Guano; other things were budding and pruning knives, tree labels, insecticides, &c.

DUNDEE.—*Nov 11th and 12th.*

This show was not quite up to the average in respect to cut blooms, but in the pot plant classes the exhibits were, however, better than usual. In the class for thirty-six Japs., only two entered for competition the first prize being taken by Mr. Alexander Macdonald, gardener to Mrs. Stephen Endsleigh, whilst Mr. George Ruckbie was a close second. The colours were good in this entry, although the blooms were not so large in the first-named. For twenty-four Japs. Mr. John Bell, gardener to Sheriff Robertson, Burnside, Forfar, was first with large and well-coloured specimens. There were eight entries, and a good competition resulted. The incurved section was neglected, and nothing of any special note was shown, although the competition for twelve six was good. The chief prize for six vases of three blooms each of decorative varieties were taken by Mr. David Keeler, gardener to J. More, Esq., Smeaton, Seabourne, Broughty Ferry, with blooms rich and bright, closely followed by the entry of Mr. David Nicoll, Rossie, Forgandenny. The bouquets, sprays, and baskets showed exquisite arrangement, and formed a special feature, these classes being judged by ladies. Mr. W. Kerdin, gardener to Ex-Provost Ballangall, Ardarroch, Dundee, scored in the principal class for pot plants having for threeyears in succession secured leading honours. No one appears able to touch him in this department, and we congratulate him on his continued success. Leeks were excellently shown in the vegetable department. We are indebted to Mr. Macher, of Corona, Broughty Ferry, for our report.

CARLISLE.—*November 11th and 12th.*

The first annual exhibition has received excellent support, and the results are very satisfactory and encouraging. For four plants of Japanese varieties The Orchard Co., Scotby, were placed first. Mr. James Tait was second. Mr. G. Fairbairn, nurseryman, Botcherby, contributed the best group of Chrysanthemums and foliage plants. Mr. James Hay, The Gardens, Houghton Hall, Carlisle, secured the leading award for twelve "incurves," Mr. G. Fairbairn taking the second place. The last-named exhibitor was first for twenty-four Japanese, with splendidly coloured blooms. Mr. E Horne, The Gardens, Nether Hall, Maryport, received the second award; and Mr. John Potter, The Gardens, Whitehall, Mealsgate, the third.

Two bunches of black Grapes were best shown by Mr. William Stuart, gardener to Sir Wilfred Lawson, Brayton Hall, who also led in the class for two bunches of white Grapes, showing well finished samples in both cases.

Messrs. Dobbie & Co., Rothesay; Messrs Little & Ballantyne, Carlisle, Messrs. Hammond Bros., and Mr. Ivison, florists, also contributed trade exhibits in the way of fruit, floral trophies, and decorations. A bouquet contributed by Messrs. Hammond Bros., was exquisitely executed. We shall be able to say more of these matters next week, but, meanwhile congratulate the committee upon the success that has crowned their efforts. Rain fell on the opening day. The above was wired us last week but unfortunately was crowded out. What follows is a second notice of this important show.

Special credit is due to the energetic and courteous secretary Mr. Sale and his committee for the excellent manner in which they carried out the arrangements of the show.

The Drill Hall in which the show was held was divided into three divisions. In the front of the platform, Messrs. Little & Ballantyne, Queen's Seedsmen, had on exhibition a very large group of Chrysanthemums and foliage, with fruit and vegetables arranged along the sides. The centre table was occupied by Chrysanthemums in cut blooms and grouped with effect, the principal winner being Messrs. Fairbairn & Son, Botcherby, who were awarded first; and for twenty-four Japs. they gained the N.C.S. Jubilee Medal. For twelve blooms they were also awarded leading honours. In floral decorations, Messrs. Hammond & Son occupied the premier position, and their bridal bouquet and Chrysanthemum basket were special features of this section. For a very tastefully arranged epergne Miss Dargaval, of Wheatley, was awarded first; Messrs. Hammond & Son second.

In the display of a table of British and foreign fruits, the space was rather limited and owing to the great variety of subjects embraced by the exhibit, it made a splendid feature of the show as the quality of the fruit and laying out of the tables were excellent. Mr. W. T. Ivison, fruiterer, was first; Messrs. Hammond & Son second. Some splendid fruit was shown, principally Grapes, Mr. Stewart, Brayton Hall, and The Orchard Co., Scotby, being the principal winners. The latter firm had a very attractive display of Grapes, wreaths, sprays, etc. The classes devoted to vegetables were very good, Mr. M. Fry, Holm Hill, securing principal honours in this department.

Messrs. Dobbie & Co., Rothesay, showed an excellent table opposite the main entrance. The cut blooms staged by this firm were exceptionally fine, a well-coloured, James Bidencope being particularly noticeable. Lady Esther Smith, a pure white, was also shown in excellent form.

Sir Wilfred Lawson's gardener, Mr. Stewart, whose name figured frequently in the prize list, staged a pair of magnificent Palms in 10-in. pots, Kentia belmoreana and Areca sapida both giving evidence of high culture and grand health.

Claude Lonsdale, Esq., is the president of the society, and his presence and influence at the show did much to emphasise the undoubted success which this young society has attained. The committee included a list of some sixty names, and if safety exists in numbers the Carlisle Society certainly starts with all the elements necessary to prolonged popularity and usefulness.

LEWES and DISTRICT.—*Nov. 11th and 12th.*

The annual show in connection with this took place in the Town Hall and Corn Exchange. There was a good show, most of the classes being well represented. The groups which were arranged round the rooms had a very pleasing effect, and these together with the numerous exhibits not for competition made quite a show of themselves. A large group from Mr. Kenward which occupied one end of the hall attracted much attention, and another from Messrs. Woollard, of Cookshridge, occupied a similar space in the Corn Exchange. While both Mr. McBean, of Cookshridge, and Messrs. Wheatly & Sons, of Malling Nurseries, staged some choice plants. In the class for a group of plants arranged for effect, Mr. J. Adams was first with a very pretty arrangement. The background consisted of light Palms, and in front of these interspersed with Adiantum farleyense and other Ferns were some choice pieces of Dendrobiums, Vandas, Oncidiums, etc. The groups of Chrysanthemums did not present that stiff appearance as is so often seen. In this class Mr. C. Funnell, gardener to Mrs. Thorne was first. This also gained the Bronze Medal of the National Chrysanthemum Society. For twelve untrained plants Mr. Stidworthy was first.

Cut blooms were very good, the first prize for twenty-four Japanese going to Mr. J. Harwood; while Mr. Coles took first for twelve, six, and six of one variety. Mr. Sayers, gardener to Miss Cook, of Nutley, was first for twenty-four, twelve, and six incurved, and six of one variety, all of which were shown in good form. There were many classes for vases and table decorations. Primulas, Cyclamen, etc., all of which were well contested.

Fruit was good, Mr. Hopkins, of High Cross, being first for Tomatos, and three dishes of Pears; While Mr. Thomas, of Wannock, gained the primary honours for Apples.

There was a strong competition in the classes for vegetables. The collection of eight varieties brought out eight competitors, Mr. R. Wheatley of Lewes being first, and Mr. C. Watkins, of Glyndebourne, second. For Messrs. Sutton's prizes, Mr. Tourle was first with well-grown stuff.

Potatos and other vegetables were well shown. For a collection of the former Mr. J. Morley took first with a very creditable lot.

The weather being fine there was a good attendance, the takings at the door exceeding that of former years, thanks to the energy of the committee who did all in their power to make the show a success.

TUNBRIDGE WELLS.—*Nov. 11th and 12th.*

The annual show of the Tunbridge Wells Chrysanthemum Society was held on the above dates at the Sussex Assembly Rooms and adjoining Corn Exchange, which were made very gay with Chrysanthemums and horticultural produce. Exhibitors came up in strong force, entries were more numerous than last year, and the show was an improvement on its predecessors. Groups of plants were a distinct advance. Fruit, especially Grapes, were remarkably fine, and the same may be said of the vegetables. Poinsettias were very conspicuous. Mr. Norman Davis, Framfield, Sussex, exhibited the new Chrysanthemum Mrs. H. Weeks. Mr. J. Snow, The Gardens, Wadhurst Park, exhibited Dahlias. A collection of sixty varieties of Apples was shown by Mr. A. Wilson, gardener to the Marquess of Abergavenny.

In the competitive lists Mr. J. Smooker, gardener to Mrs. Hall, Broadwater, Tunbridge Wells, secured the leading prize for eight Chrysanthemums. Mr. H. Kimber, gardener to Captain Alcock, Stone Ness, Ashurst, was second. The third place was taken by Mr. J. Ovenden, gardener to W. Newbold, Esq., Broadwater, Tunbridge Wells. Mr. J. Smooker again took the lead for a group of Chrysanthemums, and was followed by Mr. G. Elmes, gardener to Major Lutwidge, and by Mr. A. Wilson, in the order named. Mr. J. Howes, gardener to Walter Cobb, Esq., Broadwater Down, Tunbridge Wells, had the finest group of plants; he also led the way for twelve Japanese blooms, twenty-four, twelve, and six incurved blooms, six Orchids, and secured several other prizes. Mr. J. Smooker had the best dwarf-trained Chrysanthemum. Mr. H. Kimber took the leading prize for a dwarf-trained Japanese variety. The leading honours for twenty-four Japanese blooms, twelve cut blooms, and twelve large Anemone blooms, were taken by Mr. J. Snow. Mr. J. W. Moss, The Gardens, Kingsmead, Matfield had the best six Japanese blooms. Mr. W. Berwick, gardener to J. Godden, Esq., Fernclyffe, Tunbridge Wells, showed the best twelve Anemone blooms. The best six Poinsettias were shown by Mr. W. Austin, gardener to T. Webbe, Esq., Broadwater Down.

Fruit was well represented. Mr. T. Palmer, gardener to H. J. Metcalf, Esq., Southborough, had the best Black Grapes. Mr. J. Legg, gardener to the Rev. C. H. Boardman, Groombridge, secured the first prizes for White Grapes and one dish of cooking Apples. Mr. F. Bridger, gardener, Penshurst Place, carried off the leading awards for six and three dishes of dessert Pears, three dishes dessert Apples, six and three dishes cooking Apples, three and one dishes of cooking Pears. Mr. J. Allan, gardener to G. Hanbury Field, Esq., Ashurst, was first for one dish of dessert Pears and one dish of dessert Apples. Mr. C. Harris, East Grinstead, had the best six dishes of dessert Apples. Mr. J. W. Moss gained the leading award for twelve distinct kinds of vegetables. Mr. J. Snow, another renowned vegetable grower, had the best vegetables from seed supplied by Mr. Charlton, Tunbridge Wells. The latter showed Seakale Beet, various garden roots, and garden utensils not for competition.

GLASGOW.—*Nov. 12th and 13th.*

The Chrysanthemum Society of Glasgow held its annual show of flowers, fruit, and vegetables in St. Andrew's Hall. Since its institution three years ago, the society has made extraordinarily rapid progress, and its show may now be regarded as ranking fifth or sixth in importance throughout the United Kingdom. Much of the success which has attended the society has undoubtedly been due to the zeal and the energy of the joint secretaries, Messrs. A. Cunningham, and Thomas Wyllie. For this year's exhibition over 300 entries were forwarded. The increase was mainly in the leading classes, and, in consequence, there was a considerable expansion in the space occupied by the exhibits of blooms. In the class for thirty-six Japanese blooms in as many distinct varieties, open to gardeners and amateurs, there were no fewer than eleven entries, all of very excellent quality. Mr. Thomas Lunt, gardener to Archibald Stirling, Esq., of Keir, was awarded the first place in the class. His "Panckoucke" was an exceptionally nice and fresh-coloured bloom. "Marie Hoste" was another very choice bloom, and was well shown; while his "Mrs. W. H. Lees," named after the wife of last year's champion, was adjudged the best Japanese bloom in the show. This last, with white centre, and deepening to a bluish pink on the outer florets, was a magnificent bloom some 14 in. from tip to tip. The second prize went to Mr. James Day, gardener to C. J. Massey, Esq., of Galloway House, Garlieston, "Madame Carnot" of exceptional depth was the strong point of his hoard. His Madame Chatin also was a marvellous bloom.

Mr. Thomas Lunt was again the most successful exhibitor in the next class in importance—namely, the twenty-four Japanese blooms. Hardly a bloom on his board showed even a tinge of weakness in colour, depth, or freshness. Of the incurved varieties there was not a large show. These do not receive the same attention that used formerly to be bestowed upon them; the single decorative varieties gradually are supplanting them in favour with growers. As a matter of fact the incurved varieties being so much more difficult to bring to perfection, to some extent accounts for their loss of caste. For them Mr. Thomas Dale, gardener to John Gordon, Esq., of Aikenhead, secured the first prize, and his chaste, though somewhat prim board did him credit for the evident time and trouble he had spent over his plants. In the class for six vases of Japanese blooms, three blooms of one variety in each vase, there was a liberal entry, and arranged as they were, with a due regard to effect, they made a very noticeable feature in the centre of the hall. Mr. Thomas Dale again carried the honours in this class, with a show of blooms noteworthy alike for colour and finish. The leading award in the way of shower bouquets, made up with Chrysanthemums and variegated foliage, was taken by Mr. Andrew Forsyth, gardener to Andrew Paterson, Esq., Row. Some of the bouquets were executed with more display than judgment, for assuredly only a person of extraordinary height could have held them so as to keep them from trailing on the ground.

With regard to the pot plants generally, the entries gave evidence of careful and advanced cultivation, particularly in the trained plants and the pompon varieties. One of the finest features of the exhibition were the exhibits under Class 35, for a table of Chrysanthemums and foliage plants. Here Mr. Thomas Dale again added to his already distinguished successes. His table had a wealth of colour most tastefully arranged, and relieved with a background of choice Crotons of the narrow-leaved variety, which lightened up with tiny bits of gold what would otherwise have been a somewhat heavy design. The second prize was awarded to Mr. W. F. B. Archibald, gardener to the Earl of Home at Bothwell Castle, with a less ambitious arrangement, but nevertheless a work of art. In the fruit classes there was a magnificent display of Grapes, and four of the five first prizes offered fell to Mr. J. Leslie, gardener to A. Coates, Esq., Pitcullen House, Perth, whose name as a great vine-grower has become more or less a household word among his associates and rivals. His exhibits were a long way ahead of the next best. The show of small fruits was rather limited in quantity, but what there was of it was good.

In the vegetable department the lead was taken by Mr. James Brown, gardener to A. A. Speirs, Esq., of Houston, who was also first last year. Among the trade exhibits, Messrs. Austin & M'Aslin, of the Cathcart Nurseries, staged a very prettily arranged table, with Palms and Cocus weddeliana, which had as a foreground a mass of choice flowers from the well-known raiser, Mr. H. J. Jones, of Lewisham, for whom they are principal agents in Scotland. Messrs. J. and R. Thyne, Kelvinside Nurseries, had a magnificent table in which masses of bright yellow bloom were a striking feature, Cyclamen, and Lily of the Valley, being also prominent. Messrs. Smith and Simons, Kennishead Nurseries, and Messrs. Cunningham & Wyllie, Glasgow, had also tastefully-arranged exhibits on view. Trade exhibitors at a distance were represented by the Ichthemic Guano Company, with a reproduction of their exhibit which was awarded the Gold Medal at the National Society's Jubilee Festival and here repeated; and Messrs. W. Edwards & Son, Sherwood. Messrs. D. & W. Buchanan, Kippen, had on view a beautiful collection of vine leaves in autumn tints. Mr. R. Cockburn, The Vineries, Drumchapel, showed a fine lot of Grapes produced from vines of only two years' growth, and a good word should also be given to the luscious examples of Cockburn's No. 1 Tomato, of which there were some excellent dishes in evidence. Lady Watson, of Earnock, and Mrs. Bilsland, Glasgow, judged the vases, bouquets, and sprays; and other awards were made by Messrs. James Beisant, Castle Huntly; John Macher, Broughty Ferry; John Methven, Blythswood; and D. M'Donald, Ferguslie, Paisley.

LUNCHEON.

The customary luncheon took place at the Grand Hotel immediately after the judging, the Lord Provost presiding, with the president (Mr. D. Dewar) and the principal officers of the society on his right and left. A large company were present, many well-known horticulturists from Edinburgh and the far north being amongst the list of guests.

The Lord Provost expressed the pleasure it was to him thus early in his reign to be present at so important a function and hoped they would be spared to meet again at a similar celebration next year, his Lordship kindly promising a continuance of support in the future. (Applause, which was renewed on his Lordship's leaving the hall to fulfil another important appointment in the city).

The toast list embraced the usual loyal and patriotic sentiments. Mr. Cairns ably proposed the health of "The Judges," remarking that the present show was no unworthy successor of the two previous ones, the result being a source of pleasure to the directors, who had worked hard to bring the exhibition to a successful issue. He coupled the names of Mr. Macher and Mr. Methven, of Blythswood, and the former gentleman in responding, said that the cut blooms shown were in quality and finish all that could be desired and, indeed, were far beyond the average. Mr. Methven spoke to the general excellence of the fruit department which he had judged as being of A1 quality throughout.

Mr. Robt. Laird, of Edinburgh, submitted the toast of the Glasgow Chrysanthemum Society, and expressed his appreciation of the great progress made by the society, although he was aware that the same difficulty existed in Glasgow, as in London, in the absence of a suitable hall in which to hold the exhibition. Mr. D. Dewar responded to the toast in an able address. The society, he said, had existed for only three years, and they had it on the authority of experts qualified to judge that their show was now only 6th or 7th in grade of importance. He paid a warm tribute of thanks to the Lord Provost and the Bailies for their assistance and support. In the lists of exhibitors there were some absentees, but these had been replaced by new comers, and he was able to welcome back at least one well-known cultivator who was absent from their last show, but who was now likely to send them exhibits as strong as ever.

"Kindred Societies" were proposed by Mr. Forbes, Overtoun, and responded to by Mr. Alex. Milne, of the Royal Caledonian Horticultural Society whilst Mr. Temple proposed the health of "The Exhibitors" upon rising to respond to which Mr. Thos. Lunt met with an ovation. That gentleman, in a few well-chosen words, expressed the good feeling which has existed throughout the competition and acknowledged due assistance received from the officials. Mr. Jas. Robertson proposed the toast of "The Press" to which the representative of THE GARDENING WORLD replied, and the health of the chairman having been duly honoured the proceedings terminated.

WINCHESTER.—*Nov. 12th and 13th.*

THE annual Chrysanthemum show of the Winchester Horticultural Society was held on Thursday and Friday of the above dates in the Guildhall, both the concert room and the banqueting hall as well as the corridor being well filled with exhibits.

The class for groups of Chrysanthemums only brought up two exhibits, neither of which showed any attempt at artistic arrangement, the effect being that of a flat bank of large blooms arranged almost as formally as if on a showboard. The first prize was awarded to the Rev. Dr. Fearon, The Cottage, Winchester; the Rev. H. E. Moberley, St. Michael's Rectory, being second.

In the classes for groups of miscellaneous plants, on the other hand, a number of very creditable groups were staged, the first prize group in the larger class being a remarkably fine collection of Orchids, grouped with good specimens of Cocos, Crotons, and Ferns. Among the more interesting items a very fine specimen of Cattleya dowiana aurea was very conspicuous, and some fine specimens of Dendrobium Phalaenopsis were also very noticeable. This group was exhibited by Mr. Carr, gardener to W. A. Gillett, Esq., Bishopstoke. The groups in the smaller class were remarkable for the similarity of design and composition—the description of one would serve for all—being composed of Crotons, Palms, Ferns, and other foliage plants with Poinsettias for colour. The first prize was awarded to F. C. Birch, Esq., Clovelly, Winchester.

Table decorations were a special feature of this show, and were well done, the first prize going to Mr. E. Carr for a fine arrangement of Orchids; the second prize was awarded to Mr. W. Southey Butler, gardener to E. F. Johns, Esq, Winton House. Miss Ethel Colson, Showford, was third; and Miss N. Owen, Basingstoke, fourth. Quality of bloom rather than artistic arrangement appeared to be the determining factor in awarding these prizes.

The competition in the cut flower classes was exceptionally keen, the judges, Mr. J. Wright, and Mr. W. Drover having very great difficulty in discriminating between some of the exhibits. Four competitors exhibited for the Challenge Cup and premier prize. This class was for twenty-four Japanese and twenty-four incurves, not less than eighteen varieties of each. The cup which is valued at £15, has been subscribed for by the ladies of Winchester on condition that it shall be offered for competition as an annual Challenge Cup as long as the society exists. £7 is added to the cup for the first prize, which was won by W. Neville, gardener to F. C. Flight, Esq., Cornstiles, Twyford; this is the fifth time this gentleman has held this Challenge Cup. The best blooms in his collection were Mutual Friend, M. Chénon de Léché, C. Davis, Mme. C. H. Payne, Mme. Carnot, and Panckoucke, among the Japs.; and C. H. Curtis, R. C. Kingston, R. Petfield, Golden Empress, and Martignac among the "incurves." Mr. Inglefield, Tedworth, was awarded second prize, his stand containing among others two exceptionally fine specimens of Mrs. C. E. Shea. The third prize went to Sir F. Fitzwygram, Havant.

The next class for twenty-four Japs., in eighteen varieties, brought up four competitors, the first prize being awarded to C. Hoare, Esq., Basingstoke; Mr. F. W. Flight being second. For twelve "incurves" only three stands were put up, Mr. Duglefield being first and Sir F. Fitzwygram, second. C. Hoare, Esq., received first for twelve white Japs in four varieties, Mme Carnot, Niveus, Mutual Friend, Souvenir de Petite Amie being the selected varieties. The same exhibitor was awarded first for four yellows, T. Wilkins, W. Marshall, Mrs. George Gordon, and Duke of Wellington being the varieties staged. Mr. F. W. Flight was first for twelve blooms in other colours. In the class for twelve Japanese, distinct, Mr. Inglefield was first; P. Ogilvie, Esq., second; and Mr. H. H. Lees, third.

There was a good competition for the prizes for specimen plants, the Rev. R. H. Moorson was first with eight very nice plants, among which Good Gracious, W. H. Lincoln, and C. Davis were conspicuous; Col. F. A. Dickins being second. Six specimen plants brought up four exhibitors, the first prize going to Mr. A Brown, Southampton.

Mr. E. Molyneux, gardener to W. H. Myers, Esq., M.P., Swanmore House, Bishops Waltham, exhibited not for competition a very fine collection of Chrysanthemums including Japanese "incurves" and singles, the blooms being remarkable for size and quality; all the best of the new varieties were represented in this collection.

Certificates were awarded to two fine new English seedlings exhibited by Mr. E. Molyneux, one named Mary Molyneux being a very large handsome variety of a pale mauve colour, the other Princess Charles of Denmark, a fine rich yellow, of incurved Japanese character with stout wide petals. Both these varieties are very striking, and have not hitherto been seen in any show.

A very fine show of Primulas competed for the prizes offered by the society, nine exhibitors competing in the class for twelve plants. Col. F. A. Dickins was first, Mrs. T. Gunner second, and Rev. H. E. Moberley third. A. R. Dyer, Esq., secured first for six double Primulas, the Rev. Canon Valpy second, and the Rev. R. M. Moorson third. E. H. Buckland, Esq., was first or six singles, the Rev. Dr. Fearon being second.

Fruit was well-shown, about 100 dishes of Apples and Pears competing for the various prizes. Sir S. Montagu, Mr. F. W. Flight, J. C. Warner, Esq., Sir H. St. John Mildmay, Bart., and Mr. J. Kaines, were the principal prize takers.

Twenty-seven bunches of Grapes competed in four classes, Sir S. Montagu staging firsts for three bunches and for two bunches of black Grapes, second for two bunches of white Grapes; J. W. Fleming, Esq., Romsey, was second in the first two classes, and first in the latter.

Some very creditable exhibits were shown in the vegetable classes especially those competing for Messrs. Sutton & Son's prizes.

Messrs. Hillier & Son, Winchester, exhibited a stand of about forty varieties of fruit and many rare and new hardy shrubs grown at their West Hill Nursery. Mr. E. Carr, gardener to W. A. Gillett, Esq., Bishopstoke, staged a fine and extensive collection of Orchids not for competition, among which very fine specimens of Epidendrum fragrans, Dendrobium formosum giganteum, Vanda caerulea, Laelia tenebrosa, Oncidium ornithorhynchum, and some fine Cattleyas in variety, merited special attention.

Messrs. B. Ladhams & Son, Shirley, exhibited some fine Cannas, among which the new Italian varieties, Austria and Italia were conspicuous. They also showed some specimens of the somewhat neglected Ruellia macrantha.

The new market Chrysanthemum Golden Ball, received a good deal of attention, the free character and charming manner in which the blooms are borne marking it as distinctly an acquisition. A Certificate of Merit was awarded to this variety at the N. C. S. meeting on the 9th inst., and it is being sent out by Messrs. B. Ladhams & Son.

The Ichthemic Guano Co., exhibited specimens of their specialities; and the Belmont Nursery, Southampton, a fine collection of flowering plants and cut flowers. A vocal and instrumental concert took place each afternoon and evening, and a very good attendance was made by the general public.

STOCKPORT.—*Nov. 13th and 14th.*

THE ninth annual show of Chrysanthemums which has now become to be considered one of the leading events of the town, and also second to none in quality of exhibits, was opened by the president, Councillor F. R. Robinson, J.P., Ex-Mayor. The entries in almost all the classes were numerous, and the exhibits were of exceptionally good quality, enhanced, no doubt, by the fact that it is the Jubilee of the National Chrysanthemum Society which presents two Certificates of Merit, one for the best Chrysanthemum plant in the show, and one for the best cut bloom; also a Bronze Medal in commemoration of its jubilee, for twelve cut blooms of large Japanese varieties, distinct.

The following is a list of the principal prize-winners:—

Certificate of the N.C.S., for the best plant, Mr. H. Gaddum, with Viviand Morel. Certificate of the N.C.S. for the best cut bloom, Mr. James Watts, with C. H. Curtis. Group of Chrysanthemums, arranged for effect, and measuring 9 ft. by 6 ft., Captain S. H. Sykes. Six plants, distinct, any varieties, not disbudded, first prize, an electro-plated teapot, presented by W. Colchester, Esq., Ipswich, Mr. G. H. Gaddum. Eighteen cut blooms, comprising nine "incurves" and nine Japanese, distinct, Captain T. H. Sykes. Twelve cut Japanese blooms, distinct, Mr. T. H. Mills. Six cut blooms, comprising three "incurves" and three Japs., Mr. Cordingley. Twenty-four cut blooms, of twelve "incurves" and twelve Japs., Mr. Evans.

In the cottagers' division, three Chrysanthemum plants, distinct, were best shown by Mr. R. Kitchen.

ALBERT GARDENS SHOW, GLASGOW, *Nov. 14th.*

The Association of Allotment Holders identified with these gardens—which, by the way, are situated on the Clydeside in the Hutcheson town district of the northern metropolis—held on Saturday their first annual exhibition of Chrysanthemums grown on the estate by the membership. The place of exhibition was a roomy corrugated iron hall erected by the association within the gardens, and although the weather was not all that could be desired, a considerable company of ladies and gentlemen connected with the district met to do honour to the Lord Provost, who, in a well-chosen speech, declared the exhibition open, a charming bouquet having been presented to his Lordship by the little daughter of the president, Mr. Andrew Borrowman. Referring to the fact that the association was composed of working-men, who in their spare hours tilled their gardens to such good purpose, the Lord Provost expressed his conviction that too much credit could not be given the membership for the really successful exhibition placed before them that day, and which he considered could not fail to develop and assist the aims the association had at heart.

Of the Chrysanthemums grown in the Albert Gardens the Society had every reason to be proud of, especially with regard to the fact that these gardens surrounded the workmen's dwellings, and he hoped that the meeting would prove an incentive to further effort, and that the show would become an annual event.

Mr. Cameron Corbet, M.P., also spoke a few words of encouragement to the growers, and Mr. Bailie Battersby was equally happy with his remarks in which he congratulated the members on the successful result of their labours, quoting those beautiful lines:—

Flowers have language, flowers have feeling,
Sad and joyful as our own,
Every human sense revealing,
Till life's latest tint is gone.

A description of the show itself would be incomplete without some reference to the collection of cut blooms kindly sent by John Gordon, Esq., Ackenhead, whose gardener, Mr. Thos. Dale, kindly fulfilled the duties of Judge. Messrs. Dobbie & Co., Rothesay, and Mr. Ferguson, Rutherglen, also sent collections not for competition. There was also an interesting collection of dried specimens of British flowering plants mounted on white paper, and exhibited by Mr. Jno. Campbell, 11, Stonefield Terrace. The following were the chief prize takers:—Best two plants in bloom; first, Mr. Borrowman; second, Mr. Gordon Cummings, Albert Gardens. For single plants, Mr. Robert Hunter and Mr. A. Macfarlane were first and second respectively; whilst in a similar class Mr. Jas. Wilcox, Mr. D. Ferguson and Mr Allan Ashcroft, appeared in the prize-list in the order given.

At a subsequent meeting Mr. D. Dewar, of the Botanic Gardens, Glasgow, addressed the members, and votes of thanks were passed to that gentleman and others for the warm interest they had taken in the Society. Mr. Robert Hunter ably fulfilled the duties of secretary.

BY TELEGRAM.

CHESTER.—*Nov. 17th and 18th.*

THE Chester Paxton Society's show was held in the Town Hall. The opening ceremony was performed by Countess Grosvenor. The principal feature was a grand display of fruit grown in the district. There were 100 more plates of fruit than last year, and last year's entries double any previous year taken as a whole. This was the best and most successful show since the foundation of the society. The prizes were distributed the second evening by the Mayoress, Mrs. B. C. Roberts. The general arrangements were admirably carried out by secretary G. P. Meln.

Class I. was for five dishes of Ribston Pippins; first, Rev. L. Garnett, Chester; second, Mrs. Logan, Chester; third, A. O. Walker, Esq., Colwynbay. Class II. was for five dishes Cox's Orange Pippin; first, Rev. L. Garnett; second, E. Severn, Esq., Whitchurch; third, Hugh Lee Smyth, Esq., Barrowmore Hall. Class VII. was for five dessert Pears, Louise Bonne, of Jersey; Miss Humberston, Newton Hall, was first; H. L. Smyth, Esq., was second. For five Marie Louise Pears, E. Severn, Esq., Whitchurch, was first; Rev. L. Garnet was second; and the Hon. C. Parker, Eccleston, came in third. Class XXI. was for thirty dessert Apples in six varieties. Rev. L. Garnett took the first. Lord Trevor and E. Severn, Whitchurch, were equal second. Class XXII. was for sixty kitchen Apples in twelve varieties. E. Severn, Esq., took the lead; Rev. L. Garnett was second; and Mrs. C. Day came in third. Class XLI. was for a collection of fifty dishes of Apples: Mr. J. Watkins, Withington, took the lead; Hugh Lee Smyth, Esq., took the second prize; and J. Oldfield, Chirk Castle, was third. Class XLV. was for two bunches black Grapes, and Sir G. A. Meyrick, Anglesey, took first prize; E. Dixon, Esq., Littleton Hall, followed. Class XLVI. was for two bunches white Grapes; Sir G. A. Meyrick led the way, followed by Mrs. Logan.

For a group of Chrysanthemums arranged for effect, 7 ft. by 5 ft., Jno. Wynn Ffoulkes, Esq., Chester, had the best; Mrs. Potts, Hoole Hall, was second; and third came Mrs. S. Hudson, Bache Hall. Class XLVIII. was for four plants, Japanese and incurved, and Mrs. Bloomfield, Mollington Hall, led the way, followed by F. Gibbons Frost, Esq., Chester. In Class LI. for twelve single trusses of naturally-grown Chrysanthemums, Lord Trevor was first; Mrs. Townsend Ince, second; and E. Dixon, Esq., Littleton Hall, third. In Class LII. for twelve blooms, six each of Japanese and incurved, T. Brocklebank, Esq., Heswall, took the lead; Charles Thregall, Esq., Aldersey Hall, was second; and J. Mosford, Esq., Chester, third. Class LV. was for the premier Japanese bloom in the show, and the winner was J. Mosford, Esq. The premier incurved bloom was shown by Sir G. A. Meyrick. For the best arranged box of cut single Chrysanthemums, Mrs. Townsend Ince had the best; Tomkinson, Esq. followed. For the best arranged vase Mrs. R. O. Hudson was first; J. Tomkinson, Esq., Willington Hall, was second.

A fine collection of ninety-seven dishes of Apples and Pears, not for competition, was shown by his Grace the Duke of Westminster. Amongst trade exhibits, Messrs. Dicksons, Ltd., Chester, had a magnificent collection of stove and greenhouse plants and Chrysanthemums, including rare things like Amasonia punicea, Varigated Poinsettia, Dracena sanderiana, etc. Messrs. McHattie & Co., Grosvenor Nurseries, exhibited a handome collection of thirty-six dishes of Apples and Pears, of grand colour and size. There was likewise a fine exhibit of plants grown with pure Ichthemic Guano by Mr. W. Colchester, Ipswich.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Cocos weddeliana turning brown.—*M. M.*: Under the conditions you name, the tips of the leaves might get brown for various reasons. A low temperature and a dry atmosphere, separately or in conjunction and continued over too long a period would bring about such results. Cocos weddeliana requires a fairly high temperature to make it flourish properly for any length of time, and if it once gets into a bad condition, it cannot be restored to health again without putting it into stove heat till it develops and ripens a fresh lot of leaves. See also whether it gets too dry occasionally, that would also injure it.

Catalogues of Trees and Shrubs.—*Omega*: They do not appear to be sold anywhere except at the Royal Gardens, Kew, and you would probably have to employ some one to get them for you.

Orchid to name.—*D. N.*: It comes very near Laelia grandis tenebrosa Walton Grange variety, but differs in having pale, rosy-lilac sepals and petals, slightly marbled or splashed with purple, while those parts of the variety just named are greenish-white. Although a number of forms have been allowed to pass muster as varieties of Laelia tenebrosa, we believe they are the result of a natural cross between that and some species of Cattleya. Those flowers you sent show the effect of the latter, unless they are abnormal, in which case they would be different next year.

Red Colours and Flowers.—*Rubens*: Cinnamon-red may be met with in some of the varieties of Odontoglossum luteo-purpureum, and O. crispum. Of the other red colours you mention, we cannot speak. The Peach Tomato flowers early or late, according to the treatment given. Out of doors it may flower from June till October. Peach Tomato is the correct name. Morning Glory, Lonicera, Calystegia, and Calampelis are used for training over arbours and bowers. The first-named flowers in July and August; Lonicera from April onwards; Calystegia in July and August; and Calampelis in July, August, and September.

Carnation to Name.—*Omega*: We cannot undertake to name florists' flowers. Only those specialists having a good collection in bloom can do it.

Height of Thermometer.—*Omega*: In different gardens thermometers are placed at various heights. About 3 ft. is a good average, and when recording the temperature you should also state or take note of the height at which the instrument is placed.

Flavour of Tomatos.—*H. J.*: All Tomatos that are full grown will assume their proper colour in course of time, even if cut and taken indoors. Those that are nearly ripe will be fairly well flavoured, but not nearly so good as those ripened on the plants under the influence of sunshine. Even those that were picked half grown will become red in the course of some weeks if kept in a dry warm place, and provided they are not diseased, injured, nor split with the wet weather. We cannot vouch for their flavour, however, as they will be rather insipid. They may be turned to account, however, in making sauce or for other culinary purposes. You might grow a number in pots for very late work, taking them into a warm house, well exposed to light, before the weather gets too cold and boisterous to injure them.

Names of Plants.—*Sigma*: Sherardia arvensis. *J. T.*: 1, Tamus communis; 2, Ligustrum vulgare; 3, Pyrus Aria; 4, Pernettya mucronata var.; 5, Cotoneaster frigida.—*W. Allan*: 1, Salvia acuminata Bethelli; 2, Salvia rutilans; 3, Vallota purpurea; 4, Hippeastrum aulicum; 5, Nerine curvifolia generally called N. Fothergilli majus; 6, Oxalis valdiviensis; 7, Coleonema alba.—*H. J.*: 1, Adiantum hispidulum; 2, Pteris tremula smithiana; 3, Osmunda regalis palustris; 4, Aspidium aculeatum; 5, Selaginella Martensii robusta.—*Alex. Metcalf*: 1, Hippeastrum reticulatum; 2, Aster vimineus; 3, A. Novae-Angliae roseus; 4, Eupatorium odoratum.—*W. R.*: 1, Eccremocarpus scaber; 2, Olearia argyrophylla; 3, Helianthus cucumerifolius.

Communications Received.—R. G. W.—W. J. Godfrey.—S C.—D. N.—M. Temple.—C. C. M.—W. Roupell.—Harry Bailey.—Harrison & Sons.—Alex. Logan.—G. Russell.—J. K. M..

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, NOVEMBER 28th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, November 30th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, and Mr. J. C. Stevens.
TUESDAY, December 1st.—Opening day of the N. C. S. Midwinter Show at the Royal Aquarium (3 days).
Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.
Sale of Japanese Lilies by Messrs. Protheroe & Morris.
WEDNESDAY, December 2nd.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, and Mr. J. C. Stevens.
THURSDAY, December 3rd.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris & Mr. J. C. Stevens.
FRIDAY, December 4th.—Sales of Dutch Bulbs by Messrs. Protheroe & Morris, & Mr. J. C. Stevens.
Sale of Imported and established Orchids by Messrs. Protheroe & Morris.

CANADIAN FRUIT FOR THE QUEEN.—The sixtieth year of the reign of Her Majesty the Queen coincides with one of the finest crops of fruit ever grown in the Dominion of Canada; and the fruit growers of Hamilton, Ontario, conceived the idea of sending some of their richest and best for Her Majesty's acceptance, together with their warm congratulations at her having occupied the throne longer than any other British monarch. The consignment of fruit duly arrived and on the 18th inst., the Apples, Pears, Quinces, and Grapes, were unpacked and spread their delicious and tempting aroma through the offices of the High Commissioner for Canada, in Victoria Street, Westminster. This tribute of loyalty and respect was exceedingly graceful and highly complimentary, coming, as it did, spontaneously from the goodwill of the Canadian fruit farmers. For many years we have been familiar with the superb character of the Canadian Apples, and it may be taken for granted that this special consignment in no way detracted from the reputation of former years.

The rosy and red Apples were of enormous size and spread a delicate perfume around them as they were unpacked. Pears and Quinces were also tempting, and attractive. The Grapes retained their delicacy of bloom and luscious appearance,

even after their voyage of 3,000 miles. This voyage was effected in less than half the time it would have taken an inhabitant of Hamilton to reach the sea coast about the time Her Majesty ascended the throne. In those days, Hamilton was only a tiny village in the back woods of Ontario, and between 300 and 400 miles from the ocean port. This shows the great rate of progress that has been made during Her Majesty's reign, in the matter of intercommunication between the colony and the Mother Country.

Sir Donald Smith, the High Commissioner, superintended the unpacking of the fruits himself, and will arrange for the disposal of the same according to the wishes of the Queen. Sir Donald is a native of Canada, and was quite enthusiastic over the excellency of the Canadian climate and soil, of which the fruits just unpacked were silent but demonstrative evidence. He declared that Canada can grow the best Apples and wheat in the world. While speaking of the abundance and excellence of the fruit crop in Canada this year, the High Commissioner estimated it at 3,000,000 barrels, of which one half would be available for export. The bulk of this will come into British ports, so that people in the Old Country need fear no scarcity of supply this season, although the home produce was only about half an average. Great attention is paid to the fruit-growing industry in Canada on account of the suitability of soil and climate. Almost all kinds of temperate and subtropical fruits can be brought to perfection in the Hamilton district of Ontario, and, indeed, the latter province, together with Nova Scotia and Quebec are the chief sources of supply coming from the Dominion. An observation about the severity of the Canadian climate elicited the remark from Sir Donald that people in Canada never knew it was cold till they consulted a thermometer.

Fruiting Raspberries may still be seen in gardens in the Long Sutton district of Lincolnshire.

Fruit Growers in Scotland are not afraid of foreign competition in the matter of Raspberry culture, because such soft fruit does not carry well.

Essex School of Horticulture.—The ordinary three weeks' autumn course of elementary instruction at the Central Biological Laboratory, Chelmsford, commenced on the 9th inst., and closes to-day.

An Exhibition of Varieties of Apples was held in the Central Biological Laboratory, Chelmsford, on the 19th and 20th inst., for the benefit of the students attending the autumn course of instruction, but others interested in the question could also inspect the fruits on the 20th.

The Wild Chinese Primrose.—At a recent meeting of the Ealing Gardeners' Society a very interesting specimen of the above was exhibited by Mr. Holloway, an Ealing gardener, and which called forth a good deal of comment. Mr. Holloway had certainly done this very well, although he explained that it was rather a difficult subject to manipulate. The plant occupied a 4½ in. pot, was in the pink of perfection, and compared very favourably, in my opinion, with the beautiful greenhouse forms which were also on view. While the foliage is dwarf, roundish and lobed, the colour of the flowers is of the most pleasing pink; and compared with the size of the plant, large, and freely produced. From twenty to thirty of these fragile organs were in evidence, and measured, on an average, about 1½ in. in diameter. It is evidently a true Alpine, and should, therefore, receive somewhat different treatment to its pampered progeny. It is a native of Central China, where it was found growing on hot, dry, limestone rocks—a fact which should be taken into consideration, although not strictly followed, by its cultivators. It is a recent re-introduction. Mr. Holloway has crossed it with Primula obonica, and is now awaiting results.—*C. B. G., Acton, W.*

Miss Chrys Anthemum Jap., in a frizzled red cloak,
He with railing described as a Globe Artichoke;
But he quaintly and curtly subscribed—yours, Mc' Jock,
So I simply concluded his squib was a joke—*Snaggs.*

Memorial to Darwin.—The Shropshire Horticultural Society at a recent meeting decided to defray the entire cost of providing a statue to the memory of Charles Darwin in his native town of Shrewsbury. The cost is estimated at £1,000 to £1,200. A Darwin Memorial Scholarship is also being subscribed to by admirers of the great naturalist, and £400 has been already promised towards it.

Veitch Memorial Medal at Belfast.—The groups competing for this honour were considered the feature of the Chrysanthemum show at Belfast on the 10th and 11th inst. The successful group occupied a central space of 846 sq. ft., the plants being exceedingly well grown, in pots not exceeding 8 in. in width. The Veitch Memorial Medal and £5 were awarded J. Blaikston-Houston, Esq., D.L. (gardener, Mr. Thos. Gray), Orangefield, Belfast. The "Fairy Dell of Magnificence," a piece of horticultural architecture, put up by Mr. McKenna, of the Botanic Gardens, Belfast, was much admired by the public.

Messrs. Harrison & Sons' Vegetable and Farm-root Show was opened on the 11th inst. at their extensive seed-stores situated at 41, Welford Road, Leicester, and continued open until seven o'clock on the Saturday evening, the 14th, affording ample opportunity for cottagers and allotment-holders to visit the exhibition. When we take into consideration the extremely dry spring it was marvellous to find such grand specimens of horticultural produce, especially in Celery, Potatos, Leeks, and Onions. The Globe Mangolds were also wonderfully fine. It is gratifying to observe that, amongst the number of competitors from all parts of the country, most of the honours went to local growers. The judges were Mr. John King, of Broom, near Biggleswade, and Mr. Robert Cooper, of Beeston, Sandy, both extensive cultivators in Bedfordshire.

Can Maize be grown in this Country?—Some weeks ago a note on this subject appeared in THE GARDENING WORLD, and in answer to it Mr. Fredk. W. Simpson, Monument Road, Edgbaston, Birmingham, sends us two fine cobs which he reared and brought to maturity in 1894, as a result of an experiment he made on purpose to see what could be done. The years 1893, 1895 and 1896 were quite as favourable as 1894, to the development of Maize, as far as sunshine was concerned. The specimens were grown in the neighbourhood of Birmingham, and all the others ripened perfectly. Those sent us measured 6½ in. and 7¼ in. in length with a width of 1½ in. and 2 in. at the base, respectively. Our correspondent does not tell us the name of the variety grown, but probably it was an early sort. The grains were bright golden-amber. If Maize such as this can be grown in the Midlands, it can certainly be grown in all other more favourable parts of the country.

Hyacinth Bulbs and Eczema.—At the meeting of the Linnean Society of London on the 5th inst., Dr. Morris, C.M.G., exhibited specimens and slides illustrating the occurrence of raphides in the bulbs of the common Hyacinth of gardens (Hyacinthus orientalis and varieties). Forms of eczema were said to have been produced in persons handling and cleaning these bulbs. Although the fact was familiar to gardeners, the cause did not appear to have been clearly traced. Experiments and observations at the Jodrell Laboratory at Kew had shown that both dry and moist scales were capable of producing considerable irritation in certain cases when applied directly to the skin. There was little doubt that the raphides were the prime agents. These needle-shaped crystals (composed of oxalate of lime) varied from $\frac{1}{100}$th to $\frac{1}{200}$th of an inch in length, and were arranged in close bundles, easily dispersed by rubbing the dry scales. In the growing plants they were doubtless protective, as snails, for instance, avoided Hyacinth bulbs but attacked others growing close by. Roman Hyacinths (var. albulus) were understood to cause greater irritation than other varieties. Dr. D. H. Scott described some experiments which he had tried, tending to confirm the conclusion that the irritation of the skin produced by contact with the bulb-scales of Hyacinths is due immediately to puncture by the numerous raphides.

New description for a Chrysanthemum Show.—A local contemporary describes the show at Leamington as "exceedingly well organised in detail and very rich in turpentine-scented floral gems."

Size of blooms at Exmouth Show.—Mr. W. J. Godfrey, of Exmouth, calls our attention to a statement at p. 158, middle column, which says: "These blooms were much finer than many of the same class of recent years, still behind some of the old Liverpool boards of ten or fifteen years ago." Whether this statement is justified or not, we cannot say, not having seen the blooms in either case. Mr. Godfrey says that the exhibitors were first-class growers, and one has successfully competed at the N.C.S. show, both this year and last.

The D'Arcy Spice Apple.—A photograph of a fruit and a section of this Apple is given in the *Journal of the Essex Technical Laboratories* for October. The variety is of considerable local interest in the country, as it originated at Tolleshunt d'Arcy in Essex, and is frequently met with in gardens and orchards, particularly in the eastern half of the county. It has long been valued for its spicy flavour and good keeping qualities; but the dull colour of the fruit and the slow rate of growth of the tree act as hindrances to its extensive culture for market purposes. For private establishments, however, it deserves a place. The fruits should be allowed to hang as late in the autumn as possible convenient with immunity from frost, otherwise they are liable to shrivel,

Gardeners Royal Benevolent Institution.—The committee of this institution at their meeting held on the 13th inst., decided to place TWENTY candidates from the list of applicants, on the funds at the next election, which will take place on January 14th, 1897. TEN of these candidates will be recommended for election *without votes*, they having complied with the terms of Rule III., sec. 5, and other rules in connection therewith. The remaining TEN will be elected by the votes of subscribers in the usual way. In thus increasing their liabilities by adding to the pension list *the largest number of candidates ever admitted at any one election in the history of the institution*, the committee had in mind the fact that next year will witness the celebration of the sixtieth year of the Queen's Sovereignty, and as Her Majesty has been for forty-five years the gracious Patroness of the charity, they intend to appeal to all gardeners and other friends of the institution to assist them in making some special effort on its behalf during the coming year in commemoration of an event which will be unparalleled in the annals of this country.

Home of Horticulture.—The subject mentioned in my recent letter, which appeared in THE GARDENING WORLD, received very strong confirmation from Sir Trevor Lawrence, Bart., and Mr. F. A. Bevan, of Trent Park, at the festival banquet of the National Chrysanthemum Society held at the Whitehall Rooms on Tuesday week. Mr. Bevan, in forcible terms (which were heartily applauded), referred to the incongruous associations under which they were compelled to hold their exhibitions, and expressed his hope to see a change soon. Sir Trevor Lawrence supported Mr. Bevan's remarks, and alluded to the great want of a metropolitan building for horticultural exhibitions, also describing how Baron Schroeder's scheme was unfortunately frustrated, through financial complications, when nearing accomplishment. Sir Trevor compared our position, with regard to horticulture, with other nations. "Our Empire," he declared, "is ahead of all the world, but other nations are following on our heels, and we must strive to maintain our supremacy." He also laid great stress upon the paramount importance of prompt action to secure a hall for horticulture. The time is ripe, and when we remember the riches of England, the commercial supremacy of the City, the widening interest which is being taken in horticulture, and this country's position with regard to it, surely no better monument can be raised to perpetuate the memory of Her Majesty's reign than the establishment of a home of horticulture. If the City of London took the initiative, its several companies combining, representatives of each being governors, the project would soon be realised. It is only waiting for a strong impulse, and this the City of London can give. Will you kindly grant space in your columns for this letter, the intention of which is to arouse interest in this question, and, it is hoped, lead to an early meeting of horticulturists and others to take steps for the establishment of a home of horticulture.—I am, &c., *James L. Wood, F.R.H.S., Liveryman of the Skinners' Company, Oakleigh Park, Whetstone.*

The Smoking Concert organised in support of the N. C. S. Jubilee resulted in a balance of £11 15s. in favour of the funds.

Correction in Winchester Show Report.—In our report of the Winchester show last week, Mr. E. Molyneux was reported to have received a Certificate of Merit for two new Chrysanthemums Mary Molyneux and Princess Charles of Denmark. Our correspondent writes to point out that this is a printer's error, that the certificate was awarded to Mr. N. Molyneux, of Rookesbury Park, Wickham.

Death of Mr. A. M. Byres.—Just as we go to press we have been informed of the death of Mr. A. M. Byres the secretary of the Royal Horticultural Society of Aberdeen. We are especially sorry to hear of this sad event as arrangements were in progress for a deputation of which the late Mr. Byres was to form one in a visit to the Temple Show in London next May. We are sure also that the many exhibitors who customarily visit the Aberdeen shows will join in expressing their regret at Mr. Byres' death.

Mr. William Falconer, the energetic superintendent of Schenley Park, U.S.A., has been obliged to resign the editorship of *Gardening* (American), on account of the great amount of work entailed upon him by the laying out of the new park, which consists of some 450 acres of stiff clay and rock. All the editorial work in connection with *Gardening* had to be done at night. Now the planning and arrangement of the park have to be done in his study at home during the evenings.

Roots pierce Roots.—Mr. A. Pentney, Worton Hall Gardens, Isleworth, always a keen observer, sends us a speimen of a root of La France Rose, which has been pierced right through by one of its neighbours, perhaps on the same plant. After the roots had partly dried up, the attacking root was loose in the hole it had made, but could not be removed because it had thickened on both sides of the other. The acid cell sap in one root had no doubt helped it to pierce the other.

Curator for the Liverpool Botanic Gardens.—The Parks' Committee of the Corporation, at a special meeting held on the 20th inst., Mr. Alderman Ball in the chair, appointed Mr. Herbert to be chief of all the public parks and gardens in the city; and Mr. James Guttridge, of the Botanic Gardens, Glasgow, to be his deputy, and resident curator of the Botanic Gardens, Edge-lane. Five selected candidates attended before the committee. The vacancy at the Botanic Gardens arose through the retirement of Mr. J. Richardson on super-annuation.

New species of Crassula.—At a meeting of the Linnean Society of London on the 5th inst. Dr. S. Schönland communicated a paper on some new species of Crassula from South Africa, which he had obtained from localities which had been very rarely visited by botanical collectors, and which were believed to be undescribed. Mr. J. G. Baker, who criticised the paper, spoke in favourable terms of the care which had been taken by the author in its preparation, and thought there was sufficient justification for describing the species mentioned as new.

Shirley Gardeners Mutual Improvement Association—There was the usual monthly meeting on Thursday, the 19th inst, at the Parish Room, Shirley, Southampton, Vice President, G. T. Harper, Esq J.P., presiding, and the members attended in good numbers. The lecture was given by Mr. E. T. Mellor, B. Sc., London, lecturer in biology, at the Hartley, Southampton; and was a departure from the ordinary style, being illustrated by chemical experiments, and also diagrams. "Plants and air" was the subject, and the object of the lecturer was to show how plants obtained the 50 per cent of their substance (carbon) chiefly through their leaves, from the carbonic acid gas in the air. There was a brief discussion and at its close a very hearty vote of thanks was accorded to Mr. Mellor for his entertaining, and instructive lecture. There was an exhibition of cut blooms of Chrysanthemums and a few plants also, the two certificates for six blooms Japs. and six blooms incurved both being secured by Mrs. Keates, Rownhams House (gardener, Mr. W. G. Bushell) with good exhibits; and a certificate was also accorded Col. W. S. Sinkins, Alderman House (gardener, Mr. E. G. Wilcox) for 24 cut blooms of single Chrysanthemums. Mr. B. Ladhams, F.R.H.S. showed a lot of cut blooms of the new decorative Chrysanthemum, "Golden Elsie" a sport raised in the district.

PEOPLE I HAVE MET.

Mr. William Martin Welsh.

A tower of strength amongst Scottish Horticulturists is Mr. W. M. Welsh, and as senior

Mr. W. M. Welsh.

partner in the firm of Messrs. Dicksons & Co., of Waterloo Place, Edinburgh, he is well known in connection with the several organisations and institutions relating to the profession of which he is so prominent a member. Born on June 21st, 1838, Mr. Welsh had to confess to fifty-eight years of a busy and energetic life. It was in 1862, on the death of Mr. Archibald Scott, a former partner in this century old firm that Mr. Welsh and his brother the late Mr. James Welsh joined Mr. James Alexander in the firm of Dicksons & Co., and it is that step which undoubtedly marked the advent of a new era of progress and prosperity to which the firm is able to point with just pride and satisfaction. Nevertheless, the last thirty years has seen changes in the personnell of the firm, and Mr. William Hall Massie and Mr. James Welsh, son of the senior partner are associated with Mr. W. M. Welsh in the management of the business Whilst the seed department is in the capable hands of Mr. Massie, both Mr. William Martin Welsh and his son conduct the section of the business relating to the nurseries and landscape gardening in regard to which the firm have attained a national renown, and a reputation which will probably remain for many a decade.

Coming from an old and respected family, whose ancestors belonged to the Borders, Mr. W. M. Welsh's native place is Ericstane, near Moffat, in Dumfriesshire. He was educated at the Academy of his native town. Like many another eminent man in his profession, he began his business training in the ancient city of Carlisle, and subsequently attained experience at Liverpool and Manchester, to which part of his life may be attributed the acquisition of the masterly skill, which, as we all know, is the absolutely necessary qualification for the successful landscape gardener of to-day.

It is interesting to note that the tufted Pansy owes much of its present popularity to the interest taken in this beautiful flower during the last thirty years by Messrs. Dicksons & Co., who cultivated and hybridised the various forms of the wild mountain Viola, from which they succeeded in producing the many varieties with which we are now familiar, commanding as they do, such universal admiration. Fruit trees, Roses, and forest trees, all have their special department, whilst ornamental trees and shrubs, hot house plants and hardy florists' flowers all receive their quota of attention at the hands of Mr. Welsh, and go to form individual items in the vast business controlled by his firm, who are nurserymen and seedsmen by special warrant to H.R.H. the Prince of Wales.

Similarly Messrs. Dicksons & Co. enjoy the distinction of having been awarded the only gold medal granted to nurserymen at the Edinburgh International Exhibition, 1890. Mr. Welsh owns to a personal love of rural life and takes a keen interest in the many institutions which exist for the promotion of agriculture and its allied arts. Not only has he been a member of the council of the Royal Caledonian Horticultural Society, but he has been twice President of the Scottish Horticultural Association, which, last week, celebrated their Chrysanthemum festival. The Highland Agricultural Society also has a claim upon his time, whilst Mr. Welsh is also a director of the Scottish Trade Protection Society. As an exponent of golf, he has attained considerable note, and he also takes a warm personal interest in the outdoor sports, for which the nation is so famous, and the noteworthy popularity which he enjoys, and the high social regard in which he is held by all who know him, is, and must be a striking tribute to his professional abilities, and kindliness of manner.—*G.Y.P.*

GARDENING MISCELLANY.

PRIMROSES ON DEESIDE.

Our correspondent, Mr. M. M'Laren, writing on the 12th inst. says: "As an instance of the mildness of the season, I have had, for weeks past, Primroses and Polyanthus in bloom. I have an edging of white Polyanthus, some seventy yards in length, and I note the double white variety in bloom. To-day I have just plucked a nice bloom of that grand climbing Rose Reine Olga de Wurtemburg from a trellis in front of my house, and although in summer it has very little fragrance, yet at this time the genuine Tea Rose scent is very grateful. This particular bloom was nestling amongst greenery formed by the Passion-flower and Clematis Flammula. The colour of the Rose is exceedingly vivid and the growth extraordinary, while the foliage is very handsome. Its defects are its want of fragrance and its semi-double character. If one could cross it so as to retain its good qualities and add fragrance, and perhaps doubleness, the result would be very fine. The long pointed bud is handsome.

CHURCHTOWN WINTER GARDENS, SOUTHPORT.

These gardens are easily reached from Southport by tramcar, and any gardening friend should not fail to pay a visit, if in this district. They will find twenty acres of land beautifully laid out and well planted. These grounds were opened in 1875, and it is really astonishing to see how well things grow; both ornamental and evergreen trees and shrubs seem quite at home. There is a nice lake, rustic bridge, everything well done, all kinds of bedding out studied, and spring gardening most effective.

The grand Winter Garden and its adjoining Fernery are now looking well. The gigantic foliage plants in the former make a splendid background for a magnificent collection of well-flowered Chrysanthemums, some grown for the production of large flowers, others as bush plants for cut flowers, and decorative purposes. About 3,000 plants are grown in all, 600 for exhibition flowers. Many would be proud to have such a lot, they would do credit to any of our leading exhibitions. I noticed amongst the "incurves" Mrs. H. Cannell, Mr. Bunn, Lord Alcester, Golden Empress, White Empress, Baron Hirsch, Golden Beverley, Queen of England, Jardin des Plantes, Sir Garnet Wolseley. The following Japanese were grand:—C. Harman Payne, Sunflower, Mdlle. Thérèse Rey, W. H. Lincoln, White Louis Boehmer, Chas. Davis, Mrs. C. H. Payne, Norman Davis, Stanstead White, Sarah Owen, Viviand Morel, Rose Wynne, &c. These are grown by the dozen and make a splendid display. Salvia splendens is used with them with telling effect. Mr. Bull also has in reserve a grand lot of all the leading late varieties, so a good display will be kept up till far in the new year. I notice in the houses a grand lot of zonal Pelargoniums, Cyclamen, Primulas, bulbs, &c. The vineries are carrying fine crops of well-coloured Grapes fit to adorn any exhibition table. The place is well kept and reflects great credit upon Mr. Bull, the able and courteous superintendent.—*Urbanus.*

THE FIRST ENGLISH CHRYSANTHEMUM SHOW.

No member of the National Chrysanthemum Society can have any possible desire to withhold from the Norfolk and Norwich Horticultural Society the credit due to it of being the oldest association of Chrysanthemum growers in the country, nor of having held its first exhibition of Chrysanthemums in pots in 1829. The information furnished by the president of the National Chrysanthemum Society was to the effect that the late Mr. John Salter stated in his book on "The Chrysanthemum" that "the first public show of cut blooms was held in Stoke Newington in 1846," and this was the information the president sought to convey to the company at the banquet. It is easy to understand that his statement was supposed to mean the first exhibition of Chrysanthemums held in England. The information given by Mr. Pollard is full of interest, and it comes before the Chrysanthemum-loving public at an appropriate time. Whether cut blooms were staged at Norwich as well as plants, is only a matter for inference, according to Mr. Pollard, and perhaps Mr. Salter's statement may be a correct one after all.—*Richard Dean, Secretary, National Chrysanthemum Society.*

CHRYSANTHEMUMS IN THE NORTH.

At the leading Scottish shows, as elsewhere, there is not much left to choose from in the excellence of the exhibits, even where numbers may vary exceedingly, there being such similarity in the flowers tabled, and so many bearing the same name that novelty is not a striking feature at exhibitions. The exhibition of Chrysanthemum flowers with stems a foot and a half long or less, and foliage entire, arranged in glasses, filled with water, is considered by many to be a system which will be likely to become general at Chrysanthemum shows. There have for some years past been classes arranged at some of the larger exhibitions for exhibits as indicated, and unquestionably such beautiful and natural looking objects are greatly admired. In private gardens Chrysanthemum plants are arranged among fine foliage and other plants with telling effect; even where they are tall they are placed so that the long stems are hidden by stages, and the flowers, appearing singly, or in threes among the foliage, give a charming effect. In some leading nurseries plants are arranged to show the form, size, and colour of the flowers in order, which is of much importance when one is making a selection.

We have gone to see several collections this season arranged in the form indicated. The large display at Messrs. Dobbie & Company's Nurseries, Rothesay, and that at the Botanic Gardens, Glasgow, are worthy of special notice. At that nursery so familiarly known as an emporium for displaying flowers when in season, there is an immense collection of Chrysanthemums in which are the best known varieties, also those which have recently come into existence as acquisitions. They are being proved at Rothesay, and by high cultivation, correct verdicts may be relied on. Many a novelty suffers in reputation by reason of not having cultural attention, and honest vendors are also alive to the fact of withholding a recommendation from unworthy objects. Among the finest of flowers we noted at Rothesay (which had an advantage over those we admired in the dark St. Andrew's Hall at Glasgow by being arranged in long glass structures), the new Japs. of 1896 were very promising. Arona promises to be one of the best yellows extant, Edith Tabor is very handsome, and Emily Salisbury is a grand white. John Seward is a very large and graceful pale yellow; Lady Esther Smith, a white of fine substance and a grand flower; Alice Seward is older than the foregoing, and a grand exhibition flower; Chas. Davis, so well known, holds a high position; Duchess of Wellington is a capital yellow; Duke of York is a beautiful pink; Good Gracious, pink; Eva Knowles, Guirlande, International, John Chrétien, each extra fine; Madame Ad. Chatin, a fine dwarf white; Pride of Maidenhead, Lady Ridgeway, Mons. de la Motte (extra fine), Mrs. J. Lewis, Miss Ethel Addison, Master Bates Spaulding, Mons. Panckoucke (one of the best yellows), Noces d'Or, Nyanza, Robert Flowerday, Puritan, Sir J. Lawrence, Souvenir de Petite Amie, Van den Heede, Viviand Morel, William Seward, and William Fyfe were a few of the choicest and striking flowers in two of the houses. Mrs. A. Kirke, a delicate pink with yellow stripe, is quite new, very striking and a free-flowering variety; Adelaide Russell and Stressa had special notice; Dorothy Gibson is a splendid yellow reflexed; Mdlle. Nathalie Brun is a good Anemone-flowered variety; W. W. Astor is peculiar and pretty; Ewan Cameron, Dolly Varden and Miss Anne Holden are other good things. In other groups were Australian Gold (in fine form), General Roberts, Mrs. T. Lewis, Mrs. Hume Long, Pride of Maidenhead, Mrs. W. H. Lees (a grand exhibition variety), President Carnot, and C. H. Curtis. Plants to supply cuttings are grown for that purpose alone, and are said to impart constitution and vigour to the stock. It may be to this practice that the sturdiness of habit and fine foliage of the plants at Rothesay is due.

The best of the large collection at the Botanic Gardens of Glasgow in flower November 13th, were arranged in the large conservatory in the form of a huge pyramid with a large Palm in the centre, and the flowers were distinctly visible and legibly named. The base of the pyramid was about 100 ft. in circumference, and dwarf Palms lent elegance to the floral display. Mrs. D. Dewar, raised at the Botanic Gardens in 1895, is a fine white. In Japs., Madame Carnot, President Borrel, Mutual Friend, Chas. Davis, G. W. Childs, Avalanche, Louise, C. H. Curtis, H. Jocotot Fils, W. H. Lincoln, Viviand Morel, Eda Pras, Miss Rose, George McGee, Mons. Panckoucke, Niveus, Etoile de Lyon, Duchess of York, Marie Hoste, G. C. Schwabe, Lily Love, Edith Tabor, William Tricker, Souvenir de Petite Amie, Val d'Andorre, Lady Randolph, Boquet de Dames, Mons. Bernard, Mme. Ad. Chatin. Amiral Avellan, W. H. Lincoln, and Stanstead White, which are frequently renewed from Mr. Dewar's immense stock, are some of the 'Mums which have created so much pleasure among many admirers.—*M. Temple, Carron, N.B.*

EXAMINATION IN HORTICULTURE.

TUESDAY, APRIL 6th, 1897.

1. The Council of the Royal Horticultural Society sympathising with the efforts of various county councils, technical institutes, schools, gardeners' mutual improvement societies, and other bodies to promote instruction in practical horticulture by means of lectures, demonstrations, etc., and in the hope of rendering such teaching more definite and effective, have consented to hold an examination in horticulture on Tuesday, April 6th, 1897.

2. The following is an outline syllabus, showing the nature of the subjects to which it is considered desirable that the attention of students should be drawn.

Elementary Principles on which Horticultural Practice is Based.

(1) Soils, good and bad; their nature and composition: weeds and their eradication.
(2) Requirements of growth—water, heat, air.
(3) Seeds; nature of, duration of vitality in, and modes of germination.
(4) Roots: nature and functions of; fibrils and root-hairs; what they do, and how they do it—what helps and what hinders them.
(5) Stems and branches; their nature, work, and uses; helps and hindrances to their work.
(6) Leaves: what they are, what they do; helps and hindrances to their work.
(7) Tubers and bulbs, leaf-buds and flower-buds.
(8) Growth and development: increase in size and changes of composition and structure; Formation and storage of food materials.
(9) Flowers: their component parts; what they do: artificial fertilisation.
(10) Fruit: changes and development during ripening: forms and varieties, as, *e.g.*, Apple, Strawberry, Plum, etc.
(11) Seed; formation of.
(12) Variation and selection.
(13) Names and orders of common garden plants, trees, etc., etc.

Horticultural Operations and Practice.

(1) Surveying and landscape gardening: elements of.
(2) Choice of site for garden.
(3) Description and use of implements under each head.
(4) Operations connected with the cultivation of the land, with explanations and illustrations of good and bad methods: digging and trenching; draining; hoeing, stirring the soil, and weeding; watering; preparation of seed beds; rolling and raking, sowing, transplanting and thinning; potting, planting; aspects, positions and shelter; staking; earthing and blanching, etc.
(5) Propagation, elementary principles: cuttings, budding and grafting, stocks used, layering, division, branch pruning, root pruning; old and young trees and bushes. Training.
(6) Fruit culture: open air and under glass; small fruits; Apples and Pears; stone fruits; gathering and storing; packing and marketing; general knowledge of fruits, and selection of varieties.
(7) Vegetable culture: tubers and roots; green vegetables: fruits and seeds; rotation of crops, and selection of varieties.
(8) Flower culture, outside and under glass.
(9) Manures and their application.
(10) Improvement of plants by cross-breeding, hybridisation and selection.
(11) Arboriculture: trees and shrubs and their culture.
(12) Insect and fungus pests: prevention and treatment.

3. Lecturers and teachers wishing their students to sit for the examination would do well to send to the secretary, Royal Horticultural Society, 117, Victoria Street, Westminster, two copies of the syllabus on which their lectures have been based at least one month before date of examination.

4. Students and young gardeners not having had the advantage of attending lectures, but wishing to present themselves at some one of the centres for examination would do well to communicate with the secretary of the society, and they might with advantage consult some of the following works: "Primer of Botany" (Macmillan & Co.), by Sir J. D. Hooker, K.C.S.I.; "Botany for Beginners" and "Plant Life" (Bradbury, Agnew & Co.), by M. T. Masters, M.D., F.R.S.; "Popular Gardening," 4 vols. (Cassell & Co.), edited by D. T. Fish; "Epitome of Gardening" (Adam Black & Co.), by T. Moore and M. T. Masters; "Agriculture," Parts I. and II. (John Murray), by J. Wright; "Physiology of Plants," by Prof. Sorauer (Longmans, Green & Co.); "Structural Botany," by Dr. D. H. Scott (Adam Black & Co.).

5. The examination will be held simultaneously in as many different centres in Great Britain and Ireland as circumstances may demand.

6. The examination for the most part will be based on the above outline syllabus of "Elementary Principles of Horticultural Operations and Practice," but arrangements will be made, as far as possible, to frame the questions so as to cover the ground of any syllabus sent up for that purpose. It will, however, in all cases, be absolutely essential to students to exhibit a sufficient knowledge of the "elementary principles" named in the above syllabus.

7. 300 marks will be given as a maximum. Candidates gaining 200 marks and over will be placed in the first class. Those gaining 150 to 200 will be placed in the second class, and those gaining between 100 and 150 will be placed in the third class. Candidates failing to obtain 100 marks will not be classed.

8. The Royal Horticultural Society will award a Silver Gilt Medal to the candidate gaining the highest number of marks, and will also, if the county council or other body promoting the lectures wish it, deliver to their candidates certificates of the class in which they shall have passed.

9. County councils, lecturers, etc., must send in to the society the actual number of candidates at each proposed centre at least ten days before the examination takes place.

10. Gardeners and students wishing to sit for the examination, but who have not attended any particular series of lectures, must send in their name and address, and also the name and address of some responsible person willing to conduct the examination (*see* par 14), to the secretary, R.H.S., 117, Victoria Street, Westminster, at least three weeks before the date of examination.

11. Every student wishing to be examined must, as far as possible, give the information asked for on the form supplied him (Form A.).

12. A small capitation fee of 3s. will be charged for every student, in order to partially defray the expenses of the examination.

13. County councils, lecturers, and others desiring to have an examination held in their neighbourhood, must also send in the full name and address (with designation or occupation) of one responsible person for each proposed centre, who will undertake to supervise the examination in accordance with the society's rules.

14. N B.—The society is willing to hold an examination wherever a magistrate, or clergyman, schoolmaster, or other responsible person accustomed to examinations will consent to supervise one on the society's behalf, and in accordance with the rules laid down for its conduct.

A stamped and directed envelope must be enclosed with all communications requiring a reply.

PLANTS RECENTLY CERTIFICATED.

FIRST-CLASS Certificates were accorded to the undermentioned Chrysanthemums by the National Chrysanthemum Society on the 18th inst.

SUNSTONE.—This is a Japanese variety of large size, and very full though rather light in colour, being of a clear soft yellow in the centre, fading to a paler tint towards the circumference. It is of American origin. Mr. Norman Davis, Framfield, Sussex.

MME. PAUL LACROIX.—For description, see p. 183. Three fine blooms were shown by Mr. P. O. Knowles, gardener to F. C. Crisp, Esq., Henley-on-Thames.

SIMPLICITY.—Here again we have a Japanese variety with long reflexed, pure white florets of moderate width and handsome in appearance: The bloom is of large size. Mr. Norman Davis.

JOSEPH BROOKS.—This Japanese variety varies in colour between yellow and apricot, paler or darker, according to the bud which is taken, probably. It is novel and promising. W. Seward, Esq. (gardener, Mr. J. Shrimpton) Hanwell, Middlesex.

MR. A. G. HUBBUCK.—A massive Japanese variety with long, narrow, drooping florets, the colour of which no two authorities, apparently, are agreed upon; chestnut-red, carmine-amaranth and orange-crimson are some of the epithets applied to it. Mr H. J. Jones, Ryecroft Nursery, Lewisham, raised it in 1894, and on this occasion exhibited some blooms; but Mr. W. H. Lees, The Gardens, Trent Park, Barnet, staged better blooms and had the honour of the First-class Certificate. We note, however, that the National Chrysanthemum Society's Official Catalogue, (Jubilee edition) records that it previously had that award.

MRS. MARLING GRANT.—The long, outer, reflexed florets of this Japanese variety are deep apricot, fading to a paler hue towards the centre of the bloom. It is said to be a seedling from Gloire du Rocher. Mr. W. Jinks, the Gardens, The Beeches, Walton-on-Thames.

VEGETABLE CALENDAR.

ASPARAGUS.—Where first-class vegetables are in regular demand throughout the winter months, a good supply of Asparagus always gives satisfaction. The principal point in securing strong heads of this vegetable is in having good four or five-year-old roots to place in the forcing frame. At this age the crowns can be packed very closely, and the produce will be greater and more lasting than from older roots. The materials for the hot-bed should be composed of one part long dung and two parts of leaves, in sufficient bulk to maintain a temperature of 60° to 70° for some time. Over this place 6 in. of light rich soil, and on this the crowns must be placed, taking care not to damage the roots during the operation. Another layer of sifted vegetable mould should be placed over the crowns to the depth of 2 in , and well watered through a coarse rose tc settle the soil firmly around the roots. Another inch of soil may be added after the watering. The frame should be kept closed until growth appears, when full light and ventilation will be needed to give flavour to the heads of growth.

SEAKALE.—The whole stock of this should be lifted and trimmed, ready for placing in heat at any time. The crowns can be laid in any light soil and covered with a few inches of leaves to keep out frost. The strongest roots must be saved for cuttings and placed under some damp litter ready for cutting into sets during bad weather. Early growth and high culture during summer generally give fine roots for early forcing, and those having the most prominent crowns should be selected for placing in heat first. Any dark warm place is generally recommended as being good enough to force this vegetable, but the produce is generally tough, owing to a lack of sufficient atmospheric moisture. A good plan to produce heads of the best quality, is to dig out a bed about 4 ft. wide and 2 ft. deep, filling this with dung and leaves (previously prepared by being well-blended and sweetened) to within a few inches of the surface. Place the crowns in some light rich mould, and cover them an inch or two deep with some clean leaves. Some boards 10 in. deep placed round the bed and covered with skeleton frames and a layer of old mats, with some long litter over all, will produce Seakale of the best quality.

MUSHROOMS.—These will be more esteemed as the winter season advances, and fresh beds should be made up at regular intervals according to the demand. This will entail constant attendance to keep up a regular supply of droppings, which should be frequently turned and sweetened, to get them into the best condition for forming into beds. It will be an advantage to have the manure under cover in an open shed when preparing it for the beds. Old beds that have been in bearing sometime, may be revived by a watering of cow manure, clear soot-water, or a weak solution of salt and water. Beds in bearing outdoors will need to be well protected now, and any operations, such as gathering, should be done as quickly as possible to prevent loss of heat.

RHUBARB.—To ensure early prodnce, a slight hot-bed should be made in a shed or cellar, and on this the roots must be laid, burying them to the depth of two inches to ensure moisture around the crowns, and covering the latter with large pots or deep boxes. Any odd corners on the floor of a forcing house, or under the stages, may also be used for forwarding this crop. The early kinds such as Champagne and Early Albert should be selected for forcing.

FRAMES, containing Lettuces, Cauliflowers, Radishes, and Parsley must be freely ventilated during fine weather, and any decaying foliage should be removed at once. Seedling Lettuces should be examined at the collar, and if any decay is observable a sprinkling of fine wood-ashes should be carefully placed around them.—*J. R.*

THE ORCHID HOUSES.

ONCIDIUM VARICOSUM.—When well grown this is a most beautiful species, producing long branching racemes or panicles of its bright yellow flowers during the dull months of November and December. It is somewhat difficult to keep in good condition for any length of time; especially so is this the case if allowed to carry the flowers until they fade.

There is no better place for them during winter than the Cattleya house; but during the summer they do well at the warmest and brightest end of the cool division. Here they do not get infested so much with the little white scale, which, if left to its own resources, soon plays sad havoc with them.

BASKETS OR RAFTS are the most suitable receptacles in which to grow them; for they delight in plenty of air about their roots. The compost should consist of good fibrous peat, and sphagnum moss in equal parts, with pieces of crocks; the whole being placed loosely about the roots, first securing the plant firmly to the basket or raft by the aid of copper wire.

They require plenty of moisture at the roots during the growing season, and at no time should they be allowed to shrivel; and for that reason we prefer a course of cool treatment after the flowers are cut and the plants are taking a slight rest.

CALANTHES.—These winter favourites will soon be coming into flower, and must therefore be afforded a light airy position and a temperature of about 65°. A shelf in the stove suits them admirably, but in syringing the other occupants do not let it reach the Calanthe spikes; this, with the temperature sometimes running lower than advised, causes the bracts to turn black, which cripples the flowers. Too much water at the roots will also have a like effect. Just keeping the soil from becoming dust dry is all that is needed.

DENDROBIUMS for supplying flowers for the new year should be removed from their resting place, and placed in heat. D. nobile stands first on account of its cut-and-come-again characteristics. D. wardianum too adapts itself to the forcing principles adopted by cut-flower merchants that supply the leading markets with choice flowers.

COELOGYNE CRISTATA is another easy grower, and indispensable for supplying cut flowers, although it does not last so long as it might when severed from the plant. A few plants introduced into strong heat at intervals give a long season to this best of all amateur Orchids. It does not like to be disturbed too often at the roots.

GENERAL REMARKS.—The temperatures may be gradually reduced, and the atmosphere allowed to become drier in each division.—*C.*

THE FLOWER GARDEN.

THE lawns and grounds near the mansion will have been kept clear of the leaves as they fell, but this will not be sufficient to insure their cleanliness throughout the winter. Now that the leaves are all down, a start should be made with the raking up of those to be found in outlying parts of the grounds, in order that they may be carted away to the heap as soon as possible. If this is not done, a few drying winds will cause the wayward leaves to skip gleefully over all parts of the garden to the gardeners no small disgust and annoyance.

CHRISTMAS ROSES —If the weather continues mild and open, it will not be long before Helleborus niger and some of its earliest varieties make their appearance. In the meantime it will be advisable to cover them with small hand lights or glasses. The slight protection thus given is greatly appreciated by the plants, and if it only prevents the flowers from getting splashed with mud during heavy rains the slight amount of trouble will be amply repaid. When planting Hellebores it is well to keep this fact in mind. They should only be put in places where protection of the kind suggested can be easily given.

HERBACEOUS BORDERS have now assumed, with very few exceptions, that cemetery like appearance which they wear during the winter months. Any tidying up that there is to do should be seen to at once, and the rubbish removed without delay. Stakes that are sound enough to be of service for another season should be tied neatly up in bundles according to size, and stored away. Any alterations in the size or shape of borders should be made as early as possible for the days upon which it is possible to work upon the soil are very few indeed at this season.

DAHLIAS.—It often happens that the first sharp frost causes such a press of work that there is little time to be spared for the Dahlias. The tops are cut down, and the rubbish cleared away, and that has to suffice for the time being. Up to now the roots will have taken no harm whatever in the ground, but they should now be lifted and stored away for severe frost may now be expected at any time in which case the Dahlias would come rather badly off. In lifting take every care to avoid injuring the roots. For a few days after lifting, the roots should be laid in single layers on hurdles or trellises in a shed to dry before they are stored away for the winter. A label bearing the name of the variety, must be firmly affixed to each root, or there will be a deal of worry and vexation when propagating time comes round to find out the roots of varieties required, and also a good deal of mixing of the names, which is likewise vexatious.

TULIPS.—Despite all the criticism that has been, from time to time, directed against the Tulip, our gardens would be a great deal poorer if it were entirely absent. There is, indeed, no more showy spectacle than a bed or a number of beds filled with them, and as prices are now pretty reasonable, and a bed or two of Tulips find favour with most of the ladies and gentlemen who take an interest in their gardens at least a few of them should be utilised.

If the soil is inclined to be rather heavy, and the locality is low lying, a little sand may be placed in the whole for the bulbs to rest on when planting is carried out. On the other hand, if the soil is naturally light, this precaution may be dispensed with except in the case of very select varieties, when the grower naturally wishes to make assurance doubly sure. From 3 in. to 4 in. will be sufficient depth at which to plant the bulbs, and about 6 in. of space each way will be room enough.

The arrangement of colours, and the association of varieties that come in about the same time is of the utmost importance where a more or less elaborate plan is to be worked out. Any time spent in this direction will, however, will be amply repaid by the enhanced effect. In speaking of effective combinations, we must not forget the mixed bed which, whilst the easiest to manage, as there is no trouble in matching or contrasting the colours, produces as satisfactory results as any.—*A.S.G.*

Weather prophets say that the abundance of berries in the hedges fortells a bad winter. I consider them outstanding evidence that last summer was good.—*Snaggs.*

HINTS FOR AMATEURS.

Covering Cold Frames.—For the next four or five months the protection of unheated frames will be a matter of daily routine. The weather is very treacherous now, and there is sometimes a great deal of difference between the temperature at ten o'clock at night and six in the morning. If the amateur gardener does not want to be caught on the "hop," he will do well to follow the method practised by most of his professional brethren, and cover up each night no matter what the weather is. It will be well also to have two or three heavy spars of wood in readiness in order to weigh the mats down during windy weather. It should be seen before-hand that these are free from protruding nails or there will be a few breakages of glass to account for as a consequence.

Echeverias.—These will keep through the winter easily enough with comparatively little protection from the cold. Damp, on the other hand, has seriously to be reckoned with, and thus wherever the plants are put it should be dry. Those who remove the offsets from the plants usually dibble them into sandy soil in a cold frame about the beginning of October. It is astonishing to see how great a degree of cold these little plants will put up with if only they are kept dry. In severe winters we have seen the tips of the thick fleshy leaves turned quite pink by exposure.

Failing a cold frame in which to accommodate the old plants these will do fairly well if stacked up pyramidal fashion under the shelter of a wall. In this case the crowns of the plants should stand at right angles to the outline of the pyramid or cone, and any rain that falls will then run readily off. In severe weather a little dry bracken should be shaken over the plants, and this covered in its turn with some light boards. By such means as these a stock of plants may be preserved for use next summer.

A use for Clinkers.—Where the greenhouse boiler is fed with cinders from the fires of the dwelling house, the result is that quantities of clinkers are made, and as the heap soon assumes formidable proportions, and may become a nuisance where space is limited, it is advisable to put this heap of refuse to some use if possible. For forming a bottom or foundation for paths clinkers are of great value. A very effective and serviceable path may be made by a layer of ashes spread over a bottom of clinkers. Of course, it would not bear heavy traffic but for walking upon it is both neat and clean.

Lifting Endive.—As a winter salading Endive is the most reliable subject we have, and as it can be had in quantity throughout the winter months provided proper measures are taken, it is well worthy the expenditure of any little trouble it may give, in order to obtain this desired end. Where the winters are severe the best plan is to lift all good-sized plants some time during the early part of November, and transfer them to shelter. A cold frame is the most suitable structure for the purpose, as the plants are near to the glass. A bed of soil about 6 in. in depth will be sufficient. The plants must be lifted from the outside with good balls of earth attached, and may be planted pretty close together in the frame prepared for them. Do not give them any water, and air them during favourable days. The exclusion of rain is also very necessary, for it must be remembered that the plants succumb more quickly to damp when placed under glass than they do in the open ground.

Blanching Endive is an easy matter, and as it is highly important that to obtain good quality the heads should be well blanched, it is advisable to see that, whatever system is adopted, sufficient time is allowed it to make it effective. From ten days to a fortnight is the time usually required to blanch a head properly. Tying-up the heads in the same way as Lettuces is perhaps the most commonly adopted plan. All the leaves are gathered together into a bunch, and a string passed round them to keep them in place. The light is thus totally excluded from the small leaves, and instead of a flat close lying cushion of leaves the plants then present the appearance of little cones or pyramids. In cases where the season has been dry throughout, and growth has not been quite so free as usual, or where the seed was sown rather late, and the plants are small from the brevity of the growing season it is often very difficult to blanch the heads by tying-up, as the outer leaves are too short to cover the heart well, and light is thus admitted when, of course, blanching does not take place properly. Such small heads, however, may be turned to good account by laying upon them flat tiles or pieces of slate sufficiently large to cover them. With the exception of size the small heads blanched in this way are as good as those which have been tied up.

Blanched Endive does not keep well, so it will be necessary to operate upon a portion only of the stock at one and the same time. The number of heads tied up or covered with slates or tiles will naturally depend upon the demand, and this part of the proceeding must be regulated at the discretion of the operator.

Plants left standing in the open ground should be first used, as in the event of no severe or long-continued frost visiting us they will blanch very well as they stand.

Asparagus Beds.—If these have not yet been attended to they should be taken in hand the first opportunity. The old stems should be cut off close to the ground with a knife, and this will give an opportunity to get rid of the weeds. All the rubbish should be carted off at once, and burned up out of the way. The beds may then receive a good dressing of stable manure about three parts rotten, to the depth of about a couple of inches, the paths or alleys between the beds hoed and cleaned, and the beds will be straight for the winter.

Globe Artichokes.—Although these do not find a place in the majority of amateurs' gardens, yet they are grown to some extent by some who go in for the delicacies amongst vegetables. The plants will pass through a mild winter without protection, but one of the charms of our climate is that we never know what is coming next, when to expect a mild winter, or when a severe one. Hence the safest plan is to afford protection to the plants each autumn before the winter really sets in. This may be done in the following way:—Cut off the flowering stems and the larger outside leaves, and heap a quantity of stable litter round the plants. The hearts must in all cases be left uncovered, or they will be almost sure to rot off in the course of the winter.

Briers for Budding.—The budding of their own Roses is an occupation in which numbers of amateur gardeners have obtained great enjoyment, and there is certainly no reason why others should not follow the example thus set by the enthusiasts. We explained the *modus operandi* of budding at the season when it was necessary to put the operation in practice, and we hope those of our readers who followed the advice then given have not been deprived of their measure of success. Now, however, we must look forward to another year, and set to work to obtain the material upon which to practise next July. Briers for budding should be obtained without delay, and planted. Those who are fortunate enough to live in close proximity to country lanes and hedgerows will most likely be able to obtain what briers they need from thence. There are many amateur Rose growers who get their Briers in this way, and find them to answer well. Others who are not so fortunate have to buy their stuff, but this is not a very heavy item, although it may be as well to say that the low-priced article is by no means the cheapest.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Retarding Lily Crowns.—I notice a reference in "Amateurs" Correspondence for last week, to the practice of retarding Lilies of the Valley, by placing them in an ice chamber. I should like to know if this is a common practice, and if the flowers suffer at all in size or substance, by reason of their long wintry experience? *R. Lemworth.*

It can scarcely be claimed that the system of freezing Lily of the Valley crowns, is a popular one in the sense that it is practised very commonly. On the other hand there is not nearly so much of it done as there ought to be, taking into consideration what excellent results are obtained, and also what a popular flower the Lily of the Valley is. We should imagine, indeed, that we could scarcely have too much of it. There are several large growers for market that freeze hundreds of thousands of crowns, and the number is doubtless on the increase. We have never been able to discover any weakness or inferiority in any way to the ordinary flowers in the produce of the frozen material. Size and substance are remarkably good, and the delicious scent, the flower's greatest charm, is as strong as could be desired. Of course, this applies to the blooms borne by specially selected crowns, specially recommended for forcing purposes.

Gooseberry Whinham's Industry.—This is a favourite variety in the north of England, *Carduus*, not only for the quality of the fruit, but also on account of its vigorous constitution. It was raised and sent out by Mr. Robert Whinham, of Morpeth. The article about it, to which you refer, appeared on p. 738 of the issue of THE GARDENING WORLD for July 18th.

Greenhouse.—The cost of the greenhouse, *M. M.*, would depend in a great measure as to whether the framework was erected on a low wall, or whether the sides were built of wood. The wall would, of course, cost more, but would be substantial and satisfactory. By all means fit it with a small boiler and pipes. An unheated house is of but comparatively little value, and can only be used during the winter for subjects like Carnations which are to all intents and purposes hardy.

Ventilating Gear.—The best method of ventilation is to have small lights or sashes near the ridge of the house that will lift up and down and controlled by means of a hand lever or a wheel. Air can then be given without letting in the rain. Accordingly, a great advantage is obtained over the old system, in which the lights slide up and down in grooves, as well as upon the plan of having a narrow sash running the whole depth of the roof, and at right angles to the ridge to lift up, as in the so-called "Paxton" house. The "lantern roof" with movable side-lights, is the best system up to the present, for it enables air to be given without causing a draught, and at the same time the rain is excluded. This system is favoured in the newer glass houses at Kew.

Barking Vines.—*S. T. G.*, wishes to know if we recommend him to strip the bark from his Vine after he has pruned it? He has been told that to do so will cause injury to the Vine.

Although "barking," the canes, if judiciously performed, does not damage Vines, yet a little carelessness in carrying it out, will very soon be productive of harm. The "barking" of Vines in the winter is not a part of the cultural routine in the same way as pruning or watering is. It has no direct beneficial effect upon the health of the plant, although in some cases it has an indirect result. It is simply as an aid to a thorough cleansing from insects, especially mealy bug, that it is given. Bug finds a convenient shelter in the loose outer bark of the canes, and it is in order to rout out the bug more effectually that this shelter is removed. If *S. T. G.'s* Vine has not been infested with bug, there is no need whatever to "bark" the canes.

Mildew on Verbenas.—From what you say, *Clara*, there is little doubt that the Verbenas are badly affected with mildew. The only thing you can do is to keep your plants out of the way of draughts, and be very careful with the watering. Meanwhile, dust a little flowers of sulphur over the affected plants by means of a sulphur blower. Verbenas are rather difficult to keep through the winter, and are almost sure to contract mildew to some extent.

Apricots.—Either a south, south-west, or west wall will do for Apricots, *B.*, in the southern counties; further north, a south wall would be required.

Lifting Jerusalem Artichokes.—You are wrong in supposing frost will harm these, *Samson.* So far from this being the truth, many people prefer the taste of them when lifted from the ground after they have been frozen. It will be wise to dig up a supply and store it in ashes, if severe frost threatens. Artichokes will keep very well if buried in sand or soil in the storehouse.

Three Good Pears that will suit you, *F. Giles*, are Williams's Bon Chretien, ripening in September;

Louise Bonne of Jersey, ripening in October; and Beurré Diel, ripening in November. The dates of ripening given are only approximate, as the character of the season, whether hot and dry, or cold and wet determines them. Thus Williams's Bon Chretien came in very early in September this year, and was practically all over some time before the end, even in later districts.

you give the hetter. This will help you this season, but in order to effect a permanent cure it will he your best plan to pull the Muscats out, and plant with Foster's Seedling, or Buckland's Sweet water. Either of these varieties does well with Black Hamhurgh and would shed their leaves early enough to suit you.

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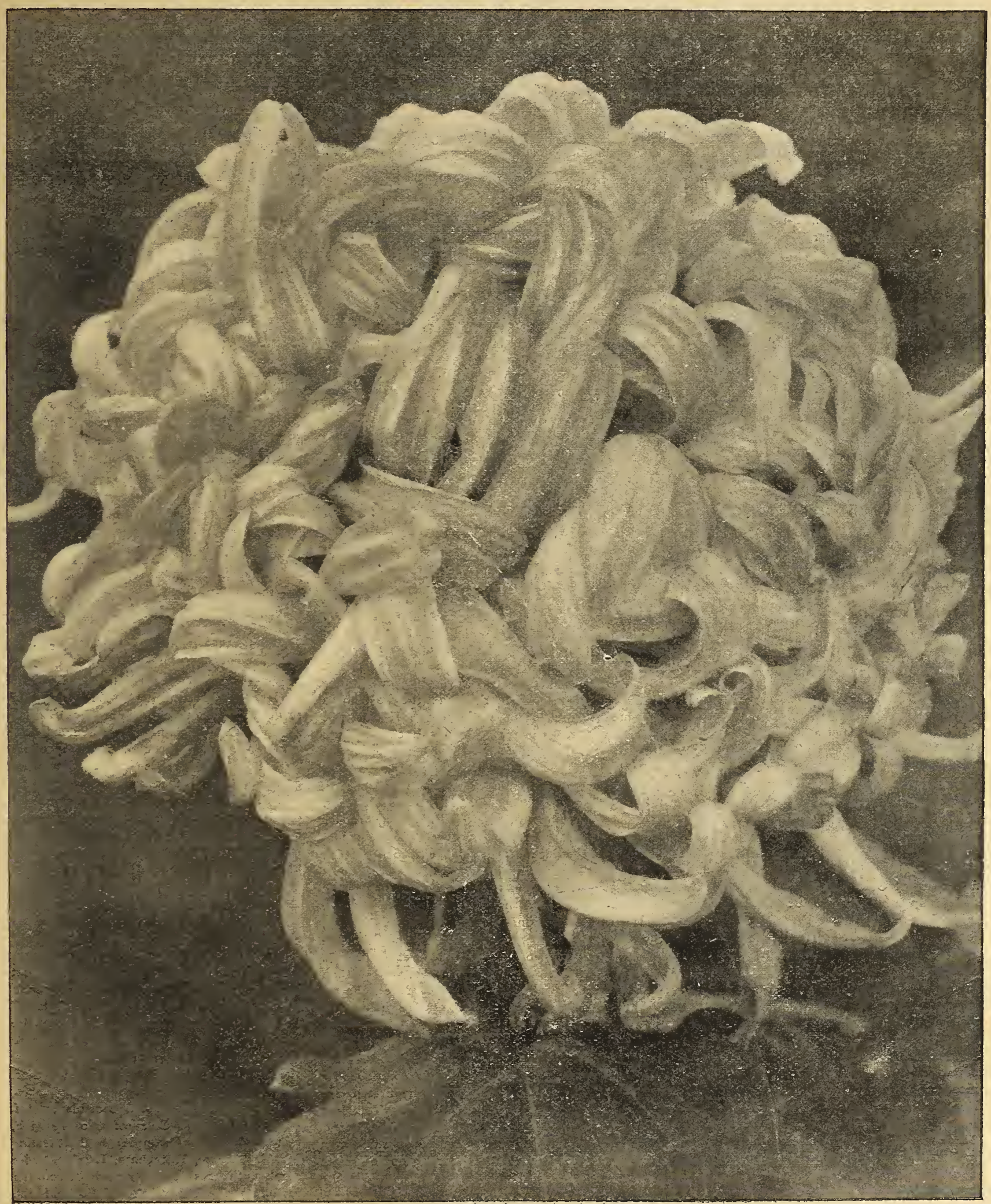
another in such a way as to make a globular bloom of handsome shape and not quite so formal as some others belonging to this type. It may he described as an incurved Japanese variety, making another fine addition to a section which has been vastly enriched within the past few years. For the accompanying illustration of it we are indehted to Mr. H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham, who



Chrysanthemum Mrs. C. Orchard.

Vines keeping their leaves.—Muscat Grapes naturally require more heat than Black Hamhurgh, and consequently it is not wise to attempt to grow them both together in one and the same house. You might curtail the water supply to the horder in which the Muscats are growing. Continue with the top and bottom ventilation in the same fashion as you have hitherto been doing. Of course the more air

CHRYSANTHEMUM MRS. C. ORCHARD.

Here the great width of the florets seems to act in reducing their numher, and no doubt such is the case in actual reality. The bloom is of great size and, though light in colour, is hold and beautifully effective on account of the massive appearance of the hright sulphur-yellow florets. The latter are very much incurved, twisted and interlaced with one

raised it in 1894, and who received an Award of Merit for it from the Royal Horticultural Society on the 10th inst. The hlooms vary a little in shape according to the stage of development, and the outer florets become creamy-white; but the variety is admitted hy connoisseurs to he useful and decidedly handsome. Its character has been well proved during the past season.

CHRYSANTHEMUM SHOWS.

NANTES, FRANCE.—*Nov. 7th, 8th and 9th.*

A GRAND Chrysanthemum show took place as above, under the auspicies of the Nantes Horticultural Society. In the 1st section, the leading award (a Large Silver Medal) for twenty new varieties put into commerce in 1895 and 1896, was secured by M. Jean Mourand, eighty Rue des Hauts Pavés. In the 2nd section, for twenty-five blooms of any varlety, a Small Silver Medal was awarded to Madame Veuve Lizé ainé, and fils, Route de Vannes. M. Prosper Donaud was accorded the Bronze Medal for a collection of fifty varieties. For the largest and best collection of no less than 100 varieties, the first prize, a Gold Medal, given by the President of Agriculture. was taken by M. Jean Mourand. The second prize a Gilt Medal, went to Mme. Béchat. Mr Jean Mourand again secured the Silver Medal in the 3rd section, for twenty-five large blooms. In the 4th section, the Small Gold Medal offered by the president for fifty large blooms, was taken by the same competitor. The Large Gilt Medal as the second prize, went to M. Joseph Goulean, Place Charles-Lechat. The latter came to the front for the special prize, a Small Gold Medal, offered by the president. In the 5th section, M. F. Loiseau ainé, Rue Babonneau, took the first prize for any plants in bloom. M. Auguste Mainguet was second. Mme. Lizé took the premier award for green plants; and was followed by M. J. B. Picot.

Amongst trade exhibits, MM. Caillé fils, Nantes, Mme. Béchat, Nantes, and M. Jean Mourand, 80, Rue des Hauts Pavés, Nantes, each had splendid collections of cut blooms. The Ichthemic Guano Co., Ipswich, we noticed, was also represented.

REIGATE, *Nov. 10th and 11th.*

The Reigate and District Chrysanthemum Society held its eighth annual exhibition in the Public Hall, Reigate. It was in every way a success, which is the more gratifying from the fact that this society hands over each year, a substantial sum to the Gardeners' Royal Benevolent Institution, and the Royal Gardeners' Orphan Fund.

Groups of Chrysanthemums were well represented, and in the class for a group not exceeding 50 ft. Mr. J. Miles, gardener to Mrs. Searle, Eversfield, Reigate, was first. Mr. J. B. Mead, gardener to M. Marcus, Esq., High Trees, Red Hill, was second; and Mr. W. King, gardener to J. Colman, Esq., Gatton Park, third. For smaller groups not exceeding a space of thirty square feet, Mr. W. Cooper, gardener to P. Riddock, Esq., was first, and Mr. W. Robertson, gardener to Mrs. Simpson, Wray Park, Reigate, was second. There were three nice miscellaneous groups, Chrysanthemums excluded. Here Mr. J. B. Mead was well first with a prettily arranged group. Cattleya labiata, Odontoglossum grande, and a very fine spike of Oncidium varicosum Rogersii, brightened it up considerably. Mr. A. J. Dodd, gardener to Mrs. Campion, The Frenches, Red Hill, was second; and Mr. J. Miles, third. There were several classes for bush specimens, and they were well contested. Mr. Miles, and Mr. R. Poole, gardener to the Misses Cannons, Beechwood, Reigate, were first and second respectively; and in another class, Mr. G. Stonnard, gardener to Sir. A. T. Watson, Bt., was first; Mr. A. J. Dodd, second; and Mr. G. Smith, gardener to R. W. Inglis, Esq., Craigendowie, third.

The most important of the cut flower classes was for thirty-six Japanese, distinct; here Mr. W. Slogrove, was well to the front. His best flowers were Madame Carnot, G. C. Schwabe, grand, Dorothy Shea, Lord Brooke, Mme. C. Molin, Mme. Rosain, and Duke of York. Mr. C. J. Salter, gardener to T. B. Haywood, Esq., was second; and Mr. G. Steer, gardener to A. Mordan, Esq., Stone House, Reigate, third. For twenty-four Japanese, distinct, it was a close tussle between Mr. W. King, and Mr. A. J. Dodd; the former, however, just managed to win with a grand box. His Edith Tahor, Mrs. H. Weeks, Mephisto, Niveus, H. Jacotot Fils, and Thos. Wilkins, were very fine. Mr. Dodd was second, and Mr. G. Smith, third. There were only two boxes of twelve Japs., distinct. Mr. W. Cooper was first, and Mr. J. Miles, second. For six Japs., distinct, Mr. A. Humphrey, gardener to P. C. Burnand, Esq., Hill Grange, Reigate, was first; and Mr. W. Pottle, gardener to E. C. P. Hull, Esq., Earlswood Mount, Red Hill, second; third came Mr. W. Robertson. Six Japanese, one variety, brought forth six boxes, and Mr. J. R. Cotton, secured the first with Mdlle. Thérèse Rey, which were six handsome flowers; second, Mr. G. Steer, with Mme. Carnot; and third, Mr. G. Smith, with Viviand Morel. For twenty-four incurved, distinct, first, Mr. C. J. Salter; second, Mr. W. King. For twelve incurved, distinct, first, Mr. A. J. Dodd; second, Mr. G. Smith; third, Mr. J. R. Cotton. For twelve reflexed, not less than eight varieties, first, Mr. Salter; second, Mr. G. Steer. For six reflexed not less than four varieties, first, Mr. Cotton; second Mr. W. Robertson, For twelve Anemones, distinct, first, Mr. A. J. Dodd, second, Mr. Salter; 3rd. Mr. G. Steer. All other classes were well filled, including pompons in bunches, plants in pots, such as Primulas, Cyclamen, Solanums, table plants, and Bouvardias. The plants were all arranged in the centre of tables, running the whole length of the hall. The cut blooms were staged around the edges. It made a pretty display and was much admired. The President, M. Marcus, Esq., gave a special prize for six bush specimens of Japanese, distinct. Mr. G. Steer, was first; Mr. R. Poole, second; and Mr. W. Robertson, third. The secretary, Mr. J. Brown, deserves great praise for the zeal and energy he displays in connection with the work of the society.

SEVENOAKS.—*Nov. 10th and 11th.*

THE Sevenoaks and West Kent Chrysanthemum Society held their annual show in the Club Hall, Sevenoaks, and it was generally agreed that the display was one of the best ever got together by the society. Mr. Sidney Cook, gardener to De B. Crawshay Esq., Rosefield, Sevenoaks, is the indefatigable secretary, and he, with his assistants, arranged the show in a very beautiful and attractive way, making the ordinarily dull hall brilliant and effective. The Challenge Cup, value 20 gs. offered for the best group of Chrysanthemums arranged for effect, brought out a goodly number of entries, five prizes being awarded. The cup was secured by Mr. W. Tebay, gardener to Mrs. Rycroft, Everlands; Mr. A. Hatton, gardener to Mrs. Swanzy, The Quarry, was second; and Mr. S. Cook, third. Another leading feature of this show was the bush-trained plants with a single stem, and which were excellent. Mr. E. Hughes, gardener to E. Dixen, Esq., Edenhurst, had the best three specimens; and was followed by Mr. A. Hatton, and by Mr. Young, gardener to Sidney Bucknall, Esq., Norvalia, St. John's. Large blooms cut with long stems and foliage are also one of the most interesting and exciting competitions here. The prizes were taken by Mr. A. Hatton, Mr. W. Tebay and by Mr. S. Cook, in the order named. Mr. R. Potter, gardener to Sir Mark Collet, Bart., St. Clere, Kemsing, had the N.C.S. Certificate for six blooms of one variety. Mr. E. Hughes, had the best twelve Japanese blooms distinct. Mr. Cowper, gardener to H. Foster, Esq., Hill Side, took like honours for twelve blooms, not less than eight distinct. Mr. Wilkins, Wellington, Swanley took the first prize and the N.C.S. Certificate for twelve blooms of incurved varieties. Mr. Hughes was first for twelve incurved, not less than eight distinct, as well as for twelve Anemones. Ferns, Primulas, Poinsettias, tahle plants, bouquets and sprays wers also competed for. Mr. G. Latter, Mr. R. Edwards and Mr. Potter took leading prizes for fruit. Mr. W. Tebay, Mr. H. Heath, Mr. S. Cook, Mr. A. Farmer and Mr. S. Huntley took prizes for vegetables. The last named took the first award offered by Messrs. James Carter & Co., High Holborn; London, and Mr. W. Read, gardener to Admiral Miller, J. P., Fernside, Sevenoaks Common took the N.C.S. Bronze Medal, for a group of plants arranged for effect.

NORTHAMPTON.—*Nov. 11th and 12th.*

THE Corn Exchange, Northampton, was again the venue of this annual display, which has now been held for twenty-five years. The society possesses an excellent record of work done, and success has been by no means an uncertain quantity in past exhibitions, but it may be fairly said that this year has proved a record one, both for the number and excellence of the exhibits. Accordingly the judges, Mr. C. Orchard, Bembridge, Isle of Wight; and Mr. Shoesmith, Woking; had anything but an easy task in adjudicating the awards; whilst Mr. McGradie, Wakefield Green; and Mr. F. Perkins, Jun., Kingsthorpe Nurseries, who judged the fruit and vegetables, likewise had their hands full.

Mr. O. Soden, gardener to F. G. Adnitt, Esq., Billing Road, Northampton, submitted the best group 8 ft. by 7 ft. in size, whilst Mr. T. Manning, Junction Road, Kingsley Park, came out strongly for six trained plants.

Mr. J. Copson, gardener to Mrs. Phipps, Collingtree Grange, led the way for eighteen cut blooms of "incurves," in distinct varieties; also in the smaller class for twelve "incurves." Mr. W. Pearce, gardener to Mr. S. Loder. Flore House, Weedon, headed the list of competitors for eighteen Japanese blooms, distinct, with a very fine and even lot. The same exhibitor also obtained the premier award for twelve Japanese blooms of varieties introduced in or since 1892. For twelve blooms of newer varieties, *i. e*, those introduced in 1895 or 1896, Mr. S. Cole, gardener to Earl Spencer, K.G., Althorp Park, was placed first, Six Japs. of one variety were best shown by Mr. W. Woods, gardener to J. Cooper, J.P., Delapré Abbey.

A fine table of cut Chrysanthemums, arranged with Ferns and foliage plants that was submitted by Mr. Woods, ohtained the first award in its class.

In the amateurs' classes, Mr. W. Kirby, 29, Milton Street, Kingsley Park, was a heavy winner, winning the first prizes for four trained plants; eighteen cut blooms of incurved varieties; and six Japanese of one variety; besides numerous seconds and thirds. The best group of Chrysanthemums 6 ft. by 6 ft. came from Mr. J. Barkway, Lower Thrift Street.

JERSEY.—*Nov. 11th and 12th.*

THE above are the dates on which the Chrysanthemum show, under the auspices of the Horticultural Department of the Royal Jersey Agricultural and Horticultural Society, was held in the Oddfellows' Hall. The were 180 entries, a record for the Society. Quality also was good, and the hard-working hon. secretary, Mr. C. F. Le Feuvre, together with the committee, is to he congratulated upon the result. The features of the show were the Japanese cut blooms, the bouquets, baskets of Chrysanthemums, and about three dozen vases of Chrysanthemums as grown for market.

The Special Cup offered for the best six trained plants was won by Mr. P. Bailhache. The Bronze Medal offered by the National Chrysanthemum Society was secured by Mr. H. Becker for twelve magnificent plants as grown for exhibition; his group of Chrysanthemums with fine foliage, which gained him the first prize was worthy of all praise. Mr. A. J. Le Quesne also secured first places for a group of Chrysanthemums and a basket of them. Mr. P. Bailhache was again to the front for four and one Japanese plants, and three and one pompons. Mr. N. Allain took several leading prizes, including one each for six plants not trained, twelve incurved blooms, twelve blooms of one variety, twenty-four Japanese blooms, and equal first with Mr. P. Bailhache for twelve Japanese blooms. He (Mr. Allain) had several other first prizes. Mr. R. B. Colley took the leading award for six incurved blooms, and the Bronze Medal for cut blooms. The Silver Medal for the best collection of cut blooms went to Mr. N. Allain. Mr. H. Becker had the best sprays and buttonholes; Mr, W. Glenen had the best hand bouquets; and Mr G. T. Day showed the best vase of six blooms. Mr. W. T. Marett took all the leading prizes for pompons. Mrs. Brayn had the hest basket of flowers. Mr. C. J. Nicolle had the best three and one Orchids.

Mr. W. Rogers had a fine display, not for competition. Mr. W. Colchester, of Ipswich, had a tasteful display of samples of Ichthemic Guano. Mr. T. S. Ware, Tottenham, London, had a capital display of Chrysanthemums, not for competition and including the hirsute Midnight and the bright yellow Mrs. Freeman.

DUNDEE.—*11th and 12th.*

YOUR correspondent Mr. Machar, p. 188 makes a mistake by saying the blooms were not so large in the first prize, thirty-six as in the second thirty-six.

He also states that the plant exhibits were better than usual. Quite true the exhihits were better, but there was no competition in the class for gardeners. There has been no competition for two years, and only two, three years ago. Therefore, I think, it

leaves little room for Mr. Machar to say that no one is able to touch Mr. Kennedy. I am surprised that Mr. Machar does not try himself when no one is able to touch him. He also states there were eight entries for the twenty-four, there only being four, and all very close; the second lot was splendid.—*A. McDonald, Helenslea.*

STREATHAM.—*Nov. 11th and 12th.*

THE thirty-seventh annual Chrysanthemum show of the Brixton, Streatham, and Clapham Horticultural Society was held in the Town Hall, Streatham. The groups of Chrysanthemums were of great beauty and excellence, the cut blooms of Japanese varieties exceptionally fine, and competition amongst the exhibitors remarkably keen. A grand display of Orchids was also made, and Ferns and fine foliage plants were of a high order of merit. John T. Gabriel, Esq., Roupell Park, S.W., took the prize, a plant worth 5 gs., offered by Messrs. F. Sander & Co., St. Albans, for the best exhibit of Orchids. Mrs. Knights, Florist, Streatham, secured the Ryecroft Silver-Gilt Medal offered by Mr. H. J. Jones, Lewisham, for the best exhibit in the show. Mr. Howe, gardener to H. Tate, Esq., J.P., Streatham Common, took the first prize for a group of Chrysanthemums, and the N. C. S. Jubilee Medal. Mr. Cherry, gardener to Mrs. Gabriel, Norfolk House, Streatham, took the prize offered by Messrs. Peed & Sons, Streatham, for eight varieties of vegetables. Prizes were offered by Miss Sherwood for baskets of Chrysanthemums with foliage, and Mrs. Strugnell, Brixton Hill, had the best. N. N. Sherwood, Esq., offered prizes for Black Hamburgh Grapes, and the first was taken by Mr. Morgan, gardener to G. L. Turner, Esq., Leigham Court Road. All of the above were special prizes.

Mr. Cherry had the best four trained pompons. Mr. Weston, gardener to D. Martineau, Esq., J.P., Clapham Park, had the best six plants of Japanese varieties. Mr. Gidner, gardener to F. J. Ridsdale, Esq., Clapham Park, was second for standard or pyramid pompons, and first for three trained plants, not pompons. In the cut bloom classes Mr. Howe, led the way for twenty-four incurved blooms; and Mr. T. W. Stevens, gardener to M. H. Voss, Esq., Streatham, had the best twelve. Mr. Mursell, gardener to Mrs. Burton, Leigham Court Road, staged the leading lot of twenty-four Japanese blooms; and Mr. Milsom, gardener to G. A. Payne, Esq., Tulse Hill, had the best twelve. Mr. Howe was again to the fore for twelve broad-petalled incurved Japanese blooms. For six Orchids in bloom Mr. Ranson was first; Mr. Jones, gardener to N. N. Sherwood, Esq., Dunedin, Streatham Hill, was second. The latter had the best four Ferns in 11½-in. pots, the best four smaller Ferns, the best four Chinese Primulas, and the best dinner-table plants. Mr. Poulton, gardener to C. T. Cayley, Esq., Leigham Court Road, took the lead for six white Japanese blooms of one variety, and had the best collection of twelve distinct kinds of vegetables. Mr. Cherry had the best eight vegetables. A First-class Certificate was awarded to Messrs. J. Peed & Sons for a collection of Apples.

DERBY.—*Nov. 13th and 14th.*

THE twelfth annual exhibition of the Derby Chrysanthemum Association was opened in the Drill Hall on the above date, and was generally acknowledged to have surpassed that of last year, the groups alone being finer and twice as numerous.

In the classes open to all except nurserymen the leading prize for twelve incurved blooms was taken by Mr. Holder, gardener to Earl Ferrers, Staunton Harold. Mr. J. Stopps, gardener to H. T. Alton, Esq., Borrowash was second. As usual there was a much more lively competition in the class for twelve Japanese blooms, distinct. In this case Mr. H. Weeks, gardener to Lady Byron, Thrumpton Hall, Derby, carried off the coveted premier award, with a magnificent and imposing display of large and richly coloured flowers. Mr. Holder had to be content with the second place, having much smaller flowers. Mr. H. Gough, gardener to W. Malin, Esq., Overdale, Burton Road, Derby, had no difficulty in securing the first prize and the N C.S. Certificate for his magnificent group of Chrysanthemums, artistically and beautifully arranged. The second prize went to Mr. E. Wilson, gardener to A. J. Cox, Esq., Mill Hill. The third prize group was also a very fine one and was shown by Mr. J. B. Chapman, an amateur belonging to the society. The best shower bouquet, exhibited by Mr. Josiah Wood, was described as amazingly handsome. Mr. Joseph Adams had the best epergne.

Even greater interest was excited in the classes open to members of the society only. Mr. J. Brown, Kilborn, had the best twelve incurved blooms, in eight varieties; and was followed by Mr. W. Garnett, Mr. Josiah Wood secured the coveted special Jubilee Medal of the N C.S, and the first prize for his twelve Japanese blooms. Mrs. W. H. Lees and Primrose League were two of his best blooms. He was followed by Mr. J. Brown, Mr. W. Garnett and Mr. A. J. Hickling, respectively. Other first-prize winners were Mr. J. Brown, Mr. J. Bryan, Mr. J. R. Barnsby, Mr. G. Walker, Mr. J. Adams and Mr. F. Meakin.

Non-competitive exhibits of cut blooms of Chrysanthemums of great merit were staged by Messrs. H. Cannell & Sons, Swanley, Messrs. Dobbie & Co., Rothesay, N.B., and by Messrs. Wm. Clibran & Son, Altrincham.

GRIMSBY.—*Nov 13th and 14th.*

THE Grimsby and District Chrysanthemum Society held high festival in the Town Hall on the above dates. The exhibits were divided among thirty-eight classes—about ten more than last year—and 180 entries in all appeared. The amateur element was especially well represented, and competition in this section of the schedule was very strong and well sustained.

The president Mr. G. A. Carr was placed first in the large class for twenty-four Japanese blooms, distinct, staging very high-class material. The first prize for the best bloom in the show was also carried off by the same exhibitor with a splendidly grown Madame Carnot. Mr. Carr carried all before him again in the premier class for "incurves." He had twenty-four wonderfully even blooms, which were also well coloured. Alderman Doughty came in second here.

The groups showed a considerable falling off as compared with what has been done in other years. There were only three entries in the two classes devoted to this section.

As has already been intimated, the amateurs formed the backbone of the exhibition. Mr. W. Brumpton was a very heavy winner here. Mr. F. W. Maddison, Mr. F. Fawcett, and Supt. Stennett, were likewise very successful. Miss Bennett swept all before her with pot plants, and won all the first prizes.

The fruit classes were fairly strong. Here Mr. W. Staples, of Louth, made a brave show with cooking Apples. Mr. Carr, and Mr. E. K. Cordeaux were likewise among the successful exhibitors.

BATLEY and DISTRICT.—*Nov. 14th.*

THE ninth annual exhibition of the Batley and District Chrysanthemum and Paxton Society, was held in the Drill Hall, Batley, and was one of the most successful the society has yet held. The specimens of cut blooms were excellent in quality, and the grouping of Chrysanthemums in half circles for effect was very fine indeed. In the open class, Messrs. J. R. Pearson & Sons, Chilwell Nurseries, Notts, carried off the first prize, £7, the Batley Temperance Challenge Cup, value £21, and the N. C. S. Silver Medal for the best thirty-six Chrysanthemum blooms, eighteen incurved, and eighteen Japanese, in not less than fifteen varieties each; the second prize £4, was awarded to Arthur Wilson, Esq., Tranby Croft, Hull (gardener, Mr. J. P. Leadbetter); and the third £2, to John Theniton, Drighlington. There was a good competition in the local class for Mr. John Blackburn's Silver Challenge Cup, value 6 gs., together with the N.C.S. Silver Medal, and a suit of clothes value thirty-five shillings, and a money prize of £3 10s. for a group of Chrysanthemums arranged in half circles for effect, space not to exceed 45 ft. The coveted prize was taken by James Davis, gardener to Geo. Sheard, Esq., J.P., Batley, the second and third prizes being won by Mr. S. Hurford, and Mr. R. Lofthouse, respectively. Mr. Davis, also took Major Fox's Challenge Cup for the best three specimen plants; and John Thornton was awarded, Mr. Walter Critchley's Cup and N. C. S. Certificate for the best nine incurved and nine Japanese blooms, in six varieties each.

The judges were Mr. Wm. Boston, The Nurseries, Carthorpe, Bedale; Mr. Thos. Garnett, St. John's Nurseries, Wakefield; and Mr. H. Hemmings, Parks Superintendent, Sheffield, all of whom spoke of the show in commendatory terms. The show was opened by the president, Colr. A. Gill, and the Mayor (Alderman B. P. Nettleton). Mr. Duke Fox, Mr. R. I. Critchley, J. P., Mr. George Sheard, J.P., Mr. Waller Bagshaw, J.P., and Alderman Wilson, Ex-Mayor, also took part in the proceedings.

GRASSENDALE.—*Nov. 14th.*

THE autumn exhibition held under the auspices of the Grassendale Horticultural Society, in the Parish Room, proved in every respect most satisfactory, the exhibits in each section being of considerable merit. In the premier class for cut flowers, twelve incurved and twelve Japanese, distinct, R. P. Houston, Esq., M.P. (gardener, Mr. J. Heaton) won the handsome twenty guinea Silver Cup presented by Alf. L. Jones, Esq., with good flowers. For six varieties of each, A. Cook, Esq. (gardener, Mr. Thos. Hughes) scored a victory, securing the Silver Medal presented by Mr. H. J. Jones, Lewisham. For group of Chrysanthemums, forty square feet, E. Pryor, Esq. (gardener, Mr. E. Taylor) was to the fore with a tastefully arranged group, Mr. C. Colebrooke supplementing the prize with a Gold Medal. For the most tastefully arranged basket the same exhibitor won Messrs. R. P. Ker & Sons' prize with a charming arrangement of Cattleyas, Odontoglossums, Oncidiums, and Bouvardias on a groundwork of Adiantum cuneatum.

For two bunches black Grapes, A. L. Jones, Esq. (gardener, Mr. A. Randall) was awarded the first with Black Alicante, the decision of the judges being the subject of considerable comment. For two bunches of White Grapes, H. A. Samuelson, Esq. (gardener, Mr. R. Dickinson) won with Muscat of Alexandria. For four dishes of dessert Apples, four dishes of Pears, and four dishes of culinary Apples, J. H. Bingham, Esq. (gardener, Mr. W. Jones) was first in each class. The minor classes were filled with very creditable exhibits.

BIRKENHEAD. *Nov. 17th and 18th.*

THIS society has removed its position to new and more commodious quarters; but the Drill Hall, a large non-heated structure, proved most unsatisfactory to the visitors, the cold being in strong opposition to enjoyment; but with this detail remedied the structure is in every way suitable for a large show. The exhibition was somewhat below its usual high average, plants and Grapes being small in numbers, and only of moderate quality. The cut flowers were good, the eight competing lots of Japanese being all up to the mark, and worthy of a position in the prize list. The following are the first prize winners in their respective classes:—

For twenty-four Japanese in not less than eighteen varieties, E. Ellis, Esq. (gardener, Mr. J. Davies), Heswell, staged a strong lot, the best being Phoebus, Miss D. Shea, Viviand Morel, Mutual Friend, Chas. Shrimpton, W. Seward, Mons. Panckoucke, Mons. C. Molin, Chas. Davis, and Mrs. W. H. Lees. For eighteen incurved, distinct, W. H. Watts, Esq. (gardener, Mr. J. Bracegirdle), Wavertree, took the lead, his finest being C. H. Curtis, W. Tunnington, J. Agate, Lord Alcester, John Fulford, Mrs. G. Colman, Lucy Kendal, &c. The prize for twelve Japanese, distinct, local, to which was added the Gold Medal presented by Mr. Colebrooke, was won by C. J. Procter, Esq. (gardener, Mr. J. Williams), with a very telling stand, Chas. Davies, Thos. Wilkins, and Mdlle. M. Hoste, being especially good. For twelve incurved, distinct, Mr. G. Burden was first with moderate flowers; six Japanese, distinct, Mr. H. Holford; six Japanese (novice), Mr. W. Darlington; six incurved, distinct, Mr. R. Balfour; six incurved (novice), Mr. E. Faulkner; group of Chrysanthemums, 40 ft., with foliage plants, Mr. A. Brown, in whose group Crotons, Palms, and Ferns were introduced with taste. For one untrained Chrysanthemum, Mr. W. Totty was first with a good specimen.

OTHER PLANTS.—One Palm, W. Laird. Esq, (gardener, Mr. W. Totty); six Primulas, G. B. Dobell, Esq. (gardener, S. Davis), with good plants of an excellent strain; six Cyclamen, J. H. Ismay, Esq. (gardener, Mr. W. Neish); one Mignonette, Mr. A. Brown; one bouquet, Miss A. M. Mitchell; four stove or greenhouse plants, Mr. J. W. Totty, with a good Croton, Fern, Latania borbonica, &c.; six table plants, Mr. J. W. Totty.

FRUIT.—Four dishes of fruit, Mrs. Porter

(gardener, Mr. M. Quirk), with Muscat of Alexandria and Alicante Grapes, Ribston Pippin Apples and Marie Louise Pears; two bunches black Grapes, Mrs. Paterson (gardener, Mr. T. Ferguson), with large bunches of Barbarossa; two bunches of white Grapes, R. Hobson, Esq (gardener, Mr. M. Carey), with good Muscat of Alexandria; eight dishes of culinary Apples, Mr. John Lee, with The Queen, Warner's King, Mére de Ménage, Annie Elizabeth, &c.; one dish of culinary Apples, Mr. James Smith, with Stirling Castle; six dishes dessert Apples, Mr. James Davies, with Blenhein Orange and Prince Pippin fine; one dish, Mr. G. Webster; one dessert Pear, Mr. H. Reynolds, with Doyenné du Comice; four dishes culinary Apples, Mr. J. Williams; four dessert Apples, Mr. J. Parkinson; four dishes of Pears, Mr. R. Hanagan.

The undermentioned exhibits were arranged not for competition:—Mr. W. Henderson had plants and cut flowers; Mr. A. M. Mitchell showed wreaths, bouquets, &c.; Messrs. Neiuwenhuijs Bros. showed Conifers and a Plan; Messrs. Colebrooks had manures; Messrs. Dicksons, Chester, exhibited hardy fruit and table plants. The arrangements were of a satisfactory character, reflecting credit upon the committee and Mr. W. Barrett.

BRISTOL.—*Nov. 18th and 19th.*

The Bristol Chrysanthemum Society's show was held in the Colston Hall. This show this year was fully up to the former standard, in fact it was difficult, notwithstanding the capacity of the halls to find room for all the exhibits; and it was not till late in the afternoon that judging was completed and all the exhibits finally in place.

Groups were poor, although there were three classes, the first of which for Chrysanthemums only brought up three exhibitors, J. Dole, Esq., staging first prize lot; A. Shipley, Esq., was second; and J. C. Godwin, Esq., third. The next class was for groups of Chrysanthemums and foliage arranged for effect. Three exhibitors again came forward, but owing to the cramped position in a corner of the hall their efforts were almost useless to produce a pleasing effect. The first prize went to J. B. Brain, Esq.; second went to J. Saunders, Esq.; and the third to H. St. Vincent Ames. The third class was for a bank of miscellaneous plants, and banks indeed they were. The first prize was awarded to Joshua Saunders, Esq., for a very fine collection of Orchids with other flowering plants, Crotons Dracaenas, Palms, Ferns, etc.

Under the gallery the class for eight foliage plants resulted in some fine exhibits being brought up, among which a fine specimen of Croton Queen Victoria and Anthurium Vetchii were particularly noticeable. Classes for specimen and trained Chrysanthemums brought a good competition, the principal prize takers being, Mrs. Gibson, W. A. Todd, Esq., A. Coll, Esq., V. Ames, Esq., etc.

The competition for the Challenge Vase which is valued at twelve guineas, and has to be won three times, when it becomes the property of the exhibitor, was very keen. The winner last year was Mr. J. Macdonald, gardener to Capt. Marling, Sydney, Gloucester. The winner also receives £5 in money. Twelve exhibitors competed for this prize and after long and close judging, the coveted first prize was awarded to Mr. Thos. Wilkins, gardener to Lady Theodora Guest, Inwood House, Blandford, Dorset, for a fine lot of blooms the principal of which were Phoebus, Amiral Avellan, Edith Tabor, Chas. Davis, Mme. E. Capitant, Dorothy Shea, Richard Dean, Mme. Carnot, Mrs. C. Blick, Mme. Ad. Chatin, V. Morel, Mrs. Hume Long, Mrs. C. H. Payne, Duke of York, Silver King, Graphic, etc. The second prize went to W. McDonald, gardener to W. B. Marling, Esq.; and the third was taken by Mr. A. Holbrook, gardener to Mrs. Beddoes, who also received the N.C.S. Certificate for the best bloom in the show for a magnificent specimen of Robert Owen.

H. E. M. Anderday, Esq., gained first for twenty-four "incurves," Mr. W. M. Baker being second; and the Rt. Hon. Lord Justice Lopes third. Seven entries in the class for twelve Japs. caused a keen competition, the first prize going to a stand comprising the following:—Mme. Carnot, C. Davis, Stanstead White, Van den Heede, Etoile de Lyon, G. W. Childs, Mme. Marie Hoste. Duke of York, J. Wilkins, V. Morel, Lord Brooke, Mme. Thérèse Rey. The name of the exhibitor was not displayed at the time of reporting. An extensive display was made of table decorations, epergnes, baskets, etc., both of flowers and Autumn foliage, about twenty or more epergnes and baskets being staged. Mr. C. Winstone, Messrs E. S. Cole & Son, and Messrs. C. Dobson & Co. were amongst the prize takers.

A very large exhibition of fruit, including over 130 bunches of Grapes, was staged in competition for the various prizes. Lady Henry Somerset secured first for a collection of fruit. Mr. E. Hall, Bath, was first for two bunches of Black Hamburgh Grapes. Alderman Chaffin, J.P. (gardener Mr. W. Taylor), The Grove, Bath, was first for two bunches of Muscats, and also for two bunches of Alicante, two bunches of Foster's Seedling, and two bunches Gros Colman. The Rt. Hon. Lord Justice Lopes, was first for two bunches of Lady Downes. J. Dole, Esq., was first for two bunches of Mrs. Pince.

Ten competitors competed in the class for a collection of ten distinct kinds of vegetables, the first prize being awarded to Mr. J. Garraway, Bath.

Messrs. Cannell & Sons, Swanley, had a collection of Cannas Pelargoniums, Chrysanthemums, etc., not for competition. Mr. H. Deverill, Banbury, had specimens of this firm's world renowned Onions. Mr. W. J. Godfrey showed a collection of new varieties of Chrysanthemums, among which a new seedling of a blush colour fading to white in the centre, and named Lady Northcote, was awarded a Certificate of Merit by the Judges. Some very choice Carnations were also shown by this firm. Messrs. Garaway & Sons, Bristol, showed a collection of Apples grown upon the Paradise Stock, which caused a good deal of attention. The Ichthemic Guano Co., showed specimens of their specialties and also some fine blooms testifying to the value of their fertiliser.

The Bristol Amateur Horticultural Society held their show in connection with the above, but in a separate room and made a very praiseworthy exhibition by themselves. Most if not all of the members exhibiting were working men, and all the exhibits shown were grown by themselves without skilled assistance. Many of the stands showed a marked advance upon the exhibits usually staged by amateurs, several being worthy of a place in the open classes.

LEAMINGTON, WARWICK.—*Nov. 19th and 20th.*

The first show of the Leamington, Warwick and District Chrysanthemum Society was opened at the Pump Rooms, Leamington, by the Mayor (Alderman Dr. T. W. Thursfield) in the absence of the Countess of Warwick through indisposition. C. A. Smith-Ryland, Esq., two years ago inaugurated a Chrysanthemum society at Barford Hill, in the neighbourhood, and this soon outgrew the space at command; hence the formation of the above society at Leamington. It was well organised and highly successful as far as the show was concerned.

Mr. T. West, Warwick, took the leading prizes for one and three Japanese Chrysanthemum plants, dissimilar. The features of the show were the groups of Chrysanthemums arranged for effect. The leading award was easily secured by Mr. R. Greenfield, of the Ranelagh Nurseries, whose group contained 250 blooms of good quality set off with Ferns. Mr. W. Vause took the second place with smaller blooms but more Ferns, &c., to give effect. Mr. T. West again took the leading award for six Chrysanthemum plants, which were well flowered.

Cut Blooms.—C. A. Smith-Ryland, Esq., offered prizes for twenty-four blooms of Japanese varieties distinct, and the fine blooms staged elicited general admiration. The leading honour was secured by Mr. W. Pearce, Weedon. Mr. H. Blakeway, gardener to P. A. Muntz, Esq., Dunsmore, near Rugby, took the second place; and was followed by Mr. W. Tustin, Rugby. Mr. J. Masterson, Weston House Gardens, had the best twelve incurved blooms in nine varieties. Mr. F. J. Blake, Coundon House, Coventry, was second. Mr. W. Pearce came to the front again for twelve Japanese blooms, which he grows to great perfection. Mr. F. J. Blake was second. Mr. H. Dunkin, Warwick, was first for six incurved blooms; Mr. H. Blakeway for six Japs; Messrs. Finch & Co., Milverton, for a bouquet of Chrysanthemums, and for a cross of Chrysanthemums. Mr. R. Greenfield had the best vase of Chrysanthemums.

Fruit.—The Grapes, Apples, Pears, and Medlars were very choice. The first award for a collection was taken by Mr. G. Hopkins. Mr. A. D. Christie, of Alcester took the leading prize for white Grapes, and also that offered by Messrs. Thomson & Sons, Ltd., Clovenfords, for two bunches black and white. Mr. C. Walter, Compton Verney had the best three bunches of black Grapes. Mr. H. Blakeway had the best three dishes dessert Apples. Messrs. Finch & Co. took the leading award for three dishes culinary Apples. Mr. T. Keen, Barford, staged the best single dish. There were numerous other classes for lady amateurs, single handed gardeners, cottagers, &c.

Non-competitive exhibits were represented by a splendid collection of vegetables from Mr. C. Wilson, of Warwick. Messrs. Finch & Co. staged Orchids and Pelargoniums. Mr. William Colchester, Ipswich, showed an exhibit of his well known fertiliser, Ichthemic Guano. Mr. Fred Perkins set up some groups of plants, including Carnations, Marguerites, Poinsettias, Ferns, &c.

EDINBURGH.—*Nov. 19th, 20th, and 21st.*

Second Notice.

The usual excellent results experienced by the Scottish Horticultural Association in their annual show have been fully maintained, and we understand that at the close of the show, which remained open till Saturday night last, the receipts totalled £1,100 for admissions and space letting, this sum being some £200 beyond previous records. We congratulate the Council upon this eminently satisfactory result, which will doubtless instil forcibly a desire to beat even this record when another season has come round. Indeed there seems no limit to the enthusiasm and capacity for work in the interests of this show by the management responsible for it, and we point to the Edinburgh Society as a patern and an example of what can be done by sheer determination and practical work, which are two potent factors in the results before us.

It is worthy of note that the winner of the City of Edinburgh Cup, Mr. J. W. McHattie, who is now head gardener to the Duke of Wellington, Strathfieldsaye, has twice previously been successful in winning this prize when he had charge of the Marquis of Lothian's gardens, and he is to be congratulated upon still holding his own.

The plant classes were better than have been for several years.

The following were the principal awards in this section:—Six pots Chrysanthemums, distinct, single and pompon excluded– First, Joseph Holmes, Winton Castle, Pencaitland; second, D. Cavanagh, St. Edwards, Murrayfield, Edinburgh; third, S. Abbott, Prestonfield House, Edinburgh. Four pots pompon Chrysanthemums, distinct—First, W. Pulman, Holywood, Colinton; second, George Balmer, 9, Ettrick Road, Edinburgh; third, P. Hunt, Colthbridge Hall. Four pots Japanese Chrysanthemums, distinct—First, D. Cavanagh; second, D. Jardine, Ravelston, Blackhall; third, Joseph Holmes.

Open to Amateurs Only.

Two pots large flowered Chrysanthemums, distinct—First, R. H. M'Bean, 6, West Montgomery Place; second, Miss G. Munro, Bee Cottage, Pencaitland; third, J. F. Melrose, 8, Great Stuart Street. Two pots pompon Chrysanthemums, distinct—First, R. H. M'Bean; second, Thomas Anderson, 29, Cluny Gardens; third, T. N. Fairley, 6, South Elgin Street.

Open to All.

A special prize of one guinea, presented by Mr. Porter, Maidstone, for the best Chrysanthemum plant of any variety which has one of his patent invincible crocks in the pot at the time of exhibition —D. Cavanagh.

Another very pleasing feature of the show was the circular table, 4 ft. in diameter, arranged with Chrysanthemum blooms, in glasses or vases, and interspersed with Ferns and other foliage plants, for which the following were the awards—First, Alexander Bogie, Kilmarnock; second, Daniel Kidd; third, D. Jardine.

Similarly good was the class open to ladies only for best arranged epergne or vase of Chrysanthemums, any foliage used—First, Miss Enever Todd, Stoneybank, Musselburgh; second, Miss Edith Todd; third, Miss Taylor, Orwell Lodge, Polwarth Terrace.

The miscellaneous plant department was signalised by some really excellent specimens, the following being the successful competitors in the principal classes:—Three specimen Palms, not less than

4 ft.—First, G. Wood, Oswald House, Edinburgh; second, J. Gilchrist; third, G. Chapel, St. Leonards. Six Dracaenas, distinct—First, W. Stewart, Carlisle; second, M. M'Intyre; third, D. Mackay, Liberton. Three Dracaena Australis—First, M. M'Intyre; second, A. M'Innes, Irvine.

The groups staged fully maintained the high reputation of this show for work in this respect. The culture and taste showed high order throughout. The awards were for group of Chrysanthemum, foliage and other flowering plants, arranged for effect on the floor, 10 ft. in diameter, Chrysanthemums the leading feature—First, P. Hunt, Coltbridge Hall; second, D. Jardine, Blackhall; third, G. Wood, Edinburgh. And for eight decorative foliage plants, stove or greenhouse, pots not to exceed 9 in.—First, M. M'Intyre; second, D. Mackay; third, T. Lunt. Four decorative foliage plants, stove or greenhouse, pots not to exceed 9 in.—First, M. M'Intyre; second, D. Kidd; third, J. Cumming.

A very large space had been devoted to vegetables, and the exhibits generally were fine. For Potatos the prizes were taken by Mr. J. Cossar, Spott House, Dunbar; Mr. E. Gemmell, Flakefield, Chapelton; and Mr. R. Wilson, Devonvale, Tillicoultry, in the order named. Two very good collections of vegetables were displayed by Mr. D. Logan, Castlelaw, Coldstream; and Mr. J. W. Scarlett, Inveresk, who succeeded in taking first and second prizes respectively. At this time of the year it is only natural to expect a poor lot of entries for Peas; Mr. D. Logan's plate-full worthily took the first prize for size of pods, whilst Mr. J. Gilchrist was second with a larger quantity. Class No. 113 for two pots of Parsley secured nine entries, all good specimens, first prize, Mr. J. Wood, Newtown, Pencaitland; second, Mr. J. Turner, Caberston Toll, Walkerburn; third, Mr. J. Gilchrist, Clifton Hall, Ratho.

Onions again formed a good class, the awards being given to Mr. D. Murray, Culzean; Mr. P. Melville, Rosemount, Monckton; and Mr. T. Gordon, Ewenfield, Ayr. For Turnips the prizes went to Mr. R. Hastie, Kirkleas, Broxburn; Mr. A. Brunton, Lindsaylands, Biggar, and Mr. J. Tweedie, Biggar Park.

Carrots were best shown by Mr. J. Waldie, Dollarbeg; Mr. H. Dunsmore, Thornhill Cottage, Polmont.

Parsnips by Mr. C. Davidson, Newtown, Pencaitland; Mr. J. Waldie, and Mr. D. F. Cook, Cornton Cottage, Crieff.

Beetroots were numerously represented, and the awards were given to Mr. A. Taylor, The Cross, Pencaitland; Mr. H. Dunsmore, and Mr. A. Short, Old Melrose.

Prizes for Celery were accorded to Mr. D. Logan, of Castlelaw, Mr. J. Gilchrist and Mr. T. Boyd, Callender Park, Falkirk.

Curled Greens (an exhibit we do not cater for in the south) were strongly mustered, and the judges must have experienced a deal of difficulty before deciding that Mr. J. Staward, Belwood, Milton Bridge, Mr. J. Cossan, and Mr. R. Neil, Holycot, Lasswade, were the winners. Messrs. J. W. Scarlett, of Inveresk, J. Wright, of Prestonpans, and W. Clark, Primrose Cottage, Kirkcaldy, carried the ribbons in the three Savoys class. Mr. J. W. Scarlett, again was first for Culinary Cabbages, Mr. J. Waldie, Dollarbeg second, and Mr. J. Smith, New Town, third. Brussels Sprouts were fairly numerous, the first prize going to Mr. J. Mathieson, of Glenesk, and second to Mr. J. Waldie, for three very good stalks each. Mr. J. W. Scarlett was first for Cauliflowers, Mr. J. Cossar second, and Mr. A. Short, of Old Melrose, third. Further results were Mushrooms, Mr. W. McRobbie, Waverley Park, Abbey Hill, Mr. M. McIntyre, The Glen, and Mr. S. Tanner, Plewlands, Morningside.

Cucumbers.—Mr. J. Waldie, Mr. T. Boyd, Callander Park, and Mr. C. Palmer, Fenton House.

Leeks.—Mr. D. F. Cook, Cornton Cottage, Crieff, Mr. W. Rutherford, Fanfield, Selkirk, and Mr. R. Hastie, Kirkleas.

Tomatos.—Mr. J. G. White, The Orphanage, Aberlour, Mr. J. Paterson, Bennochy Park, Kirkcaldy, and Mr. W. Clark, Primrose Cottage, Kirkcaldy.

Collections of Salads were sent in by Mr. J. Joss, Arnhall, Dundee, Mr. W. Davidson St. Fillans, Trinity, and Mr. J. W. Scarlett.

Collections of vegetables in ten distinct kinds brought out the talent, and formed objects of attraction to all gardeners and of envy to the city people.

Mr. R. T. Rae, Sunlaws, Kelso, was a good first, his show containing Dobbie's White Celery and Champion Leek, selected Parsnips and Golden Ball Turnips, with Veitch's Autumn Cauliflower, Liberton Sprouts, Stourbridge, Marrow Pea, Comet Tomato, and Cranston's Excelsior Tomato. The second prize collection was that in the name of Mr. Wm. Harper, Tulliebelton House, Perth. The third Mr. A. C. Cameron, Binrock, and fourth Mr. A. Dickson, Glenormiston.

For collections in six distinct kinds, Mr. J. Waldie takes premier, his Leeks (Dobbie's Champion), being very fine. Next came Mr. A. Dickson, Glenormiston, followed by Mr. A. C. Cameron, Binrock, Dundee.

A most interesting table was that of Mr. Crombie, gardener to Viscount Powerscourt, K.P., Powerscourt, Ireland, on which were displayed branches of rare Japanese, Indian, and other Conifers with cones upon them. There were fine specimens of the cones of Abres magnifica, Pindrow, and Webbiana, and a fine decorative effect was imparted to the table by the display of tall sprays of the spindle tree, of travellers' Ivy (Clematis vitalba), of the sweet Laurel, and of Pernettya mucronata, with its rich carmine berries. In this neighbourhood was a stall where flowers and fruit were sold by Mr. M. Todd (not Ford as erroneously reported last week) for the benefit of the Gardeners' Orphan Fund.

The following are the awards for trade exhibits at the Edinburgh Show, November 19th, 1896;—

Gold Medal.

Messrs. Dobbie & Co., Old Bridge End, Leith; and Ichthemic Guano Co., per W. Colchester, Ipswich.

Silver Medals.

Mr. Thos. Fortune, Queensferry Street, Edinburgh; Mr. D. Crombie, Powers Court Gardens, Ireland; Messrs. G. Bunyard & Co., Maidstone; Mr. J. Watkins, Hereford; and Messrs. H. and J. Caesar, Knutsford.

Vote of Thanks.

Mr. M. Campbell, Auchenraith, High Blantyre; Nr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E.; Mr. J. Downie, 144, Prince's Street, Edinburgh; Messrs. Dobbie & Co., Rothesay; Messrs. Turner, Ltd., Portobello, Edinburgh; Mr. J. W. Scarlett, Inveresk; Mr. J. Forbes, Hawick; Messrs. J. and R. Thyne, Glasgow; Messrs. Laing & Mather, Kelso; Messrs. Wm. Thomson & Sons, Ltd., Clovenfords; Messrs. Richardson & Co., Edinburgh; Mr. D. Anderson, Edinburgh; Messrs. Tomlinson & Hayward, Lincoln; Mr. Wm. Jobson, Murrayfield; Messrs. Cranston & Elliott, Edinburgh; Messrs. Buchanan Bros., Kippen; Messrs. W. Edwards & Son, Sherwood, Nottingham; Mr. J. Coats, Leith; The Hitchcock Lamp Co., Edinburgh; Messrs. Bruce Lindsay Bros., Leith; Messrs. R. Adams & Son, Edinburgh; Messrs. Burns, McCallum & Co., Edinburgh; Messrs. J. Ford & Co., Edinburgh; and Mr. D. Noble, Edinburgh.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E., was awarded First-class Certificates for three new Chrysanthemums, viz:—

Mr. A. G. Hubbuck (Jap.), an indian-red colour, with large deep flower and narrow drooping florets, golden reverse, distinct.

C. W. Richardson (Jap.), a rich yellow large flower with long drooping and curling petals; and

General Mauric (incurved), showing a medium-sized beautifully incurved flower of soft primrose colour with a deep yellow centre.

CHORLEY.—*Nov. 20th and 21st.*

The thirteenth annual show of the Chorley Chrysanthemum Society was held at the Town Hall. The principal feature of the show was the groups, one of miscellaneous plants although small was very lightly and harmoniously arranged. This was exhibited by Mr. Drinkwater, gardener to H. T. Parge, Esq. Two well-arranged groups of Chrysanthemums arranged for effect were shown, the first prize going to Mr. Haynes, gardener to A. M. Thorn, Esq. A good number of specimen plants filled one side of the hall, and the classes for Primulas and table plants induced several exhibitors to compete.

Cut blooms were not so well shown, very few exhibitors competing for the various prizes, although they have been increased in value. The first prize for eighteen Japanese blooms was awarded to Mr. J. Kirkman, gardener to J. Stanning, Esq., J.P. The best blooms in this stand were Golden Gate, Silver Cloud, Niveus, and M. Gruyer. The best bloom in the show for which an N.C.S. Certificate was awarded was a Mme. Carnot in the second prize stand shown by Mr. Bretherton.

Some choice Orchids were exhibited for prizes, among which the fine Cymbidium and Laelia anceps shown by E. Jackson, Esq., and which received first prize, was very noticeable.

Some excellent fruit was shown, one bunch of black Alicante Grapes being exceptionally fine. Unfortunately this came into competition with a bunch of Muscat of Alexandria, which took first prize, the second going to the Alicante. The judges were Messrs. Tunnington and Hathaway, and they expressed themselves as very pleased with the show.

Messrs. Clibran & Son, Altrincham, exhibited a collection of new Chrysanthemums. Mr. J. Atherton, Preston, showed a large and varied collection of Cacti and other succulent plants, which proved a very interesting feature.

The Ichthemic Guano Company had a stand illustrating the benefits of their speciality as a plant food. The show was opened at two o'clock on Friday by the Rt. Hon. Lord Balcarres, supported by the president, the very Rev. Dean Lennon, the Mayor, and various members of the corporation.

LEEDS.—*Nov. 24th and 25th.*

The annual Chrysanthemum show at Leeds was held on Tuesday in the Victoria Town Hall, which was very beautifully decorated with some fine Palms and pot plants. The number of entries is well up to the average, with a slight falling off in vegetables, but a great increase in the number of cut blooms and groups. One of the latter exhibited by Mr. Townsend, gardener to C. B. Faber, Esq., Harrogate, fully deserved the first award. A more artistic grouping was scarcely possible among cut blooms. The leading honours were gained by Mr. Goodacre, gardener to the Earl of Harrington, some of whose blooms were very fine; notably so were Madame Carnot and Messrs. Wm. H. Lees. Messrs. Cannell, Swanley, Kent; and Messrs. Green, Leeds, had also exhibits. The courteous secretary, Mr. Campbell, is to be congratulated on the splendid management of show arrangement.

SOCIETIES.

Royal Horticultural, *Nov. 24th.*

Orchids, Chrysanthemums, stove and greenhouse plants were the leading features of the meeting on Tuesday last, the first two classes of plants creating the greatest amount of interest.

Messrs. J. Veitch & Sons, Chelsea, exhibited a large group of Orchids in great variety and well relieved by Palms and Maidenhair Ferns as greenery. Bigeneric hybrids were well represented by numerous Laeliocattleyas, including L. Decia, L. Ino, L. Statteriana, L. Pallas, L. Lady Rothschild, and L. Eunomia, quite a unique lot, and showing the modern tendency in the matter of Orchids. Other things in fine condition were Dendrobium glomeratum, D. euosmum virginale, Oncidium varicosum, O. tigrinum, Odontoglossum grande, and a large number of Cypripediums. A piece of C. insigne montanum bore fourteen flowers (Silver Flora Medal).

Messrs. F. Sander & Co., St. Albans, also staged a pretty and varied group of Orchids, including pieces of Cattleya labiata, Cymbidium winnianum, C. giganteum, Cypripedium leeanum virginale, C. Bruno, Dendrobium, Johnsoniae, and various others. A grand introduction was that named Laeliocattleya albanense, var. Lady Brougham. Very uncommon is Odontoglossum Krameri with its soft rosy-violet flowers. Angraecum polystachys is a sweetly-scented species (Silver Banksian Medal).

Cattleya flowers were exhibited by A. P. Haywood Lonsdale, Esq. (gardener, Mr. T. R. Cuckney), London. W. R. Young, Esq., Fringilla, Linnet Lane, Liverpool, exhibited some beautiful varieties of Cypripedium. Catasetum splendens worthingtonianum was shown by Harry Worthington, Esq., Manchester.

Laelia autumnalis LucyDodd, a curious Epidendrum, and a Laelia were shown by E. Ashworth,

Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Wilmslow, Cheshire. Cattleya labiata alba, C. L. var, Ashford, in grand form, were exhibited by G. Shirland Ball, Esq. (gardener, Mr. A. Hay), Ashford, Wilmslow, Chelsea.

Cattleya labiata var. Stoke Park, bearing four huge flowers was exhibited by Wilberforce Bryant, Esq. (gardener, Mr. David Kemp), Stoke Park, Slough. E. H. Woodall, Esq. (gardener, Mr. W. Hughes), St. Nicholas House, Scarborough, exhibited a grand piece of Vanda caerulea bearing five spikes of bloom (Cultural Commendation).

R. I. Measures, Esq. (gardener, Mr. H. Chapman), Cambridge Lodge, Camberwell, exhibited several hybrid Cypripediums, including C. Olenus, C. Regina, C. Edwardii, &c. Admiral Cator (gardener, Mr. Geo. E. Day), Hazelwood, King's Langley, showed Cymbidium cyprifolium.

Several new hybrids were exhibited by Messrs. J. Veitch & Sons, including Cattleya Tiresias, Laelia Omen, Laeliocattleya Decia alba (a chaste and charming variety), and Cypripedium Baron Schroder. Mr. James Douglas, Edenside, Great Bookham, Surrey, exhibited a fine peice of Laeliocattleya Apollonia.

Odontoglossum elegantius was staged by W. Thompson, Esq. (gardener, Mr. Stevens), Walton Grange, Stone, Staffs. He also had some beautiful paintings of various Orchids. R. I. Measures, Esq., also exhibited about fifteen paintings of Cypripediums and Cattleyas, mostly the former, representing hybrids as well as the choicer varieties. Frau Ida Brandt showed some Orchid flowers.

Baron Scoroder (gardener, Mr. H. Ballantine), The Dell, Egham, exhibited a most interesting collection of cut flowers of Orchids, including Laeliocattleya Baroness Schroder, L. Calypso, Odontoglossum wilckeanum Godefroyae, Cypripedium insigne Sanderae, Odontoglossum Pescatorei Schroderianum, Cypripedium insigne Sanderae, and others. (Silver Banksian Medal). Laelia juvenalis and the beautiful Sobralia Lindenii were exhibited by Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

John M. Fraser, Esq. (gardener, Mr. James Lindsay), Rosemont, Perth, exhibited a splendid bunch of Oncidiums, including O. gravesianum with fifty flowers, O. Forbesii, with thirty blooms; and O. varicosum Rogersii with thirty, all very highly coloured. He also had a bunch of cut flowers of Cattleya labiata in a considerable variety of colours.

A superb group of foliage plants, chiefly Dracaenas, was set up by Mr. R. Gülzow, The Melbourne Nurseries, Bexley Heath, Kent. In the centre appeared a fine panful of D. sanderiana, the plants being cleanly grown, bright, and well variegated. On either side of this was staged a grand specimen of D. Doucettii. In the front ranks were some medium sized samples in excellent condition, clean, well-coloured, and shapely. D. Lindenii, D. terminalis alba, D. H. Schult, and D. Mad. Heine, were a few of the most notable forms. Some plants of Cocos weddeliana formed a good background, and dwarf Palms (chiefly Kentias) and Ferns made up the edging (Silver Gilt Flora Medal).

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, contributed a neat little batch of well-grown Cyclamen. The habit of the plants was vigorous, and the flowers, which were produced in considerable profusion were of corresponding size and strength. A few winter floweringCarnations were likewise sent by the same firm. (Silver Banksian Medal).

A showy, if somewhat formally arranged, group of foliage plants and cut Chrysanthemums was contributed by Mr. Davies, gardener to W. F. Darnell, Esq., Devonshire House, Stamford Hill. Crotons formed the bulk of the foliage element, in conjnnction with a few Fittonias which composed the front lines. The Chrysanthemums were large although many of them were past their best. (Silver Banksian Medal).

A small batch of Primula sinensis came from Mr. D. Kemp, gardener to W. Bryant, Esq., Stoke Park, Slough—some well grown plants of the blue variety. (Silver Banksian Medal).

Cut Chrysanthemums were, as may well be supposed, a strong feature of the day's exhibition, a goodly number of cultivators contributing.

Mr. W. Wells showed a collection of cut blooms of single varieties that included such pretty forms as Disraeli, Mabel M. Wells, Magenta, and Muriel Foster. Plants and cut blooms of Lady Hanham, the new sport from Viviand Morel, were likewise on view, as well as G. J. Warren, the yellow sport from President Carnot, and a wondrously pretty Pompon, Gem of Earlswood. (Bronze Banksian Medal).

Messrs. Young & Dobinson, Holmesdale Nurseries, Stevenage, Herts, sent flowers of late Gloxinias and sprays of Coleuses raised and sent out by them:

C. E. Shea, Esq., The Elms, Foot's Cray, Kent, submitted a couple of dozen good blooms of the Japanese type. Mad. Ad. Chatin, Mme. Carnot, M. Chénon de Leché, Golden Gate, Mons. C. Molin, and Mdlle. Thérèse Rey were some of the best (Silver Banksian Medal).

Messrs. H. Cannell & Sons showed bunches of cut Chrysanthemums, Chas. Wilkins and Miss Storer were two of the most conspicuous forms here. Two or three very pretty singles were also included. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., sent a few cut blooms, chiefly of single and decorative varieties. The grand Newmarket variety Golden Elsie was splendidly shown by Mr. B. Ladhams, Shirley Nurseries, Southampton. Mr. Walter Jinks, gardener to Edgar Bruce, Esq., The Beeches, Walton, sent four blooms of the new Jap, Mrs. Maling Grant, a variety of great promise, but which arrived on the scene too late for the consideration of the committee.

Mr. Robert Owen, Maidenhead, staged a lot of cut blooms of new varieties, in which were included C. A. Owen, John Macfee, and Bellum in excellent condition (Silver Banksian Medal).

Mr. W. J. Godfrey, Exmouth, Devon, sent two dozen show blooms. Melina Duchanel, Olive Oclee, Lady Northcote, and The Egyptian were some of his strongest varieties.

A Silver Banksian medal was awarded to Mr. Rickwood, gardener to the Dowager Lady Freake, Fulwell Park, Twickenham, for a group of cut Chrysenthemums. Messrs. Young & Dobinson received a bronze Banksian Medal for cut Chrysanthemums in which all sections were represented.

Messrs. Veitch & Sons, Chelsea, sent a plant of Rhododendron Cloth of Gold, resulting from a cross between Lord Wolseley and Teysmanni, also cut blooms of Javanica-Jasminiflorum section of hybrids.

At a meeting of the fruit and vegetable committee Messrs. J. Peed & Sons, Roupell Park Nurseries, South Norwood, were awarded a Silver Banksian Medal for sixty-eight dishes of Apples and Pears, in as many varieties. The fruit was clean and well-coloured throughout.

A dozen fine Pineapples, sent by Mr. Owen Thomas, gardener to H.M. the Queen, Frogmore, received a Silver Gilt Knightian Medal, an award which the quality of the fruit in question thoroughly deserved. Twelve splendid dishes of fruit which came from C. E. Shea, Esq., were awarded a Silver Banksian Medal.

Competition in the Veitch's classes for the best flavonred Apple and Pear, was, as on previous occasions, pretty keen. In the Apple class Mr. C. Herrin, Dropmore, was placed first, with Cox's Orange Pippin; and Mr. Divers, Belvoir Castle, Grantham, second, with De Neige. In the Pear class the last named exhibitor headed the list with Beurré de Buisson; Mr. Owen Thomas taking second place with "Knight's Monarch." Mr. Thomas also received a Cultural Commendation for a box of Cucumber Frogmore Prolific.

Obituary.

A SAD tone prevails amongst gardeners at Edinburgh in recollection of the recent death of MR. W. YOUNG, of the Caledonian Horticultural Society. This gentleman, who had been assistant secretary of the Royal Caledonian Horticultural Society for over a quarter of a century, was eighty years of age, and for several years past had been in feeble health. At the last autumn show he was, however, able to be out and attending in a quiet way to his duties, and he afterwards attended the dinner to the judges, along with his third son, who was then on a visit from India, and who recently returned to take charge of the largest tea gardens in India. Mr. Young, who was a shoemaker for many years on the South Bridge, was best known from his connection with the local horticultural societies. He was an enthusiastic amateur grower of flowers, a keen competitor, and a recognised authority on Primulas, Pansies, and Auriculas, which he raised to perfection in his garden at Broughton. For forty years he was honorary secretary of the old Edinburgh Horticultural Society, which was amalgamated with the Caledonian. Mr. Young then became assistant secretary of the Caledonian, and at social gatherings he wonld relate the steady growth of the society from the time it held its exhibitions at the Physic Gardens, then in the Music Hall, and afterwards in the Waverley Market. Certainly by his labours he has helped greatly to raise the Royal Caledonian Society to the great position it now occupies among horticultural societies in Scotland. Some years ago he was awarded by the council of the society the Neill prize of £30 and a medal, which at intervals is voted to prominent horticulturists. Mr. Young held more First-class Certificates for seedlings of his own raising than any other man in Scotland. We believe that it was mainly through him that Souvenir de la Malmaison Carnation was introduced to the public, and certainly he must be credited with being the first raiser of the pink variety. It was also upon his suggestion that the first International Exhibition was held at Edinburgh in the Sixties. The funeral cortége left Broughton Place for Warriston Cemetery on Saturday last, and comprised most of the twenty-two crofters that Mr. Young had installed on his own land, besides most of the influential members of Scottish horticulture.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Carnations attacked with Disease.—*J. K. M.*: The samples you sent us were very badly attacked with a fungus known as Helminthosporium echinulatum, which is very insidious in its attacks, and difficult to overcome. Possibly you did not notice it for a time; but you should commence at the very beginning of the attack and remove every leaf attacked to the very base. The fungus lives insides the leaf, and may be further down than the spot appears; hence the reason for removing the whole leaf and burning it. Mr. Chas. Blick, gardener to Martin R. Smith, Esq., the Carnation specialist, got rid of the disease by persistently sponging the plants with a weak solution of Gishurst Compound. We consider it would be a good plan to place your young specimens in a heated house, where you can maintain a dry atmosphere to prevent the spread of the fungus, while you sponge them at fairly frequent intervals, and remove attacked leaves. Keep the old plants right away from the young ones or burn them if need be.

"Eiley Deane."—*J. Gowa*: There was some intention of publishing it in book form, but whether it has been carried out we cannot say. You could no doubt get the particulars by writing to Miss Evelyn C. Griffiths, 200, Sutherland Avenue, London, W.

Omissions from shows.—*G. T.*: No one more regrets omissions at Chrysanthemum shows than we do; but we could not give a full report of every show taking place just now, even if we went to press every day with a separate issue. Concerning gardeners' names, we shall try and remedy that.

Names of Plants.—*Geo. Russell*: Ruellia Portellae, a fine foliage plant.—*Young Gardener* We cannot undertake to name florists' flowers of any description. Your best plan would be to see whether any nurseryman or gardener with a collection of Pelargoniums (Geraniums) would be willing to help you.

Chrysanthemums for Groups.—*George Williams*: You did not say whether you wanted small or large-flowering types for grouping. It may be remembered that large-flowering forms are used at the leading exhibitions. You might also have mentioned whether you wanted to grow them in the bush form for conservatory work. You can make them dwarf by rooting them in March and April. The following, we think, would meet your requirements for conservatory decoration:—Pallanza, golden yellow, John Shrimpton, crimson, William Seward, dark crimson, Viviand Morel, pink or rose, Charles Davis, rosy bronze, Amiral Avellan, rich yellow, Avalanche, white, H. L. Sunderbruch, rich yellow, Duchess of York, canary yellow, Madame Ad. Chatin, white, Louise, blush pink, Mrs. Falconer Jameson, orange-bronze, Mons. Chénon de Léché, buff-rose, Mutual Friend, white, Primrose League, creamy-white, Reine d'Angleterre, rosy-pink, Souv. de Petite Amie, white, W. G. Newitt, white, Van den Heede, dull carmine, Richard Dean, dark crimson, Mons. Georges Biron, chestnut red, Mephisto, bronzy yellow, Madame E. Capitant, deep red, and James Myers, rose-cerise. The above include early, midseason and late dwarf varieties.

Registered letter stamped *Leeds*, containing P.O. and stamps with coupons but no name. Will sender post name and address and say where P.O. was issued.

Communications Received. — A. P. — Metropolitan Machinists' Co.—Omega.—W. Swan.—W. B. G.—Aberdeen, Ayr, Helensburgh, and other shows are unavoidably crowded out this week.—A. R.—L. M.—T.B.—A. G.—F.C.—Weston.—H. J.—A. M., C.

TRADE CATALOGUES RECEIVED.

FOTHERINGHAM & KING, Dumfries.—Forest and Ornamental Trees, Shrubs, Roses, Fruit Trees, &c.

H. CANNELL & SONS, Swanley, Kent.—Cannell's Chrysanthemums. All the varieties shown at the Great Jubilee Exhibition, 1896.

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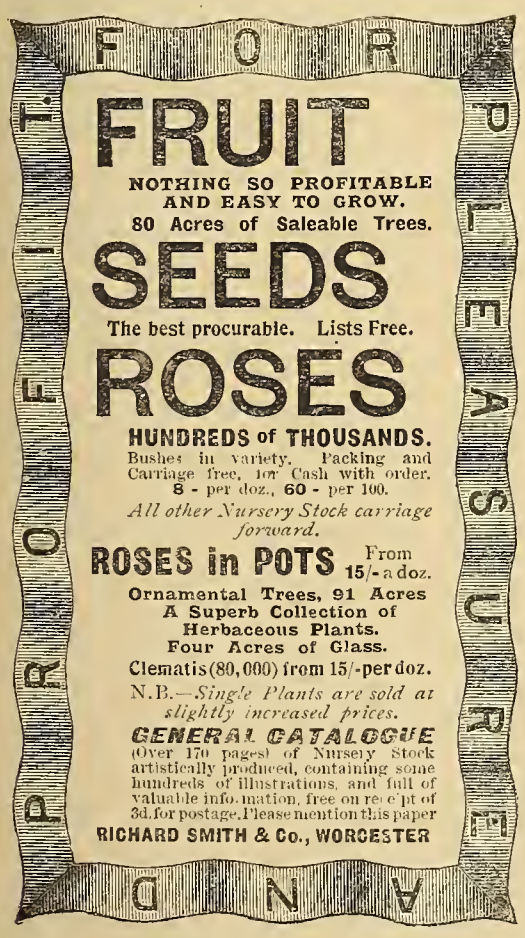

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, DECEMBER 5th, 1896.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, December 7th.—Opening of the Potato Tercentenary Celebration at the Rotunda Rooms, Dublin (3 days). Sales of Dutch Bulbs and rare Perennials by Messrs. Protheroe & Morris
TUESDAY, December 8th.—Sales of Dutch Bulbs, Roses Carnations etc., by Messrs. Protheroe & Morris.
THURSDAY, December 10th.—Sales of hardy Perennials by Messrs. Protheroe & Morris.
FRIDAY, December 11th.—Sales of imported and established Orchids by Messrs. Protheroe & Morris

GLEANINGS OF THE CHRYSANTHEMUM HARVEST.—The early winter exhibition of the National Chrysanthemum Society, just consummated on Tuesday, Wednesday and Thursday last, may be regarded as the gleanings, and valuable gleanings too, of a long and abundant harvest of bloom. The exhibition just completed takes the place of the mid-winter show, which used to be held in January. It was believed that a creditable and attractive exhibition of Chrysanthemums could hardly be realised in London after the lapse of December in our climate; and with existing machinery for getting up the same, we are of opinion that this is a correct view of the case. The shows that have hitherto been held in January amply demonstrated this fact. The results of the early December exhibition have hitherto justified the alteration of the dates of the closing show of the season. The National Chrysanthemum Society may justly feel proud, not only of its own shows, but of the example and impetus which it has given directly and indirectly to many other societies, whether affiliated or otherwise, throughout the length and breadth of the British Isles, and in distant colonies.

Needless to say, many allusions to the National Society have been made by contemporaries in various parts of the country, when reporting or commenting upon their local shows of the favourite autumn flower. The reports with which we have been furnished by our numerous correspondents in various parts of the country have amply corroborated these statements. A goodly number of Chrysanthemum societies have been rejoicing at their age, and others exulting in their vigorous youth and prospects; some have started a Chrysanthemum show for the first time; others have resuscitated an old one after the lapse of a number of years; while others have widened their sphere of action by annexing a wider district and shifting to more populous districts, reminding us of the progress of the old Stoke Newington Society, gradually shifting from its place of origin and ultimately blossoming into the National, at Westminster. It seems generally acknowledged that the Norfolk and Norwich Horticultural Society was the first to exhibit Chrysanthemums publicly in this country. This was in 1829. The Stoke Newington (now the National,) Society commenced in 1846. Brixton and Streatham have held their 37th show; Birmingham its 36th; Bristol its 33rd; and Kingston-on-Thames its 20th, so that it will have come of age by this time next year. Amongst those places which have held their first show this year, we may mention Carlisle, Leamington, Stone, Horncastle and District, and Aberdeen, the show having been resuscitated after a lapse of eleven years.

The features of the show on this occasion were undoubtedly the great competition in the cut flowers classes, both on the stands, and the collections of bunches of bloom, cut with long stems and carrying their own foliage, together with the groups of Chrysanthemums, and Primulas. There is still some room for displaying these bunches in the most effective way while at the same time avoiding anything approaching formality, and which is evidently intended by framers of the schedule and the exhibitors themselves. The open autumn must be held responsible for the highly-coloured and fresh character of the Chrysanthemums. It is quite unusual to see such competition either in the Japanese or incurved classes at this season of the year, and the numerous exhibits must be taken as evidence of the great quantity of bloom still in the various nursery and private establishments. Madame Carnot upholds its reputation as a late exhibition bloom, and others might also be mentioned, but an account of them is given in another column. No doubt many of the blooms were from terminal buds, which would help to account for the rich colour of a large number of the blooms.

Mr. John Thatcher has been appointed gardener to Charles Druce, Esq., at Wynnewood, Philadelphia, Pa. Mr. Thatcher will be remembered in England as Orchid grower and foreman at Byrkley, Burton-on-Trent.

The American Society in London celebrated Thanksgiving Day on the 26th ult., by a dinner in the Grand Hall, Hotel Cecil, at which Mr. Bayard, the American Ambassador, was the principal guest. A curious feature of the banquet was a huge Pumpkin, weighing 175 lbs.

Mr. C. Harman Payne, Foreign Corresponding Secretary of the National Chrysanthemum Society, has been awarded the "Order of Merit Agricole," by the French Minister of Agriculture, in consideration of the eminent services rendered by him to horticulture as a contributor to Chrysanthemum literature.

Kewites to the Front.—The whole of the five applicants who were called before the committee appointed to make a selection of a suitable candidate as superintendent of the Liverpool Botanic Gardens, were old Kew men. The gentlemen in question were Mr. J. Guttridge, Mr. J. Newsham, Mr. Geo. Lamb, Mr. R. Harrow, and Mr J. Milburn, superintendent of the Victoria Park, Bath.

Reading Gardeners' Association.—Mr. Arthur W. Sutton, of Messrs. Sutton & Sons, read a very interesting paper on Potatos, at the meeting of the Reading and District Gardeners' Mutual Improvement Association, in the Abbey Hall, Reading, on the 23rd ult. Mr. Arthur W. Sutton is one of the best authorities on Potato culture, having made a special study of this branch of gardening, or agriculture for the matter of that. The paper was the same as that delivered before the Royal Horticultural Society last year, and was beautifully illustrated. The secretary of the Reading Gardeners' Association had asked him to read it again. He had to read another paper on Potatos at the Tercentenary Celebration at Dublin, and which takes place on the 9th and 10th inst., but it would be unfair to the Irish Gardeners' Association to read that paper at Reading. His last years' excellent paper appeared in THE GARDENING WORLD, December 7th, 1895, and in succeeding issues.

Sweet William is a corruption of the French *Oeillet de poète* (Pink of the poet), as applied to Dianthus barbatus. *Oeillet* first got changed to Willy, then William, and Sweet was afterwards added.

Kingston Chrysanthemum Society.—In speaking of the past, present, and future prospects of this society Mr. A. Dean says that he carefully went over the names of the exhibitors at the recent show, and found only two or three that lived outside Surrey. He accounted for this by surmising that the Chrysanthemum is not only more generally grown in the county, but on the average better grown than in any other county in the kingdom.

Royal Horticultural Society of Aberdeen.—At a meeting of the directors on the 23rd ult., a number of applications for the post of secretary were submitted, and it was unanimously agreed to appoint Mr. James Barclay Rennet, C.A., as interim secretary. A resolution of condolence with the relatives of the late Mr. A. M. Byres was also passed, and instructions given for copies to be sent to the relatives of the deceased.

Lectures on Fruit in Cornwall.—Mr. Illot instructor and lecturer for the County Council of Cornwall, gave a series of lectures and demonstrations on fruit culture in the neighbourhood of Helston during the last week of October. He thought that much of the land was favourable for fruit and garden produce. Strawberries and Asparagus especially would pay, if brought on a week earlier than growers in other parts of the country did. The Cornish climate was suitable for this. He considered that grafting, pruning and Apple culture required improving.

National Chrysanthemum Society.—Some good blooms turned up at the Floral Committee meeting of the above society on November 25th, at the Royal Aquarium. Only two varieties received First-class Certificates, for particulars of which see another column. A plant and some cut blooms of the single Ethelwhynn were submitted by Geo. Gosney, Esq., Elmfield Lodge, Southall, and a verdict of "Commended" was given. The variety in question exhibits a delicate shade of lilac, and the ray florets are long, narrow, and straggling. Mr. W. Wells sent good samples of Miss L. D. Black and the new decorative Lady Hanham. Mr. W. J. Godfrey, Exmouth, had fine blooms of The Egyptian and Lady Northcote. Mr. R. Owen, Maidenhead sent blooms of Bynum Schiltez for classification. The commitee decided that it was a Japanese incurved.

The Ship Canal and Fruit.—Since Manchester became a seaport, through the medium of its canal, many new businesses have sprung up, including the sale of cargoes of fruit by auction. Steamers arrive almost daily from the South of Europe laden with fruit, which is at once disposed of from samples, and railed, barged, or carted from the quays to its places of destination. The sales are conducted in the Corporation's Commercial Sale Room, Deansgate, and are attended by all the principal buyers from Manchester and elsewhere in the surrounding districts. Purchasers of American and Canadian Apples who used to have to go to Liverpool can now buy at Manchester. A steamer has been berthed at Halifax, Nova Scotia to ship Apples direct to Manchester. A market for dried fruit was established recently.

Juno Cycles at the Crystal Palace.—The Metropolitan Machinists' Co. at their stand opposite the Grand Organ at the Crystal Palace, will have a large and representative exhibit of their well known Juno Cycles, at the National Cycle Show, from December 4th to 12th, 1896. Though the main lines on which the Junos are built are now tolerably well fixed, there are numerous improvements in detail which will not fail to commend these machines. Several Juno Lady Safeties will be on view, including both straight and curved tube designs, a very light and graceful one of the latter scaling 26 lbs. Juno Diamond Roadsters will be in evidence, one of the race horse type, weighing 20 lbs., and a Light Roadster, 24 lbs. Heavy-weight riders are catered for in the Juno Safety No. 11., a new design machine, which, though only scaling 35 lbs., will bear riders up to 18 stones. A new model for 1897, of the Juno Tricycle, will be on the stand, a machine that has come into vogue during the past season, owing to its stability, lightness, and speed.

"The Average New England Farmer," says the Boston *Globe* of October 9th, "is wondering now how he is ever going to dig his farm out from underneath the Apples." No doubt old England will help him.

Rude Rebeccas is a name applied by many of the rural population of Devonshire to several yellow flowers of the Sunflower type. To those who think the fairies have been at work, it may be said that the name is a corruption of Rudbeckia.

The Orange Trees of Florida, it may be remembered, were very much destroyed a few years ago by a memorable frost in spring. They are rapidly recovering, and it will not be long before they are bearing again as heavily as ever.

Water Rate for Gardens.—Surprise and a considerable amount of indignation has been aroused amongst water consumers in South London on account of the way the Southwark and Vauxhall Water Company had been pushing a demand for 4s. per house in respect of garden watering. The company has a right to make this charge if there is any pipe, tube, or apparatus fixed in the garden for obtaining more than the usual supply but not otherwise.

Tree Planting at Brighton.—The head gardener to the Brighton Corporation has been recommending the removal of some trees that have been causing inconvenience and the planting of others on the opposite side of the road. The Recreation Grounds Committee approved the recommendation and also that of the removal of a few Poplar trees in Clevedon Road, and the planting of thirty-three Elm trees.

Kniphofia Nelsoni.—A native of the Orange Free State has been flowering freely in the open air at Kew till quite recently. The stems of the plant were 2½ ft. to 3 ft. high, bearing graceful spikes, of drooping, slender tubular flowers of a fiery orange-red, dying off to a soft orange as they became fully developed, and the anthers shed their pollen. The effect was handsome at the fag end of the flowery season.

Lecture on Hard-wooded Plants.—The other week Mr. James Hudson, gardener to Messrs. de Rothschild, Gunnersbury House, Acton, delivered a lecture to the members of the Beckenham Horticultural Society, the subject being "Hard-wooded Flowering Plants." He said they included some of the finest flowering plants, and advocated a wider cultivation, notwithstanding the fact that their popularity had somewhat declined in recent years. He mentioned the great amount of beauty and variety to be met with amongst Heaths alone. The plants varied in habit as the flowers in form and colour. Some species were slow growing plants, and others rapidly got too tall to be easily accommodated. He concluded by going into practical details of cultivation. Peat, he said, was the staple soil in which to pot these hard-wooded or New Holland and Cape plants. He did not favour the use of manure for them in any form whatever. A little soot water might be used with safety if without sediment. The second week of September was the time to house the plants, and dry flowers of sulphur or syringing with sulphur in water were the best antidotes to mildew.

Dr. Dallinger on Plants and Animals.—A lengthy and eloquent lecture on "Plants that Entrap and Prey upon Animals," was delivered by Dr. Dallinger at the Union Chapel, Islington, on the 3rd ult. His discourse was illustrated by limelight views. Amongst other things demonstrated by investigation, not the least was the biographical relations existing between plants and animals. It was inaccurate to suppose that the universal distinction between plant and animals was that of locomotion. Some plants were endowed with movements. having the grace and freedom of the swallow, all their lives. On the contrary there were animals such as sponges and coral animals which were entirely devoid of locomotion throughout their lives. He then dealt with the movements and fertilisation of aquatic plants, the movements of Mimosa, Victoria regia, the leaves of the Drosera, with their sensitive tentacles, the Sarracenias of North America, the pitchers of Nepenthes and other plants capable of entrapping and digesting or absorbing their prey. Some plants could be intoxicated like animals, paralysed with opium or chloroform, or killed by the electric spark.

Edinburgh Botanical Society.—At an ordinary meeting of the Botanical Society held on the 12th ult., at 5, St. Andrew Square, Edinburgh, Dr. A. P. Aitkin, president, who occupied the chair, stated that there had been no change in the number of honorary fellows since 1895, but two foreign fellows had died. The number of British resident fellows, 126, remained unaltered, and of the 139 non-residents two had died. One of the corresponding members, two non-resident fellows, and one associate had also died. The number of lady associates remained one, and of lady members five. He expressed the hope that an effort would be made to increase the membership. Next he read a paper on "The Nitrogenous Food of Plants." Mr. A. D. Richardson afterwards gave an account of the meteorological observations at the Royal Botanic Gardens. It showed that the mean temperature in the shade during July was 58·2°; August, 56·5; September, 53·7; and October, 43·3; while the lowest temperatnre was on the 23rd October, 27·9. The radiation thermometer had showed there was frost on the grass on one day in July, one in September, and on eighteen days in October. The sunniest day in July was the 28th, when the sunshine amounted to twelve hours; in August, the 5th, 12·2 hours; in September, the 15th, 9·2 hours; and in October, the 8th, seven hours. During July the greatest rainfall was on the 8th, 1.105 in.; August, the 23rd, 0.565; September, the 1st, 0·850; and October, the 7th, 0·850 in.

Interesting Presentation.—On Wednesday evening, November 25th, an interesting ceremony took place at the residence of Mr. George Bunyard, of the Royal Nurseries, Maidstone, when a representative committee of the employees, composed of the heads of the various departments, assembled to present their employer with a testimonial to celebrate the centenary of the firm's existence. In the presence of Mr. and Mrs. Bunyard and family, Mr. Buss, as chairman of the committee, made the presentation, accompanied by a few suitable remarks, followed by some supplementary explanations by Mr. Wells, secretary. The testimonial took the form of a handsomely illuminated address on vellum, comprising a sketch of the Maidstone offices and heraldic and other designs, and set in a massive carved oak frame of convential Oak leaves, the dome-shaped top being flanked on either side by cornucopias or horn of plenty beautifully worked in relief, the wording of the address terminating with the names of the subscribers, numbering nearly 100 being as follows:—"We, the employees of the firm of George Bunyard and Co., desire to offer our congratulations to our employer, Mr. George Bunyard, on the attainment of the centenary of the firm's existence, and we ask his acceptance of this testimonial as a slight token of our sincere respect and esteem. We trust that Mr. and Mrs. Bunyard may with their family long enjoy the fruits of the firm's prosperity, and that their sons may so follow in the footsteps of their father, that the year 1996 may witness the celebration of the bi-centenary of the champion fruit nurseries of the world." The address having been inspected and admired by all present, Mr. Bunyard expressed his appreciation of the gift in a few well-chosen words, and the proceedings terminated. The illumination was executed by Mr. H. C. Westgate, of Ipswich, while the frame was the work of Messrs. Pryer, horticultural and other builders, of Maidstone.

CALANTHE VESTITA, C. VEITCHI, &c.

These will be fast opening their flowers now, and it should be the growers' aim to keep them in good condition as long as possible; for what is better to cut for tall glasses at this season than these lovely Orchids, especially C. Veitchii. If not already removed from their summer quarters, or the temperature reduced, they should be placed in a house that keeps about 60°. If the night has been cold 55° in the morning will do no harm. I place mine among the Ferns in our fernery, where they unfold their flowers satisfactorily and keep a very long time; of course, the syringe is kept from them, and on dull days very little water is thrown about the house unnecessarily. I have known them to last three weeks in the house, when cut, and the water changed every few days, and the end of the stem shortened an inch each time. If Mr. Editor thinks it would be instructive, I should be pleased to give cultural details of these most lovely winter-flowering gems in a subsequent issue.—*J. M., B.*

[Please do. Calanthes are now in season.—Ed.]

CHRYSANTHEMUM CULTURE.

At a meeting of the Devon and Exeter Gardeners' Association, on the 18th, ult. a paper on this subject was read by Mr. George Foster, gardener to H. Hammond-Spencer, Esq., Glendaragh, Teignmouth. Mr, Foster is one of the leading authorities in the West of England. If, said he, the object in growing Chrysanthemums was for exhibition, success could only be obtained by untiring attention to every detail, from the time the cuttings are put in till the flowers are ready for the judges. The most important point was to start with good cuttings, otherwise, if they lacked constitution, they could not compete with those of greater vitality. Very little water was required till they had rooted, a period about five or six weeks. After that they required more air, and care in watering, otherwise they would assume a sickly yellow hue. The plants should be re-potted when they had filled the pot with roots. Two-thirds loam broken roughly and the same quantity of rotted leaves, horse manure (not fresh) coarse sand, lime rubble and charcoal made the best compost for the middle shift. Weak growing varieties should have it lighter.

The final potting should be done firmly, as they wanted short-jointed, solid wood. Watering should be done carefully till the pots were filled with roots. Of course in hot weather when the plants were dry, they should be watered thoroughly, and syringed morning and afternoon. Feeding should not be given till the pots were filled with roots, after which artificial manure could be given with advantage. From August 12, to September 12, was the time to secure the buds. The plants should be taken indoors not later than October 3rd. As the blooms expand a little fire-heat was necessary to keep the house dry. F. Hannaford, Esq., Teignmouth was in the chair, and there was a large audience. Mr. Foster, gave a selection of 48 of the best Japs, and exhibited the leading varieties. There was an animated discussion.

PROPOSED AMALGAMATION AT EDINBURGH.

Suggested fusion of the Royal Caledonian Society and the Scottish Horticultural Association.

Whilst our reporter was at Edinburgh he met at the show one of the members of the council in the person of Mr. W. M. Welsh, to whom he put a question or two with regard to the topic which is likely to become a matter of considerable debate within the ranks of Scottish horticulturists.

"What is your opinion, Mr. Welsh, with regard to the proposed amalgamation of the two horticultural societies in Edinburgh?"

"Well, I consider the main idea of the fusion of the two societies to be a good one, subject of course to the satisfactory settlement of the many details which require to be looked to in the interests of both bodies. I consider that both institutions have the best interests of horticulture at heart, the only thing being that the Scottish Horticultural Association being a more modern institution is working on newer lines, and certainly so far with excellent results that I am sure amalgamation would do the Royal Caledonian considerable good. The latter society loyally works on its old principles, and the requirements of its organisation are somewhat different."

"I suppose it is the Royal Charter to which you refer, Mr. Welsh?"

"Yes, that is so. The Royal Charter and its restrictions. That its embodiment requires alteration is pretty freely admitted, but whether any part of the conditions under which it was granted can be revised is a matter that must be considered later. I am quite ready to admit that the smaller growers, and the amateurs are entitled to, and deserve greater attention from, the Royal Caledonian as a society, whose one regret must be that when the Chrysanthemum came into popularity that body did not rise to the occasion in the way which it might have done. Many attempts you know were made to get the society to take up more heartily the florist flowers, and flowers within reach of the ordinary cultivator, but this was never done to such an extent as to satisfy growers of hardy flowers, nor with the Chrysanthemum; and with the rise in popularity with which that flower is now associated there is no doubt that the Scottish Horticultural Association has scored successfully."

"And I suppose the discussion of the *pros and cons* will give rise to considerable debate."

"Exactly so," said Mr. Welsh; "but there is no necessity for either side to quarrel, and good feeling should and must be the conditions under which the parties should approach the matter. There is at all events not likely to be any similitude between this subject and the heated controversion about establishment and dissent. What we want rather is assent to the establishment of the two societies worked with one set of machinery in place of the two, which at present exist, and which can but mean a waste of power in the long run."

And with a cheery good-night, Mr. Welsh wished us *bon voyage* on our journey northwards.—*Gyp.*

DUNDEE CHRYSANTHEMUM SHOW.

I was not a little surprised on perusing my copy of The Gardening World of November 28th to see an effusion from Mr. Macdonald regarding this show. As you are possibly aware the report was not written by me at all. I simply gave my impressions and opinions of the show when requested to do so by your representative, who wrote out the report taken exception to by Mr. Macdonald. It was through his omission that the word "as" was left out of the third sentence, making it appear that Mr. Macdonald's blooms were deficient in size compared with the second prize lot. The next point referred to is the want of competition in the class for pot plants. Mr. Macdonald may have, and is entitled to have his opinions as to the cause of this; but mine are simply that Mr. Kennedy has for years staged plants very much superior to anything that has ever been seen in this locality, being perfect models of good cultivation, from which I infer that competitors have been chary in competing against him.

Mr. Macdonald is apparently under the impression that he has caught me fibbing in regard to the entries for the twenty-four blooms. What I stated was absolutely correct, which is easily proved by stating there *were* eight entries, although only four came forward. Mr. Macdonald concludes with a laudation of the second prize lot, ignoring altogether the first prize stand. If his intention was to discredit the judging, I have no doubt Mr. Rushton, who acted as one of the judges, will show him his error. I had thought that Mr. Macdonald would ere this have learnt the virtue of caution, but his rushing into print without real cause convinces me that he has not yet acquired it.—*John Machar, Corona, Broughty-Ferry, 28th Nov., 1896.*

GOVERNMENT BOTANIC GARDENS, OOTACAMUND.

Inter-communication between Great Britain and the most distant parts of the Empire, is becoming more and more rapid, as modern facilities develop. A letter dated 10th November, 1896, reached us on the 28th of the same month, from Mr. Robert L. Proudlock, the curator of the Botanic Garden, Ootacamund, India. The following extract from his letter will give our readers a fair idea of the vegetation, native, and introduced, especially the latter, in that distant part of Her Majesty's dominions:—

"Ootacamund is a large hill station, about three miles long, by one and a half miles broad, situated almost in the centre of the Nilgiri Hills, at an elevation of about 7,400 ft. above sea-level. It is in a large, wide valley shut in at its eastern and north-eastern end by the slopes of Dodabetta, the highest hill on the Nilgiris, and of 8,760 ft. elevation. It is open at its western end. There is a lake at the western half of the station. The houses are built all round the sides of the valley and lake at different elevations, and are, as a rule, widely separated from each other by pieces of land.

"The chief feature of the vegetation, in and around the station of Ooty, is the Blue Gum tree (Eucalyptus globulus) which was introduced to these hills many years ago. The tree grows exceedingly well here, and is used for firewood chiefly. In fact it is the chief source of firewood. Strange to say, all our English trees are almost totally unrepresented here. There are, however, several English and Turkey Oaks in the district, about 30 ft. in height, and which are doing well. We have only a single specimen of the Beech in Ooty Garden. I have, however, sent home for a lot of seeds of the common home trees for the purpose of raising trees to plant on these hills.

"The mean temperature of Ootacamund is 57° and the average annual rainfall 60 in. On the morning of the 6th inst. we had our first frost of the season. Later on the frosts are pretty sharp in the lower parts of the station. Yesterday evening I jotted down the names of many plants we have in flower out-of-doors at present. They are Pentstemons, Phlox, Hollyhock, Sweet Pea, Candytuft, Gladiolus, Nicotiana affinis, Verbena, Roses, Geranium, Pansy, Antirrhinum, Canna, Chrysanthemum, Salvia splendens, S. patens, Periwinkle, Tagetes, Tithonia tagetiflorus, Delphinium, Hemerocallis, Mignonette, Gazania, Mesembryanthemum, Dahlia, Anemone japonica, Fuchsia, Carnation, Dianthus of sorts, Arundo conspicua, Gynerium argenteum, Virginia Stock, Nasturtium, Heliotrope, of which we have hedges, Calceolaria, Richardia africana, Hypericum, Daboecia polifolia, the common and white variety, Solanum jasminoides, Honeysuckle, Camellias, Tacsonias, Banksias, Acacias, Tritoma, and Balsams (Nilgiri species). [A large number of the above are what we see in gardens at home in the month of September.—Ed.]

"The climate is delightful and health-giving. There are excellent driving roads all over these hills, so that one can get about the country fairly well. In my leisure time I occasionally go out hunting for Orchids and find it a most congenial pastime. Some of these Orchids are Dendrobium aqueum, D. heterocarpum, Aerides crispum, Ae. maculosum, Ae. lineare, Ae. cylindricum, Ae. radicosum, Coelogyne corrugata, C. breviscapa, and C. odoratissima."

CHRYSANTHEMUMS AT ALTRINCHAM.

The other week I paid a visit to the Chrysanthemum section of Messrs. William Clibran & Son, Oldfield Nurseries, Altrincham, where the annual exhibition of this charmingly popular flower takes place. The house is a span-roofed one, 210 ft. in length, and 30 ft. in width, and contains upwards of 3,000 plants. These are displayed by means of a raised graduated staging, extending along both sides of a centre walk, running from end to end.

The first to arrest attention are some fine blooms of the following new varieties, all of which are Japanese:—Captain L. Chaure is one of the hirsute family, a massive flower with broad incurving petals of a rich bronzy-yellow colour. Vic. Réné de Chezelles is a large deep bloom with incurving florets of a terra-cotta colour and old gold reverse. Some lovely flowers of Mons. Ed. Rosette, a pure white, with long, tubular, spreading petals, is a very free variety. Mrs. Briscoe-Ironside, a blush-ivory-pink, is made up a mass of florets and is a charming novelty. Mrs. H. Weeks is a pearly-white, delicately shaded with pink. Mme. Gustave Henry is best described as a white Lincoln, and like that well-known kind is of dwarf sturdy habit. A bloom of enormous size, perhaps the largest in cultivation, is Mrs. C. E. Shea, also a creamy-white with broad florets. This variety must be secured on an early bud. Yet another white is Lady Byron, a flower of bold appearance, with long, broad, interlacing petals. Its habit is good. A very beautiful lemon-yellow flower is Phoebus, being a variety which differs from the whole family of yellows by its unique distinctness. This Japanese reflexed, with slightly incurving tips and broad florets, makes a large and imposing bloom. Calvat's Australian Gold is an attractive light yellow with incurving florets, and is of most robust growth; in fact it is just such a variety as should make its way into every collection. A flower of first rank as regards size is John Seward, a golden-yellow tipped with bronze, the petals interlacing. Like the before-mentioned, it is easy of cultivation and does best on the crown bud.

A not insignificant feature are some seedlings of excellent promise, the following three being the most conspicuous:—Lady Dartmouth, an "incurve" of fine form; the colour is ivory-white tipped with yellow and is very free. An incurved Jap. of large size is Mr. Arthur Calderbank. The colour is silvery-rose, with broad florets slightly tipped with greenish-yellow. In growth it is vigorous and hardy, is distinct, and makes a good exhibition flower. Lord Lisburn is a Jap. of a warm terra-cotta colour with old gold reverse. It makes a flower of good size and has been awarded a First-class Certificate.

Among the standard sorts are some well-grown blooms of the following:—C. H. Curtis, Mrs. E. S. Trafford, Florence Davis, Thomas Wilkins, Baron Hirsch, Duke of York (immense size), Hairy Wonder, Viviand Morel, and others. Charles Davis is evidently a favourite here judging from the fact that it meets our eye all over the house. It is a question whether taken all together there is a finer collection to be met with in the north of England, or one that reflects more credit on the grower (Mr. B. Fletcher) than does the one at the Oldfield Nurseries. —*C. C. M.*

CHRISTMAS HAMPERS FOR POOR CHILDREN.

Two years ago the surplus funds subscribed for the children's banquet in the Guildhall were spent in sending 200 hampers to poor crippled children.

Last Christmas the public enabled the Press to extend this seasonable gift to 5,000 applicants; I am informed that though Edinburgh, Manchester, Sheffield, Nottingham, and other towns bave adopted the idea, there is no intention on the part of any London newspaper to repeat this noble distribution this year. Meanwhile it has come to my knowledge that charitable people are anxious to continue the splendid work; and I believe that if nothing is done, the disappointment of the afflicted little ones will outweigh the good which was accomplished a year ago. I have therefore, resolved to appeal to tbe public to supplement the means which are annually placed at my disposal for the New Year's entertainment of about 1,500 poor children in the Guildhall by the permission of the Corporation, a festivity which will be attended, as customary, by the Lord Mayor, tbe Lady Mayoress, and the Sheriffs in state.

Tbese children are selected by the Ragged School Union from the poorest districts in London, and many of them have crippled brothers or sisters who will be denied all participation in the treat, unless I have a surplus sufficiently large to send tbem a seasonable hamper each.

A great deal of money has been spent in the classification of the 6,000 cripples who are registered on the books of the Ragged School Union, and it will be possible for me to adopt exactly the same machinery of distribution which was in operation last year. I should propose at a certain time to make a first selection of cases according to the funds in hand, giving preference to children wbo are bedridden, wbo could not therefore be given the summer outing. If the money prove sufficient I would add indigent cases between certain ages, and so enlarge my hamper list accordingly as the public should help me to do. But I hope and trust that I shall be placed in a position to deal with them all, and that tbe size of the hamper may grow with the generosity of the public.

To supplement it, gifts in kind would be welcomed at the offices of the Ragged School Union, 37, Norfolk Street, Strand, but subscriptions should be sent to me.—*W. P. Treloar.* 68, 69, and 70, *Ludgate Hill, E.C.*

FRUIT UNDER GLASS.

There will be plenty to do in this department now, especially where early Peaches, Grapes, &c., are looked for, and the pressure of work is all the greater because of the shortness of the days. Whilst the number of gardeners wbo go in for early forcing is comparatively limited, there are a great many more who like to start a vinery sometime during the present month, and such will now require to bestir themselves.

The Early Permanent Vinery may be started sometime from the beginning to the middle of the month, according to the time at which the pot vines were started, so that they may form a proper successionary crop. If the cleaning has received attention the inside border must next be looked after. As some of the scrapings from the vines and remnants of mealy bug will have fallen upon the ground it will be well to clear off the loose upper layer of soil from the inside borders, and take it clean away. In doing this the greatest care is necessary to avoid injuring any of the delicate roots that may be near the surface. A careless or inexperienced workman is almost sure to do damage in this direction, and any such should therefore be carefully watched. A top dressing of good loam may then be given. Some cultivators prefer half decomposed stable manure, and there is no doubt that this answers the purpose admirably. The canes should be tied down in order to insure them breaking equally. If tied up in their growing positions the sap would inevitably run to the highest point, and the growths there would be unduly rank, while those lower down would be very weak. When the bouse is first shut up, a night temperative of about 50° Fahr., with a 5° rise by day will be high enough. This must gradually be on the increase at the rate of one or two degrees a week, as growth progresses, during the early forcing stages. Syringing with tepid water may be practised regularly twice a day, although the afternoon performance should not be delayed too long, as the moisture hangs about so at this time of the year. Watering must be very carefully attended to at this stage, for while the roots must not lack moisture it would not be wise to deluge them.

Outside Borders.—For early work houses which have the borders within them should be chosen if possible. Where the gardener is compelled, however, to force for early grapes a house with an outside border, some measures must be taken to make the best of things. The outside border must receive a heavy dressing of stable manure, no matter bow rough. This will serve the double purpose of protection and of stimulation by imparting some nutrition to the soil. It will be well, in addition to this, to lay over all some sheets of galvanised iron, or failing these, some boards, to throw off to some extent at least deluges of rain, as well as to prevent the ice cold water of heavy falls of snow.

Lean-to Houses.—For early forcing purposes the lean-to structure possesses a great deal of advantage over the span roof. In the latter case although the maximum of light is obtained, the radiation of heat is much more rapid from the larger area of glazed surface exposed, and this is a serious matter in spells of cold weather, when it is exceedingly difficult to keep the temperatures up to the required height.

Early Peaches.—Wbere these are in great request it is necessary to start a house at the commencement of December. As neither Peaches or Nectarines will bear anything like hard forcing, at least in tbe fore half of the programme, it is manifest that considerable care will be necessary in dealing with them. Pruning having been seen to, the old wood should be washed twice or thrice with a strong solution of Gishurst, and then tying in may be undertaken, At first a temperature of not higher than 45° Fahr. by night will be as high as can safely be recommended, and even this may drop two or three degrees during very cold nights without any harm being done. A 5° rise by day will be enough in dull weather, with another 5° if the sun shines. Air may then be given cautiously. Syringing may be practised, as in the case of the vines, twice a day if the weather permit, although if the night threatens to be very frosty the second syringing should be given just after 1 p.m., or witbheld altogether. If the roots of the trees are running in outside borders a thick covering of leaves, or leaves mixed with stable manure may be applied. If the inside borders have been well looked after for water during the autumn, they will not need any more water until the roots get more active than they are at present. Those who had some of the lights taken off the house after the fruit was gathered, to admit of the better ripening of the wood, will find that the copious rains of September have made the borders, if anything rather too wet.

Strawberries.—The starting of a Peach-house gives an opportunity of introducing a batch of plants into just the temperature most suitable for them without taking up any of the valuable space in forcing pits which at this time of the year is sure to be pretty well filled, The plumpest and strongest crowns should be chosen, for it is of very little use to attempt to force weak, badly ripened material now. The pots should be washed, and a glance given to see that the drainage is in working order, and the pots free from worms. The dead leaves may be removed, but such as do not come away readily must not be forced off. For an early crop Vicomtesse Hericart de Thury answers well, and Royal Sovereign may likewise be thoroughly depended upon. President, Auguste Nicaise, Laxton's Noble, and Keen's Seedling likewise force well. The plants should be placed on a shelf near to the glass. If such a contrivance is not present in the Peach-house, a temporary one should be constructed near to the front lights, which will not want to be opened for a while yet, Water in increasing quantities may be given as growth proceeds. Clear water, however, will do for the present. After a week or two's sojourn in these quarters the plants may be shifted on into a warmer house, as they will then need more heat than the Peaches.—*A.S.G.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Laeliocattleya gottoiana Rossie Var. *Nov. var.*—A short time ago I received a grand inflorescence, consisting of five magnificent flowers of what was evidently a natural hybrid, from Mr. David Nicoll, gardener to John Bell, Esq., Rossie, Forgandenny, Perthshire. The size and form of tbe flowers forcibly recalled those of Laelia purpurata as one of tbe parents, and I was convinced that Laelia tenebrosa was tbe otber, but an examination of the pollina showed that a Cattleya was the other. Four of tbe pollinia were full sized and perfect, but the other four were very small, unequal in size, and evidently imperfect. Cattleya Warneri occurs in the district of Bahia, with Laelia tenebrosa, so that I have little doubt that the plant under notice is a bigeneric hybrid between Cattleya Warneri and Laelia tenebrosa, both of which show their influence in the progeny. On the 23rd of June, 1891, a plant exhibited by E. Gotto, Esq., J.P., The Logs, Hampstead Heath, came under my notice at a meeting of the Royal Horticultural Society, and tbis I described in The Gardening World as Laelia gottoiana, a natural hybrid between Laelia purpurata and L. tenebrosa, but not having an opportunity of examining the pollinia I was misled by appearances. The flowers of that plant measured 8½ in. across the petals. The lines and markings were those of L. grandis, but the sepals and petals were of that shade of purple characteristic of Laelia lobata, while tbe lamina of the lip was deep rosy-purple, with a median crimson-purple band. The variety under notice differs from Laeliocattleya gottoiana (which I regard as the first of this type described) chiefly in the matter of colour. The sepals and petals of the flowers sent me were of a pale blush-pink, slightly striped with purple in places, and tessellated in otber parts witb paler purple. The huge flowers measured 8½ in. to 8¾ in. across the petals, the upper flower of the truss being of the former measurement. Each petal was rhomboid-lanceolate, or narrowly elliptic, 4¼ in. long, and 1¾ in. across at tbe widest part. The lip, however, was the grandest organ of the flower, and far superior to that of L. gottoiana. The lamina was greatly elongated, strongly undulated, and crisped at the margins, and of a rich crimson-purple, with a rosy-purple margin, the side lobes being of the same colour. The exterior of the tube was tinted like the sepals and petals, but the interior was pure white with the exception of a dark purple, median band formed of closely arranged lines reaching to the base of the tube. The pseudobulbs, Mr. Nicholls informs me, are compressed, corrugated, 10 in. to 11 in. in length, and bear a single, coriaceous, rigid leaf of the same length, and 2½ in. across at the widest part. The plant was bought from Messrs. Cowan & Co., Liverpool, in 1894 as Laelia tenebrosa, in the newly-imported state. It flowered last year, and again in November last.—*J. Fraser.*

Cypridedium arthurianum.—The various hybrid Cypripediums, in which C. fairieanum has played a part, are all without exception choice and charming both in form and colour. We bave received a large and handsomely coloured flower from F. A. Rehder, Esq., The Avenue, Gipsy Hill, S.E. It measured 4½ in. from the tip of the dorsal sepal to the tip of the petals. The former was handsomely spotted with brownish-crimson along the course of the veins. Tbe wavy edges of the deflexed petals, showing evidence of the influence of C. fairieanum, were well marked; the upper longitudinal half was heavily banded with reddish-brown, and the lower corresponding half spotted in lines on a yellow ground. The tip was dark brown, and the whole flower well defined, and of a glossy lustre. It bore evidence of good cultural treatment.

Cymbidium giganteum.—A good variety of this species has been flowering for some time past in the gardens of E. H. Watts, Esq., Devonhurst, Chiswick, under the care of Mr. J. Gibson. The brown sepals and petals are striated with darker lines, and the lip is prominently and beautifully spotted. A long arching raceme carries fourteen flowers, a very respectable number for this species, and the plant is in a vigorous healthy condition.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were made by the Royal Horticultural Society on the 24th ult.

Orchid Committee.

CYPRIPEDIUM BARON SCHRODER. *Nov. hyb.*—The parentage of this hybrid (C. oenanthum superhum × C. fairieanum) is a sufficient guarantee for the beauty of the progeny. The dorsal sepal is heavily handed with rich purple spots, united so as to form continuous lines along the veins; the base is tinted with yellow, but the rest of the ground colour is white. The petals are yellow, banded with brown, and having spots of the same hue near the base. The lip is of a shining dark brown. It is the most handsome of the hybrids in which C. fairieanum has played a part. First-class Certificate. Messrs, J. Veitch & Sons, Chelsea.

LAELIOCATTLEYA DECIA ALBA. *Nov. var.*—Chaste and charming are well-deserved epithets for this engaging variety of a bigeneric hybrid, which has been raised from Laelia Perinii, crossed with Cattleya dowiana aurea. The sepals and narrowly elliptic petals are white. The lip on the other hand is soft lilac, beautifully striated, and netted with slender white lines. First-class Certificate. Messrs. J. Veitch & Sons.

ODONTOGLOSSUM HALLII CRISPUM, *Nov. hyb. nat.*—As the name indicates, this is considered to be a natural hybrid between O. Hallii and O. crispum. The sepals are creamy white, with a few, large, chocolate-brown blotches on the centre. The petals are elliptic with smaller blotches of the above hue. The lip is white, with a very large chocolate blotch in front of the long-fringed crest. The segments are of good substance, and the flowers handsome. First-class Certificate. Norman C. Cookson, Esq. (gardener, Mr. Murray) Oakwood, Wylam-on-Tyne.

LAELIA JUVENALIS. *Nov. hyb*,—The parents of this beautiful hybrid were Laelia Perinii and L. pumila. The sepals and elliptic petals are of a rich rose, broad, and thrown back much in the same way as those of L. pumila praestans, which indicates the beauty of the hybrid. The lamina of the lip is of an intense crimson-purple, the colour extending round the edges of the side lobes; while the tube is pink externally and nearly white internally. Award of Merit. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

LAELIOCATTLEYA SCHILLERIANA ASHWORTH'S VAR. *Nov. var.*—The parents of this bigeneric hybrid are considered, or supposed to be, Laelia purpurata and Cattleya intermedia. The variety under notice has blush-white sepals and petals of good substance. The lip has a white tube and a crimson lamina, with a purple band along the centre to the base. Award of Merit. E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Wilmslow, Cheshire.

CATTLEYA LABIATA ASHFORD VAR. *Nov var.*—The sepals and broadly ovate petals of this choice variety are of a rich dark purple. The lip is crimson-purple, with a paler purple margin, and the dark interior striated with crimson and yellow. Award of Merit. G. Shirland Ball, Esq. (gardener, Mr. A. Hay), Ashford, Wilmslow, Cheshire.

LAELIOCATTLEYA TIRESIAS. *Nov. hyb. bigen.*—The parents of this bigeneric hybrid were Cattleya bowringiana and Laeliocattleya elegans Turneri. The former dominates the form of the flower, while the latter enlarges it. The sepals are rose; and the broadly oblong petals, nearly as wide at the rounded apex as at the middle, are of a rich rosy purple. The bifid, orbicular lip is crimson-purple, with a very short, pale purple tube, curved at the base. Award Merit. It is one of Messrs. Veitch & Sons acquisitions.

LAELIOCATTLEYA APOLLONIA. *Nov. hyb. bigen.*—The sepals and much crisped petals of this bigeneric hybrid are pale lilac. The lip, on the contrary, is of a dark maroon-purple or crimson, with a lilac edge. The tube is orange-crimson internally, striated with paler lines. Award of Merit. Mr. James Douglas, Edenside, Great Bookham, Surrey.

SOPHROLAELIA MARRIOTTII. *Nov, hyb. bigen.*—The seed parent in this case was Sophronites grandiflora, crossed with Laelia flava. The whole plant is about 6 in. high, nearly of the same habit as the seed parent, and carrying a short raceme of about three flowers. The sepals and elliptic petals are orange, and recall those of the seed parent, while the wavy orange and crimson lip takes the form of the pollen bearer. It is both distinct and pretty. Award of Merit. Sir William Marriott, Bart., the Down House, Blandford.

ACANTHOPHIPPIUM JAVANICUM.—The flowers of this singular species are of large size and nearly closed. The segments are creamy-buff, and striated with brown. Botanical Certificate. F. W. Moore, Esq., Royal Botanic Gardens, Glasnevin.

Floral Committee.

DRACAENA BROOMFIELDII.—This conspicuous and handsome Dracaena was discovered in Australia by John Broomfield, Esq., after whom it is named. The leaves are lanceolate, spreading about a foot long, smooth, pliant, very numerous, and dark green with ivory-white margins, and soft gray bands running along the centre of the green portions. The plant on the whole is graceful, sparkling in appearance, and certain to become highly popular as a decorative plant. First-class Certificate. Messrs. F. Sander & Co., St. Albans.

BEGONIA ENSIGN.—The winter-flowering race of Begonias continues to improve and increase in number. The latest acquisition under notice was raised from a tuberous variety crossed with B. socotrana. The rich dark green leaves are obliquely suborbicular, and closely arranged on the stems, forming a plant of compact and pleasing habit. The flowers are double, with short petals in the centre, leaving the large outer ones well exposed. They are of a rich rosy red and freely produced, adding greatly to the value of the variety. Award of Merit. Messrs. J. Veitch & Sons.

RHODODENDRON CLOTH OF GOLD.—The Javan hybrids still continue to improve in size, for the rich yellow flowers of Cloth of Gold are of great size, with revolute segments and freely produced in large trusses. It is a handsome variety, raised between R. Lord Wolseley and R. Teysmanni, and will be largely grown in the near future. Award of Merit. Messrs. J. Veitch & Sons,

CHRYSANTHEMUM C. A. OWEN.—In this we have an incurved Jap. of medium size, with very broad bright yellow florets from the early bud, and quite bronzy yellow from the later ones. In the early stages of the flower the florets are quite whorled and handsome. The variety is a seedling from Robert Owen, but the florets are twice or thrice as broad. Award of Merit. Mr Robert Owen, Castle Hill, Maidenhead.

SONERILA LEOPOLD II.—The Sonerillas are usually very dwarf-habited plants, but that under notice, as shown, makes a bushy branching plant, 9in. to 10 in. high. The leaves are copiously spotted with silvery grey on an olive-green ground. The bright rosy flowers are very copiously produced. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

CHRYSANTHEMUM MRS. JOSEPH THOMPSON.—Here we have a beautiful incurved Japanese bloom about 6in. in diameter, and of snowy whiteness. The florets are fairly broad, and the bloom highly attractive. Award of Merit. Sir Trevor Lawence, Bart. (gardener, Mr. Bain).

CHRYSANTHEMUM GEM OF EARLSWOOD.—The bright and clear yellow disc of this Pompon Anemone makes a charming contrast with the neat and clear rosy-pink rays. It makes a valuable addition to the section. Award of Merit. Mr. W. Wells, Earlswood Nurseries, Earlswood, Redhill, Surrey.

CHRYSANTHEMUM MRS. LOUIS D. BLACK.—The blooms of this richly-coloured incurved variety are 4½ in. to 5 in. in diameter. They are of a rich golden yellow, and tinted with bronze on the outer florets. Award of Merit. Mr. W. Wells.

CHRYSANTHEMUM GOLDEN ELSIE.—This is a sport from the well-known decorative and market variety, Elsie. The blooms are bright yellow, about the size of those of Source d'Or, and have revolute florets that give the whole flower a light and graceful appearance. It will be of great value for market work. Award of Merit. Mr. B. Ladhams, Shirley Nursery, Southampton.

CHRYSANTHEMUM YELLOW ELSIE.—The flowers of this sport are lighter yellow than those of the Golden Elsie, and the florets are flat in the younger stages at least. Award of Merit. Messrs. H. Cannell & Sons, Swanley.

The following Chrysanthemums received First-class Certificates at the meeting of the National Chrysanthemum Society on November 25th:—

C. W. RICHARDSON.—A huge Japanese variety, bright golden yellow in hue, with long, twisted, and intermingling florets, which are occasionally divided at their apices. Mr. W. H. Lees, Trent Park Gardens, Barnet.

GEM OF EARLSWOOD.—A new Pompon Anemone, for description of which see above. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey.

First-class Certificates were awarded to the following Chrysanthemums by the Floral Committee of the N.C.S. on December 1st at the Royal Aquarium.

COMMODORE.—A very pretty blush Japanese. The florets are long, and turn up gracefully at the tips. The bloom is well above medium size. Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E.

W. WRIGHT.—A huge Japanese form with very long florets. It presents a blush-pink shade, and is occasionally striated with rose. Mr. H. J. Jones.

Gleanings from the World of Science.

Royal Horticultural Society.—At a meeting of the Scientific Committee of this society on November 10th, the undermentioned subjects came before the members present—namely, R. McLachlan, Esq., F.R.S. (in the chair), Dr. Bonavia, Dr. Russell, A. D. Michael, Esq., Rev. W. Wilks, and Mr. J. Weathers.

Carnation Disease.—In reference to the diseased Carnations exhibited on October 27th, Mr. Douglas wrote, saying the disease was caused by Bacterium Dianthi, Arth., and was known in the United States as Bacteriosis. Mr. Massee, of Kew, says, "Plants if strong and healthy may be kept free from the disease by keeping the foliage dry, and preventing the presence of aphides. Overhead spraying to be done only occasionally on bright days, the water containing only a small amount of ammoniacal copper-carbonate."

Abnormal Cattleya.—Mr. E. St. John Tucker, Sydenham, sent a pseudo-bulb of Cattleya labiata autumnalis, which, instead of developing a flower, produced six sheaths one within the other from the apex of the pseudo-bulb. Mr. Tucker thought a maggot might have been the cause of the freak, but beyond a small hole in the outer sheath there were no signs of insect attack.

Fertilising Bee of Catasetum tridentatum (*Hook*).—Specimens of this bee which had been sent to Kew by Mr. Hart, of the Botanic Gardens, Trinidad, were exhibited. They were of a metallic shining emerald-green colour, and somewhat larger and rounder than an ordinary house-fly. The name of the bee is Chrysantheda nitida, Penty. It is a native of South America.

Mustard Beetle.—A box of living beetles known as Phaedon cochleariae was exhibited. These beetles devour crops of Mustard in the eastern counties, and are very destructive.

Swede Turnip with "Fingers and Toes."—Mr. Jas. Long, of Wisbech, sent a specimen of Swede affected with this myxomycetous disease, Plasmodiophora Brassicae. It was stated that there would be a group of fifty or sixty plants affected with the disease in a crop of several acres, and no particular notice was taken. In fact, the diseased plants were allowed to produce seeds, which afterwards developed healthy plants.

Colour Experiments.—It was decided that Dr. Russell, Mr. Wilks, and Professor Henslow, should use some of Judson's dyes with a view to their absorption by the roots of Hyacinths under experiment.

A Vegetable Depilatory.—At a meeting of the botanical section of the British Association, Dr. Morris, of Kew, contributed some information concerning the curious effect produced by the wild Tamarind or Jumbai plant, upon animals that ate fruits, seeds, leaves, or young shoots of it in the West Indies. The plant is found growing along the roadsides in Jamaica and the Bahamas, as well as in waste places in tropical America and Brazil. In the Old World it occurs in China, Java, and the East Indies generally, as well as in tropical Africa. The plant is encouraged in the Bahamas as a fodder plant. Horses, mules, donkeys and pigs that feed on it lose their coat of hair, becoming more or less naked. Horses badly affected by Jumbai are known as "cigar-tails" in the streets of Nassau. Pigs are even more badly affected, becoming entirely hairless,

HINTS FOR AMATEURS.

Old zonal Pelargoniums that have done duty in the flower garden during the past summer, and were taken up in time to escape the frost and cut back according to the fashion usually practised will require a good deal of careful attention during the winter if anything like a good percentage of them are to pass through the ordeal successfully, Those amateurs who possess a greenhouse fitted with an efficient heating apparatus will not experience very great difficulty, but in cases where the heating apparatus is not efficient, or where only cold frames protected from frost with coverings of various sorts are available a totally different tale has to be told. Indeed under the latter set of conditions it is very questionable whether it pays to attempt to save the old plants. As long as the weather continues mild and open, by dint of a little care, matters may be kept fairly straight, but now and again we get spells of frosty weather when the thermometer never rises above freezing point throughout the whole of the day, and such spells may last for weeks together. The coverings on the frames are so stiff that they cannot be rolled back to let a little light into the benighted plants without a great danger of breaking the glass, even if the outside temperature permitted it. The absence of light throughout a protracted period, more than the low temperatures, causes the old plants to damp off wholesale, with the result that by the time winter is over and spring has arrived, there is very little left of them.

Now to turn to the other side of the question, of how to best deal with them when a heated greenhouse is at command. If it is not already fitted with shelves this is a point that should receive immediate attention. Not only do they economise space, but plants of the nature of those under consideration do best when brought up close to the glass by means of their aid.

The plants will need very, little, if any, water, as the few roots that they possess are nearly dormant. If the points of the cut back stems show signs of damping off, they should be gone over with a pair of scissors, and the decayed portions cut off. A sharp knife may be employed instead of scissors, but in this case the stem of the plant operated on should be grasped by the left hand below the point at which the cut is to be made, otherwise the plant not having a very firm hold of the soil, will be apt to be pulled out, or seriously disturbed.

Violets in Frames.—If these are to produce good flowers both as to colour and size, they must have plenty of light and air. Very little water will be required, especially where the frames are standing upon a bed of fermenting material, with a fair depth of soil upon the top. Indeed we have found that where the plants have been put in the frames about the middle of September after the first watering in, no more water is needed in ordinary seasons until the spring. Sometimes when the latter half of September is dry and warm, as occasionally happens, several waterings are needed till the plants get hold of the new soil, but they may be left to take care of themselves with regard to water after the beginning of October until vigorous growth sets in in the spring.

Broken panes of glass should be mended without delay. It has been slyly suggested by one of the crowd that broken panes of glass are the amateur's method of giving ventilation. We hope, and think, however, that this is a libel upon amateurs generally, but we may point out the disadvantages of having such gaps in frames. Apart from the easy means of ingress it affords to frost there is the still more serious consideration of the rain. There is bound to be a continual drip from the higher side of such gaps, and if this drip falls upon the heart or crown of any plant it is almost sure to cause its death. Violets have an especial dislike to anything of this kind, and every precaution must be taken to shield them from such an experience.

Cinerarias in Frames.—Throughout the summer a cold frame is exactly to the taste of the Cineraria, but now such a protection is insufficient for emergencies that may now arise at any time, particularly the advent of severe frost. Against such a visitor the 1 in. or 1½ in. planking that forms the sides of frames (the former size is the one usually employed) is but poor protection. Therefore it will be wise to shift the plants into the greenhouse at the earliest opportunity where a little heat can be given if occasion requires it. Should it be inconvenient to do this for another few weeks some precautions must be taken at once to render the frame a more secure shelter. This can best be done by putting a layer of stable litter all round the frame. Such a layer should not be less than 1 ft. in diameter, and if room allows and there is a sufficiency of material on hand it may well be made 6 in. wider. It will then afford a better foothold upon which to stand when putting on or taking off mats, etc.

Hoya carnosa.—This is a very popular greenhouse climber, and where it is grown well there is no more beautiful and distinct subject. It is so different from any other of our commoner plants, that to this striking individuality, no doubt, it owes a great deal of its popularity. Its culture too is easy enough, although it has strong likes and dislikes of its own. Still, beauty is expected to be more or less fractious and a little extra trouble spent in humouring it is sure to be amply repaid. Hoyas as a rule do not like much shade, a fact of which the thick leathery leaves are pretty good evidence, but still they are fairly accommodating in this respect, for we have known them to do very well indeed upon the back wall of a lean-to vinery where naturally they were shaded effectually enough from the middle or end of March up to nearely the end of October. Now and again we hear complaints that although the plants grow well enough they only produce very few flowers. There is no doubt that besides the question of too much shade too much water during the winter months is to blame in a great measure for this. Whether planted out in borders or grown in pots no water should be given during late autumn and winter, that is to say, from the beginning of November to the end of February or the beginning of March. There will be sufficient moisture as a rule left in the soil to prevent the leaves from shrivelling, although should this latter condition manifest itself a little water may be given.

From the above it may be gathered that pot culture is the safest for amateurs to adopt, as the supply of moisture to soil is so much more easily regulated when that soil is contained within a pot than it is when it is in a bed or border.

Agapanthus umbellatus.—Although there are many people who profess to love the noble blue African Water Lily and who take a deal of pains with it during the season of its beauty, their love and attention are apt to fall into abeyance at this time of the year, and they often treat their plants very badly. From some cause or other the idea seems to have become very prevalent that the Agapanthus, while it likes sub-aquatic treatment during the summer, yet needs to be kept innocent of even the smell of water throughout autumn, winter, and early spring. Such treatment is little short of barbarous, and the only reason why the Agapanthus does not resent in more unequivocally than it does is because it is a very good tempered and accommodating subject, and is moreover, blessed with something very substantial in the way of a constitution. The water supply may be reduced now, certainly, but not done away with altogether. As a rule the handiest place that offers itself for storing the plants during the dull season is the space beneath the greenhouse stage. Of course, in such a position the plants get a little water from their more fortunate relatives that are occupying the stages above, but such a supply is far too casual to meet their necessities, and must be supplemented by direct attention with the watering-can.

Autumn-sown Peas.—The practice of sowing Peas in autumn is not one that we would recommend to the notice of the amateur. The risks entailed by the practice of such a system are too great in comparison to the corresponding advantage, which, to say the least of it, is somewhat vague. However, should anyone wish to try the experiment, we would advise him to choose a dry sheltered spot, such as a south border, on which to make the sowing. A good first early variety must be chosen, such as Sutton's A. 1., and Improved William I. Mice and Sparrows have seriously to be reckoned with in these precocious sowings, and both of them often work a deal of harm. Traps should be set for the former, the good old, "Figure four Trap," in which a brick falls upon the back of the intruder, being as effectual as any, and certainly cheaper than any in construction. Wire net guards to cover the rows over are the best protection against feathered visitants.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Lobelias Damping.—Yours is no uncommon complaint, *Curo.* The wonder would have been if the old Lobelia plants did not damp off in such a place as a cold frame. If you have no means of transferring your plants to a heated house you stand little or no chance of steering them safely through the winter. Can you get sufficient materials together to build a hot-bed next spring—say about the end of February or beginning of March? If so you may try your hand at seed sowing with a good chance of success. Plants raised from seed sown then would come into bloom early enough to suit your purpose, and would save you an infinite amount of trouble now.

Roots Piercing Roots.—I have been greatly interested in the account of some roots of Rose La France pierced by other roots, of which *Mr. A. Pentney* speaks in last week's issue. Curiously enough since that account appeared in print I have discovered some roots of Roses in my garden that have behaved in a similar way. Is this a common occurrence, and what brings it about?—*J. Arens.*

There is no doubt that the piercing of some roots by others, from the same plant, or from neighbouring ones, is a more common occurrence than is usually supposed, simply because by virtue of their position such roots are out of the common observer's range of vision. Naturally, roots pick, as it were, their way through the soil in which they are growing, following the line of least resistance, which line may or may not pass through another root. The acid excreted by the root-hairs enables the roots to dissolve and take up into their system chemical salts of various kinds, and this excreted acid assists in the breaking down of the walls of the cells composing the root that comes in the way.

Incurved Chrysanthemums.—You will find the following six varieties a good selection, *F. Thomas*:—Mrs. R. C. Kingston, C. H. Curtis, Jeanne d'Arc, J. Agate, D. B. Crane, and Robert Petfield.

Calyx Bursting Carnations.—For any Carnation to burst its calyces is a serious defect, and florists of late years have been striving their uttermost to obtain varieties that do not exhibit this undesirable tendency, and with excellent results. Large and heavy flowers, however, are almost sure to burst to some extent, even although the variety may not under ordinary circumstances be given that way. Instead of tying the buds up with narrow strips of raffia, as you say you did last season, *L. G. S.*, it would be better for you to invest in a few of the small rubber rings used by florists. One of these can easily be slipped over a bud before it opens, or even when the flower is cut it may be adjusted to keep the petals in place.

The most popular Dessert Apple.—If a census of opinion were taken in the southern and midland counties, at all events, as to the best dessert Apple, it is well nigh a foregone conclusion, *Cosmo*, that "Cox's Orange Pippin," would obtain the greatest number of votes. The appearance is good, and the flavour excellent, whilst it is also a fine doer, and crops well and regularly.

Potato Pits.—The practice of storing Potatos in pits dug in the open ground is covered with the respectability that always attaches to an ancient custom. Ancient or modern, however, the system is not to be commended except as a last resource when all other means of storage fail. The Potato disease has now got to be a national, if, indeed, it is not an international institution, so regularly does it make its appearance each year. At harvesting time it usually happens that many of the tubers which are apparently sound, and are treated as being so, are really affected by the disease which develops itself after the tuber has been stored. Accordingly, it is necessary that the crop should be overhauled once or twice during the autumn, and early part of the winter in order to remove these faulty subjects, which, if allowed to remain, would inevitably spread infection to other tubers in contiguity to them. It is obvious that where the crop is consigned to a pit immediately after harvesting that it is a matter of great labour and trouble to give the picking over that has been proved to be so

necessary, and the decay engendered by a few tubers may have often done serious harm by the time the resources of the pit are drawn upon for culinary purposes.

CHRYSANTHEMUM WILLIAM TUNNINGTON.

This variety was raised by Mr. Robert Owen, Floral Nurseries, Castle Hill, Maidenhead, in 1893, and proved so excellent in every respect as an incurved Chrysanthemum, that it continues to hold its own for exhibition purposes against all rivals of its type which may have risen since then. It is a massive bloom of a reddish-chestnut, with golden-bronze tips to the florets. The latter are of good substance, broad and blunt at the tips, and these qualities insure a compact and well incurved bloom of imposing appearance when well-grown. The colour is richest from terminal buds, so that the latter are by far the best for exhibition purposes. The variety may be reckoned a mid-season one, and growing naturally to a height of 4 ft. to 5 ft., it is reckoned dwarf for the section to which it belongs. It was honoured with a First-class Certificate when it first made its appearance at a meeting of the National Chrysanthemum Society. The accompanying illustration was supplied us by Mr. Owen. The variety appeared in many of the winning stands at the various exhibitions held during the past month.

Chrysanthemum William Tunnington.

A CHAT WITH MR. EDWIN MOLYNEUX.

The Ipswich Chrysanthemum Show was honoured by the presence, as judge, of a gentleman who is the recognised authority as to the Chrysanthemum and its culture. Not to know Mr. Edwin Molyneux, F.R.H.S., of Swanmore Park Gardens, Bishop's Waltham, Hants, is to confess ignorance upon the history of the beautiful flower of autumn. The variety that bears his name is still one of the loveliest crimsons in existence; years ago, Mr. Molyneux pretty well swept the boards in competitions all over the country; finally, after the crowning feat of carrying off three twenty-five guinea challenge cups for two years in succession, he gave up exhibiting, himself, and found abundant scope for his knowledge in judging the productions of others. The great demand made upon his services in this respect is evidenced by the fact that he takes a tour of about 2,000 miles every season, and which extends from Plymouth in the south right away to far Dundee. The opportunity of "interviewing" such an expert was one that could on no account be missed.

"Do you think the 'cult' of the Chrysanthemum is going to last?" was the first question asked of him when he had concluded his labours at the show.

"In spite of what the critics are saying," he replied, "that the Chrysanthemum has had its day, my opinion is that it will remain the favourite flower of this time of the year until it can be replaced by something superior; and where that 'something' is to come from I can form no idea. I believe the Chrysanthemum will go on increasing in popularity. It is the poor man's flower as well as the rich man's, and its cultivation is becoming easier for people who are not blessed with wealth or great means."

"But the growing of blooms for exhibition must surely be an expensive business?"

"To bring the flowers up to the highest stage of development does undoubtedly involve expense and infinite care; but it is only in this way that the good points of individual varieties can be thoroughly brought out. That is where the value of these annual shows comes in At the expense of the rich men, we find out what are the best and most suitable flowers, in the matter of easy culture, for the poor men. The growers of both classes soon come in touch with one another; there is a sort of freemasonry between them. One of the best features of your show in all ways, by the way, is the class for residents who live in houses rented at not more than £15 per annum."

"And what are the more notable changes," it was asked, "that have been accomplished in recent years?"

"For one thing," said Mr. Molyneux, "the raisers themselves are now going in very strongly for plants of dwarf habit. Ten years ago the leading

Japanese variety, perhaps, was Madame Clemence Audiguier. That grew to the enormous height of 14 ft. Now, some of the best produce their blooms at a height of only 4 ft. Then again, the incurved varieties were all the rage fifteen or twenty years ago; now, these stiff Chinese productions are being ousted by the more elegant Japanese, which are so much better adapted to decorative purposes. On this account, too, a great impetus has lately been given to the growth of single flowering Chrysanthemums. They are easy to cultivate; they blossom profusely in many varieties of form and colour, and some of them are beautifully scented. There is one at least, Mrs. Langtry, with a small flower of a delicate shade of pink, which has the scent of violets."

"How do the raisers manage to get a different scent into Chrysanthemums."

"I have no idea. The art or business of raising new varieties is almost in its infancy in England; but many exhibitors are now giving a good deal of attention to it. We may, I think, look for great results shortly from the efforts of English raisers, and see them quite on a par with foreign rivals. The latter have, of course, some considerable advantage over us in the matter of climate. The French, who were the earliest in the field, ripened the seed in Algeria; the Americans have been large contributors of new varieties for many years past, and there is no doubt that Australian raisers will make some valuable additions to the list. But the English specialists, as I have said, are hybridising from the best parents, and there is no reason why they should not succeed, for the Chrysanthemum is really a hardy European plant."

"Do varieties of this flower get exhausted in course of time," it was asked, "like Potatos and other products?"

"Oh, yes. After some years of hard work in the hands of exhibitors, the constitution of the plant becomes worn out, so to speak. Generally speaking, very few of them live over ten years, so that new varieties must be introduced 'to keep the pot a-boiling.'"

"And do you look with favour upon the production of these monstrous flowers?"

"Certainly, if the quality is also maintained. By quality I mean depth—or what is commonly called 'build,' without coarseness of petal—and bright individual colouring according to the variety. A crimson variety should be crimson, for instance, not pink or washy in tint."

"So many varieties," it was urged, "seem to be so much alike that no ordinary observer can tell the difference."

"You want to live with them," said Mr. Molyneux, "and then you would soon see that there is a difference. I myself see all the best flowers that are exhibited every year, and can carry with me a store of information as I go along. My plan of judging is to give a certain number of points, varying from a fixed maximum, to every individual flower in a group, and to award the prizes to that group which gets the highest aggregate of points. Here you may see, from the note-book I had at the Aquarium show, that one exhibitor beat another by a few points only, and in one instance actually by half a point. It is the only safe and proper method, and I am always ready to give reasons for my decision."

"What are in your opinion the best varieties?"

"Well, the different types of flowers, if one may use that term, are almost innumerable, but the semi-drooping or tasselled varieties are the more popular. These include such examples as Viviand Morel; Madame Carnot, which is perhaps the finest white Chrysanthemum of all; and the Suffolk seedling, Edith Tabor, a yellow flower equal to any of that colour. More crimsons are needed, and here Edwin Molyneux still holds its own. That was introduced by Mr. Cannell from Japan, and raised by and named after me. Of new sorts this year, the American importation, Modesto, a bright yellow, is very prominent, and also a beautiful white variety named Simplicity. Last year's novelties that are holding their own include Phoebus and Mrs. H. Weeks, a white, very faintly blushed." ["And don't forget the beautiful single variety, Mrs. A. E. Stubbs," said the modest gentleman who answers to that name, and was listening to this conversation.] "The first of the hirsute varieties," Mr. Molyneux went on, in answer to a question, "was Mrs. Alpheus Hardy, which came in some years ago, and was very popular. Since then, many others have been introduced with this peculiar characteristic, but the colours are indistinct, and they are not easy to grow, nor elegant when grown."

Mr. Molyneux had but little further time to spare, for luncheon was waiting, and he had afterwards to catch the train, *en route* for Hull, and thence to Edinburgh. He added, however, that the first Chrysanthemum show was held at Norwich, and that there are now 150 well-established shows in the kingdom, exclusive of those held in small towns. "If you want to know more of the subject," he said, with a twinkle in his eye, "get my book, entitled 'Chrysanthemums and their Culture,' which is published at the popular price of 1s., and is now in its ninth edition."—*East Anglian Daily Times.*

CHRYSANTHEMUM SHOWS.

TWICKENHAM.—*Nov. 17th. and 18th.*

The twenty-eighth annual show of the Twickenham Horticultural and Cottage Garden Society, was held in the Twickenham Town Hall. For a group of Chrysanthemums occupying a space of 50 sq. ft. Mr. Rickwood, gardener to Lady Freake took first prize, the second going to Mr. Sage, gardener to Earl Dysart, Ham House. For a group of miscellaneous flowering and foliage plants, Mr. Fordham, Twickenham Nurseries, was awarded first place. For a basket of plants arranged for effect Mr. Allsopp, gardener to W. Cunard, Esq., was placed first, being followed by Mr. Macgregor, gardener to Lady Hay. Mr. Smith, gardener to — Odlum, Esq., being the only competitor in the class for a group of Orchids occupying a table space of 10 sq., ft. was awarded first prize. For eighteen blooms of Japanese varieties Mr. E. Coombe, gradener to W. Furze, Esq., was an easy first, Mr. G. Osman taking first place for eighteen incurved. Mr. Allsopp had the best twelve Japs., also best twelve incurved. For six incurved blooms Mr. R. W. Cawte was placed first with nice blooms of Miss M. A. Haggas; and Mr. E. Coombe, with six blooms of Niveus took the lead for six Japs. A leading feature of the show was the table decoration classes, which were keenly contested, although the space allotted was somewhat limited, so that the competitors had scarcely full justice. The stands, baskets, and bouque's being crowded together in front of a group of scarlet Pelargoniums and Bouvardias, the effect was not altogether harmonius. For the best single stand Miss. C. B. Cole took the first prize with an exceedingly light and pretty arrangement. The same exhibitor took first honour for buttonholes and sprays, also first for an ornamental basket of dried seed pods and berries for drawing room decoration. Mrs. Waite was first for a bouquet of Chrysanthemums.

For a collection of vegetables, six kinds, Mr. C. J. Waite took the lead with superb specimens of Ailsa Craig Onions, Supreme Potato, Perfection Tomato, Intermediate Carrots, Brussels Sprouts, and Cauliflowers. Amongst the exhibits not for competition was a collection of Apples (about fifty dishes) from Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, London; also a large collection of finely-coloured and well finished Apples tastefully arranged in baskets with foliage, contributed by Mr. W. Poupart, Marsh Farm, Twickenham. Vegetables in the cottagers' classes were creditable although theentries were not numerous.

HELENSBURGH, *Nov 18th.*

The 16th annual show of the Helensburgh Chrysanthemum Society, the oldest of its kind in Scotland, was held on the above date. It was not quite up to its usual standard in some respects. The tables for cut Chrysanthemums and foliage were, however, a fine feature and a great advance on previous years. There were four competitors. Mr. Forsyth, gardener to — Paterson, Esq., Row, was first; and was followed by Mr. McIntyre, gardener to — Buchanan, Esq. Both of the above exhibits were well staged, the blooms and foliage being combined with judgment.

Competition was not very keen in some of the cut bloom classes; for instance, there were only two entries in the class for twenty-four blooms in eighteen varieties. Mr. Forsyth was again first with an even lot of clean and fresh blooms. Mr. Cummings made a good second, his blooms being a little past their best, and therefore not quite in character. The incurved section was not strongly represented. Mr. Ross was the principal prize-taker for pot plants, thus following up his success at Glasgow. Table plants were nicely shown Mr. McIntyre, who had a clean, well-grown lot, taking the leading award; whilst Mr. H. Campbell was second. Mr. McIntyre again took the lead for foliage plants.

Primulas, Cinerarias, and similar plants were well shown and made a fine display. Mr. Byron is the energetic secretary of this society; and he decorated the platform with a pretty arrangement of foliage plants and floral devices, adding much to the appearance of the show. We are indebted to Mr. T. Dale, of Aikenhead, who was one of the judges of the show for our report.

AYR.—*Nov. 18th.*

The annual Chrysanthemum show was held in the Town Hall, Ayr. The entries were fully up to the average, but the outstanding feature of the whole show was the magnificent display of pot plants. Ayr is noted for this particular class of exhibit, but for quality and number of exhibits the present show was far ahead of anything previously staged, and we quite agree with Mr. Rushton, the judge, when he said "that he did not think that there was anything in Scotland to equal the exhibit shown by Mr. James Thompson, gardener to Richard Niven, Esq., Airlie House," who deservedly gained the County Challenge Cup for four pot Chrysanthemums, various. One of his specimens, Viviand Morel, stood 8 ft. high in the estimation of the judge, and was a mass of bloom of fine rich colour, while his three other pots came closely behind. Mr. Ganby, gardener to P. Davidson, Esq., Glendoon, who has been winner of the cup for the last three years, followed closely; while Mr. T. Gordon, who was third, was equally praiseworthy. In the cut bloom class, Mr. D. Buchanan, Bargany, gained the "Land of Burns" Chrysanthemum Cup with eighteen blooms of splendid quality and colour. Some of his blooms should deservedly be noted, namely, Viviand Morel, Thomas Wilkins, Chas. Davis, Duke of York, Rose Wynne, and Mdlle. Thérèse Rey. Mr. Halliday, Craigengellion, came second; and another exhibitor who also showed good form was Mr. T. Gordon, who made a close third

In the floral decorative class Mr. Ganby was first with six greenhouse flowers, and also obtained second place for two ladies' sprays; Miss Beveridge getting first and Mr. Gordon third. But the latter was more successful for floral bouquets, gaining the premier position in both classes. Altogether the show was a great success. Despite the unpropitious weather, which, unfortunately, spoiled the attendance a little in the fore part of the day, the large number which came at night made up the deficiency. Mr. H. Stewart, Alloway Place, was also a successful exhibitor.

Special credit should be given to the courteous secretary, Mr. Thompson, and his committee for the able manner in which the arrangements were carried out.

ABERDEEN.—*Nov. 20th and 21st.*

An interesting venture was made at Aberdeen in the attempt to resuscitate a Chrysanthemum show after a lapse of eleven years, the last being held in 1885 The show of the above date was held in the Art Gallery, School Hill, and was an encouraging success as far as cut flowers of Chrysanthemums, fruit, and vegetables were concerned. The show was opened by Captain Pirie, M.P., Mr. A. O. Gill, presiding. Mr. James Murray (chairman of the Aberdeen Horticultural Society), Glenburnie Park, the Hon. Mrs. Pirie and Mrs. Murray, were also on the platform. The show was got up by a committee, independently of the society, though not in opposition, as Captain Pirie remarked in the course of his speech. There were about 250 entries.

The Hon. Mrs. Pirie presented the handsome special prizes, consisting chiefly of plate, as follows: —The handsome teapot, offered by the Ichthemic Guano Co., for twenty-four Japanese blooms, went to Mr. James Grant, gardener to Lady Carnegie, Crimonmogate, who had a magnificent collection of blooms that would have done credit to a London exhibition. He had likewise the N. C. S. Bronze Medal for twelve incurved blooms. Mr. William Ogg, Morken, was a good second for the twenty-four Japs. Mr. E. Norman, Stoneywood, had the

best Chrysanthemums of any variety. Mr. Alexander Grigor, Fairfield, exhibited the best twelve decorative varieties of Chrysanthemums. Mr. J. Paterson, Sunnybrae, had the best collection of vegetables, which were highly meritorious. He also had the best four varieties of Potatos.

In other classes for pot plants and cut flowers, leading prize-winners were Mr. William Ogg, Morken; Mr. A. Grigor, Mr. Alexander Middleton, Waterton House; Mr. R. Kiloh, Woodlands, Cults; Mr. J F. Smith, Cullen House; Mr. James Grant, Mr. Wm. Morgan, Dunmail; Mr. William Ogg, Garthdee; and Messrs. James Mavor & Son, Holburn Street. Amongst the leading prize takers in the fruit and vegetable classes were Mr. J. F. Smitb, Mr. F. Fraser, Tillery; Mr. A. Grigor, Mr. A. Reid, Durris House; Mr. J. Paterson, Mr. H. Lawson, Oakbank; Mr. A. Middleton, Mr. A. Mortimer, Tulls; Mr. R. Kiloh, Mr. A. Davidson, Kepplestone; Mr. G. Tocber, Croalethill; and Mr. W. Morgan.

It was to be regretted tbat in our attempt to re-establish a Cbrysantbemum show in Aberdeen tbe season has been so late that plants of Chrysanthemums in pots could not be shown, as tbese are generally grown in their undisbudded or natural state. Neither did tbe classes provided for competition for trusses naturally grown bring fortb more than one entry, which made same employers think tbat to allow their gardeners to support such an exhibition would mean tbat all their plants must be disbudded, and therefore, of much less use to them. Some, in expressing their admiration of the beautiful heads of bloom as seen on the sbow table, said tbey would be of little use at home where there was but small accommodation to grow them Hence, if little or no encouragement were given to grow them for decoration purposes, there would be some cause for employers withholding their support from a 'Mum sbow; but as it is, the show has done an immense amount of good in showing that it does not require a southern climate to bring the "Autumn Queen" to perfection; also in introducing new varieties to the district.

Mention should also be made of tbe splendid exhibition of the celebrated manure Ichthemic Guano. Messrs. Benjamin Reid & Co., Aberdeen, and Messrs. Smitb & Sons, Aberdeen, had excellent exhibition stands not for competition.

Tbe committee dined at the Bon-Accord Hotel in the afternoon. A large company of well-known local horticulturists was presided over by Mr. Alexander Grigor, Fairfield; and Mr. William Reid acted as croupier. These two gentlemen were the cbairman and secretary, respectively, of tbe sbow, and no small part of its success was due to their energy.—*A*.

NATIONAL CHRYSANTHEMUM SOCIETY.

Dec, 1st, 2nd and 3rd.

THE early winter exhibition of this society was held at the Royal Aquarium, Westminster, on the above dates, and was generally acknowledged to be the finest of the shows yet beld by the National at this late period of the year. The quantity and quality of the flowers and the keenness of the competition were remarkable.

Tbere were eighteen entries in the class for twenty-four Japanese Chrysanthemums in not less than eighteen varieties, and not more than two blooms of each, making a splendid array of fine blooms. Tbe leading honour was carried off by Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverston Park, Ipswich. He had grand blooms of Madame Carnot, Elmer D. Smith, Golden Gate, Etoile de Lyon, Beauty of Castlewood, Violetta, Rose Wynne, Duchess of York, Silver Cloud, Graphic, Mons. Cbénon de Léché, Miss M. Blenkiron, Niveus, and others all higbly coloured and fresh as they migbt be a month earlier. The second prize was taken by Mr. W. Slogrove, gardener to Mrs. Crawford, Gatton, Reigate, who also bad fine blooms of Madame Carnot, Le Moucherotte, Thos. Wilkins, Marjorie Hoffman, Miss M. Blenkiron, etc. Mr. G. Hunt, gardener to Pantia Rath, Esq. Ashstead Park, Epsom, had magnificent blooms of Mrs. W. H. Lees, &c., taking the third prize. An extra prize was awarded to Mr. J Stredwick, Silverhill, St. Leonarcs-on-Sea, who had a fresh lot. For 24 bunches of Cbrysanthemum blooms, any varieties, there was also a keen competition, there being six entries, though some of them were badly staged. The premier award was carried off by Mr. Norman Davis, The Vineries, Framfield, Sussex, who had fine bunches of large-flowering varieties, cut with long stems and foliage. The colours were rich, very varied, and effectively displayed. Mr. R. C. Notcutt, Broughton Road Nursery, Ipswich, was a very good second, showing large and fresh blooms cut with stems and foliage. Both incurved and Japanese bunches were included in his collection. Tbe third prize was taken by Mr. Henry Perkins, gardener, to the Hon. W. F. D. Smith, Greenlands, Henley-on-Tbames, who had a nicely staged lot.

There were eighteen entries in tbe class for twelve Japanese blooms, distinct, and the premier lot in the fierce competition, was staged by Mr. Henry Perkins, who had some blooms of enormous size, including Mme. Carnot, Graphic, Wm. Wright, Mme. Rozain, Mrs. H. Weeks, Mrs. W. H. Lees, and Golden Wedding. Indeed, all his blooms were fine. Mr. W. Messenger came in second with much smaller blooms, though fresh and beautiful. Mr. J. Sandford, gardener to G. W. Wright Ingle, Esq., Woodhouse, North Finchley, was third with a good and even lot.

Mr. Henry Perkins again led the way for six Japanese, distinct, showing massive blooms of Mme. Carnot, Graphic, Mutual Friend, Golden Gate, Waban, and Mrs. Ricb. Jones, Mr. C. Payne, gardener to C. J. Withington, Esq., Elmhurst, Bickley Park, was a good second, witb smaller blooms, however. Mr. J, Sandford was third: and there being eighteen entries, an extra prize was awarded to Mr. W. Slogrove.

There were twelve entries in tbe class for twelve incurved blooms of not less than six varieties. The first prize was taken by Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, Hants, who had twelve magnificent blooms, including R. C. Kingston, C. H. Curtis, J. Agate, W. Tunnington, Bonnie Dundee, Major Bonaffon, and King of Orange. Mr. H. Butcher, gardener to C. J. Bass, Esq., Lodge House, Smeeth, Asbford, was a good second, sbowing several of the varieties already mentioned in grand form. Mr. James Agate, Nurseryman, Havant, was third with very neat blooms.

There were thirteen entries intbe class for six incurved blooms, distinct, and tbe best stand was again shown by Mr. W. Neville, who had the varieties above mentioned. Mr. H. Perkins came in second here, with six fine blooms. Mr. G. W. Forbes, gardener to D. Nicols, Esq., Regent House, Surbiton, was a good tbird.

Mr. W. Slogrove took tbe lead in tbe class for six bunches of Japanese, three blooms in a bunch, and which were fine. Mr. Norman Davis was second in this case with good bunches. Mr. H. Alderman was third; and an extra prize was awarded to Mr. C. Payne, there being twelve good exhibits in the class. There were seven entries for twelve buncbes of Japanese blooms, and those exhibited by Mr. R. C. Notcutt were fresh and effectively set up, taking the first award. He was followed by Mr. Norman Davis witb richly coloured and cboice varieties. Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham, came in third. All in these two classes were cut with long stems, and their own foliage.

Mr. G. W. Forbes, gardener to D. Nicols, Esq., Regent House, Surbiton, led the way for twelve bunches of large flowered single varieties, tbree blooms going to a bunch, and not less than six varieties included. Miss Brown, Yellow Giant, Purity, Alphonse, and A S. T. Symonds were some of his best blooms. Mr. W. C. Pagram, gardener to J. Courtenay, Esq., The Whin, Weybridge, was second; and Mr. A. Felgate, gardener to her Grace the Duchess of Wellington, Burhill, Walton-on-Thames, third. Curiously enough tbe same order of prize-winners was preserved in the class for a similar quantity of small-flowered single varieties. Miss Mary Anderson, Mrs. D. B. Crane, Nord, and Pride of Redhill were a few of Mr. Forbes' best sorts.

Mr. James Agate, nurseryman, Havant, was placed first for six bunches of small-flowered single varieties. Mr. A. Felgate, Jun., Horsham, was second; and Mr. T. Tullett, gardener to G. Alexander, Esq., Warley Lodge, Brentwood, Essex, third. Mr. A. Felgate, Jun., also carried off tbe premier honours for six bunches of large-flowered singles; followed by Mr. James Agate, and Mr. A. Meridew, gardener to Dr. Paul, Camberwell House, Camberwell, in the order mentioned.

There were eight entries in the class for a basket of autumn berries and foliage. Ultimately tbe first award fell to the lot of Mrs. W. Green, Jun., Harold Wood, Essex. Mr. Thos. Osman was second; and Mr. A. Newell, tbird.

AMATEURS' CLASSES.

Tbere were twelve entries in the class for six Japanese, of not less than three varieties. H. A. Needs, Esq., Heath View, Horsett, Woking, occupied the first place with very fine specimens of Mutual Friend (four blooms) Phoebus, and Niveus, indeed, Mutual Friend was stronger here than we have seen it this season. Mr. F. Durrant, 4, New Road, Ware, Herts, came in second, and Mr. Edward Spurge, Waltham, Essex, tbird.

The best vase of Chrysantbemums arranged with foliage was contributed by Mr. D. B. Crane, 4, Woodview Terrace, Archway Road, Higbgate, N. Mrs. W. Green, Junr., was second, and Mr. E. Jones, 51, Bower Street, Bedford, tbird.

In the classes for miscellaneous plants some very pretty exhibits appeared. Mr. James Gibson, gardener to E. H. Watts, Esq., Devonhurst, Cbiswick, easily won the first prize for a collection of Primula sinensis. Mr. Gibson's plants were in robust healtb, and evidently of a first-class strain. Tbe arrangement also was excellent, and a capital table was tbe result. Mr. T. P. MacGregor, gardener to the Dowager Lady Hay, North House, Putney Hill, was placed second, also with a good exhibit. Mr. James Gibson was also first for twelve Chinese Primulas witb some nice plants. One form labelled Carter's Princess May, was an ideal plant.

Mr. R. Bassil, gardener to D. H. Evans, Esq., Shooter's Hill House, Pangbourne, Berks, was second; and Mr. Thos. Osman, The Gardens, Ottershaw Park, Chertsey, was third. Mr. J. Sandford, gardener to G. W. Wright Ingle, Esq., Wood House, North Finchley, sent the best twelve double Primulas.

The class for a collection of Cyclamen in pots called fortb two grand tables. The first award was carried off by Mr. W. Orpwood, Andover Nursery, Uxbridge. The plants sent by this exhibitor were dwarf and vigorous, as well as being marvellously well flowered. The individual blooms, moreover, were of great size and substance, and evidenced cultural skill of no mean order. Mr. A. J. Bowles, for the Churcb Road Nursery Co., Church Road Nursery, Hanwell, came in second, also with a superior lot of plants.

Twelve Cyclamen in pots (nurserymen excluded) were best sbown by Mr. W. Frost, gardener to G. Asbley Dodd, Esq., Godington, Ashford, Kent. The samples on view here were really splendid, and they lost nothing by the tasteful introduction of a few foliage plants.

Mr. A. Newell, gardener to Sir Edwin Saunders, Fairlawn, Wimbledon, set up a charming table of foliage, flowering, and berried plants winning thereby the first award in its class. The popular Euphorbia (Poinsettia) pulcherrima was especially brilliant bere. Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatbam, also contributed a sbowy table, and was credited witb tbe second award.

MISCELLANEOUS.

Mr. Robert Owen, Floral Nurseries, Castle Hill, Maidenbead, exbibited two stands of Japanese blooms in fresb and beautiful condition (Silver Medal). Mr. W. Neville showed that the competitions did not exhaust his stock, by staging two stands of incurved blooms in splendid condition (Silver Medal).

Messrs. Dobbie & Co., Rotbesay, N.B., and Orpington, Kent, staged eight stands of Japanese blooms backed up with bunches of singles, pompons, and large blooms with long stems. The exhibit was a highly meritorious one (Silver Gilt Medal).

Mr. W. Wells, Earlswood Nursery, Earlswood, Redhill, Surrey, bad a splendid collection of cut flowers, including large blooms and fine bunches of single varieties. He had large and cbarming blooms of Mons. Chénon de Léché, Mrs. Cbarles Blick, Mme. Carnot, Hairy Wonder, and otbers grown in 6-in. pots, the plants being very dwarf (Silver Gilt Medal).

Mr. W. J. Godfrey, Exmouth, Devon, had a number of stands of large blooms and some bunches of very pretty decorative varieties. He had also twelve blooms of a large incurved variety, of a crimson colour and named The Egyptian (Silver Medal).

Mr. Norman Davis had likewise an exhibit of Chrysanthemums not for competition, including single, pompon. and decorative varieties as grown for market.

Messrs. J. Peed & Sons, Roupell Park Nurseries, Norwood Road, exhibited a collection of Apples and Pears, many of the Apples being highly-coloured. Uvedale's St. Germain and Catillac Pears were of great size (Silver Medal).

Mr. C. J. Waite, gardener to Col. the Hon. W. P. Talbot, Glenhurst, Esher, exhibited a magnificent collection of vegetables (Silver Gilt Medal).

Messrs. John Laing & Sons, Forest Hill, S.E., set up a very pretty table of fruit, chiefly Apples. Splendid dishes of such varieties as Blenheim Orange, Cellini Pippin, Lane's Prince Albert, Waltham Abbey Seedling, Hoary Morning, and Sandringham, were very noticeable. Pear Uvedale's St. Germain was represented by some of the largest and finest samples we have ever seen. The table was very prettily and seasonably decorated with foliage and berried plants. A young box tree trimmed into the form of a peacock that found a place at one end of the table excited a good deal of attention from the visitors (Silver Gilt Medal).

Messrs. Cannell & Sons, Swanley, Kent, showed a quantity of cut Chrysanthemums. The blooms were large and in remarkably good condition considering the advanced state of the year. Madame Carnot, Waban, Silver King, C. H. Curtis, and Reine d'Angleterre were some of the strongest blooms. The collection of zonal Pelargonium blooms although not so large as some the Messrs. Cannell have set up was fully equal to their best efforts in point of quality. Not only were the colours of the flowers most brilliant, but they were large and of the finest form. Florence Farmer, Mrs. Hall, Raspail Improved, Duchess of Portland, Snowdrop, Flambeau, Lilacina, Mrs. P. Routh, John Ruskin, and Lady Newton, were some of the best forms in an exhibit in which all were of great merit (Silver Gilt Medal).

The Ichthemic Guano Co., had a large and imposing stand, tastefully decorated with Ferns and other foliage plants, and setting forth the virtues of their valuable specific.

Undoubtedly the feature of the show, as far as the 'Mums were concerned, was the superb group set up by Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E. The public are now getting to expect something phenomenally good from Mr. Jones, and once again they were not disappointed. The outline of the group, both at the ground level and in elevation, was charmingly undulated, whilst the feathery plumes of Cocos weddeliana were very effective as a lightening agency. From a ground-work of Ferns and dwarf foliage plants the Chrysanthemums showed up bravely. The size and freshness of the blooms themselves must not pass unnoticed; some grand samples of The Egyptian, W. Wright, A. H. Woods, Hebe, the new Mrs. H. Brooke, and Mdlle. Margaret Guèze were very striking. A Gold Medal was awarded for this fine display. Mr. Jones also had a number of cut blooms exhibited for Certificates. They included half a dozen fine blooms of Mrs. W. H. Lees.

The Lawes Chemical Manure Company had a very attractive stand of various specifics sold by them, including their Horticultural manure.

AN AVENUE OF CHRYSANTHEMUMS.

The accompanying illustration represents an avenue of Chrysanthemums as they appeared in one of the nurseries of Mr. W. J. Godfrey, of Exmouth, Devon, about the middle of September, and which was supplied us by Mr. Godfrey. The avenue represents a method of growing Chryanthemums in full exposure to light and air, and at the same time well-secured against injury from rough winds after the plants get tall. The method is very generally adopted by growers in the South both in public and private establishments, when the space at command permits the adoption of the same. In many establishments, however, the plants have to be confined to a single row on each side of a hard gravel path, but nevertheless well-exposed to light and air, a fact which should be borne in mind by every Chrysanthemum grower.

An Avenue of Chrysanthemums.

MARLEY HALL, NEAR EXMOUTH.

It has become so customary when visiting gardens during the months of October, November, and December to expect to find a good display of Chrysanthemums that one naturally resolves beforehand to make a mental note of any new or beautiful variety it would be desirable to add to the collection one may already possess. Some growers total up their various varieties by three figures, and to say one has a hundred and twenty different sorts is but a common place expression. Well, no fault can be found with those who adopt this plan, perhaps their taste and requirements necessitate such diversity of size, form, or colour; and, when looking at a house-full of Chrysanthemums, these points are immediately sought for. But if the taste runs in other directions, and only flowers of one colour can be utilised, then the culture of that particular shade must be practised, and every endeavour made to give pleasure in this particular direction.

At Marley Hall, the seat of J. Forbes, Esq., some three miles from Exmouth, white flowers are always in demand, and must be used in house decoration. This has led Mr. Moiest to grow only such as are of this colour, and this autumn a most beautiful display has embellished mansion and house, and will do so for some time to come. The first to come in was Barbara Forbes, one of Mr. W. J. Godfrey's raising, and called in honour of the lady of the house. This is a compact, partly incurved Japanese of pure white, fine substance, and very showy. The flowers are large, and as they can easily be at their best early in October, it will be seen that it is a most desirable kind. Following this (which will be grown in large numbers next year), came Avalanche, beautiful in form, and of the purest white; close on the heels of this came a quantity of Madame Carnot.

These plants were struck as cuttings in March, and were flowering in 6 in. pots; the flowers were of grand size, 10½ in. to 11 in. through, by 6 in. to 7 in. deep, fit for exhibition purposes. Beauty of Exmouth was also very neat and showy, and the same might be said of Stanstead White. Plants of this variety that were struck in March had developed flowers of immense size, well incurved, and very deep. Others struck in December had brought flowers much flatter, and which had come partly reflexed, nevertheless, grand flowers for single glasses and vases. Mdlle. M. Hoste was very fine. So too was Mme. Thérèse Rey. Mrs. Beale had been grown, but did not commend itself so much as some others; while Mrs. W. J. Godfrey, represented by just one or two plants only, will certainly be more widely grown, as it becomes better known. Of Mme. Ad. Chatin it is difficult to speak too highly,

immense flowers of globular form, broad in petal, stout in substance, and withal so pure and clear. Certainly here is all that is desirable to have in this particular type. T. H. Spalding, Florence Davis, and White Louis Boehmer, were well represented. So too was Mrs. Thomson, a new pure white, incurved Japanese, of large size and substance. A number of bush plants of L. Canning was also coming into flower, which with similiarly grown plants of Avalanche and Beauty of Exmouth will keep the supply going for some time yet.

Among other white-flowering plants grown during the season are quantities of Callas, Marguerites, white Gloxinia Her Majesty, white Sweet Pea, Primulas, Cyclamen, Cinerarias, Swainsonia galegifolia alba, Pancratiums of sorts, Coelogyne cristata, Stephanotis, Comet Asters, large batches of Malmaison Carnations, Dipladenia boliviensis, Tuberoses, Lilium candidum T. I. Harrisii. The mention of these will give some idea of the quantity of white flowers required and supplied. Of the Pines, Vines, Peaches, and Bananas, which are well grown here, I may speak on some future occasion; suffice to say, this season the quantities have been greater than usual, and at the same time of most excellent quality.—*W. Swan, Bystock.*

NATIONAL CHRYSANTHEMUM SOCIETY.

ANNUAL DINNER.

THE members and friends of the above society assembled in strong force at Anderton's Hall, Fleet Street, E.C., on the evening of Thursday, November 26th, to discuss an admirable menu provided by Host Clemow. W. H. Fowler, Esq., J.P., occupied the chair, supported by Messrs. T. W. Sanders, and B. Wynne. Amongst the visitors were included such well-known gentlemen as Mr. J. W. Wilkinson (Royal Aquarium), and M. Martinét (editor of *Le Jardin*, Paris).

A lengthy toast list, interspersed with musical items, had been drawn up, and after the viands had been cleared away, and the walnuts and the wine, with sundry meaner drinks were brought forward, the chairman proposed, as in duty bound, the health of "The Queen, The Prince and Princess of Wales, and the Rest of the Royal Family" which he averred might be considered rather a tall order.

The Chairman next gave the toast of the evening "The National Chrysanthemum Society." Said he, the title of the society is a rather high sounding one, and should lead us to consider whether we really deserve it. At one time the right of the society to the national title was questioned, but he had heard nothing on this point of late. Speaking of the classes, he thought that they set a good example to other societies in having classes for sixty varieties of Japanese, and sixty of "incurves," distinct. He was of opinion that the premier class for Japanese in provincial societies' shows should at least consist of thirty-six varieties, distinct. As a society they had to congratulate themselves upon the excellence of their management. Mr. Dean told him that at the recent exhibition at the Aquarium, half-a-mile of tabling had been employed, so that would give some idea of the magnitude and far-reaching character of the display. The increase of members was most gratifying, no fewer than 182 new ones having been elected since January 1st of the current year, whilst twenty-six new societies had been affiliated during the same period, making in all a total of 880 members, and 136 affiliated societies.

Speaking of the Floral Committee he could only say that it does good work, and deserves their best thanks. He also wished to express the appreciation they all felt of the manner in which the directorate of the Royal Aquarium had met them in every possible way. He felt that the best thanks of the society were due to that estimable body.

Mr. P. Waterer followed with the toast of "The Affiliated Societies," and spoke of the benefits mutually given to and bestowed upon each other by the parent and affiliated societies, and mentioned the Bromley Society as being the heaviest contributor to the Jubilee fund. He had just learnt that they were in telegraphic communication with Mr. R. W. E. Murray, Blackford House, Edinburgh, with regard to the proposed affiliation of the Scottish Horticultural Association. At the exhibition held recently by that body over 33,000 people had attended, and the gate money had exceeded £1,100.

Mr. W. Weeks, secre ary of the Bromley Society, responded at some length, speaking of the determination of the Bromley people to win back the Challenge Trophy taken from them by the Portsmouth Society, and challenged that association to repeat their victory next year.

The presentation of the prizes was then made by the chairman, the coveted Challenge Trophy being handed to Mr. Berry, the secretary of the Portsmouth Society. In making reply that gentlemen stated that although the Portsmouth Society was one of the youngest in England, it was going to be one of the best. Continued he, Mr. Weeks challenged us to win this "shield" again,—We can do it (vociferous applause). We mean to come up next year, and walk it home again.

The medals won by Mr. H. J. Jones, Messrs. H. Cannell & Sons, Mr. Taylor, Mr. D. Donald, Mr. William Colchester, and other exhibitors were then handed to their respective recipients, but excitement reached its boiling point when Mr. Mease, of Leatherhead, received his two Gold Medals, a voice from the crowd making itself heard above the crowd in an insidious "do it again Mease."

A surprise was sprung upon the general company when M. Martinét rose to address the meeting. In admirable English he testified to the great pleasure it gave him to be present among them on that occasion, as well as to the delight with which he received the late delegation of the National Chrysanthemum Society which had been sent to Paris. His special business, however, was to convey to Mr. C. Harman Payne, the Cross and Diploma of a Knight of the Order of *Merite Agricole*. This had been awarded him some time ago on the recommendation of M. Meline, the French Minister of Agriculture. It was then found that as a good and loyal subject of Her Gracious Majesty, Mr. Payne could not receive the decoration without first obtaining the consent of the British Government. Since yesterday, however, everything had been in order, the necessary consent had been obtained, and it was now his duty to hand the diploma and medal to their recipient. Amidst a scene of indescribable enthusiasm, M. Martinét then decorated Mr. Payne with the cross and offered his congratulations. He assured the audience that Mr. Payne was known upon the continent as a good *Chrysanthemiste*. The *Marseillaise* was here sung by the whole of the company, standing. Upon resuming M. Martinét read a letter from the President of the French Horticultural Society expressing that gentleman's pleasure at being able to congratulate Mr. Payne upon his decoration. In conclusion, M. Martinét said that horticulture is a ground upon which all nations may meet in amity, for it has been said that in flowers every man may discover the colour of his national flag. He raised his glass to the friendship of English and French Horticultural Societies.

Mr. C. Harman Payne responded in a few well-chosen words alluding to the fact that M. Martinét had expressed a wish to become a member of the National Chrysanthemum Society.

A resolution was then formulated, embodying the sense of appreciation of the courtesy and good wishes of the French Horticultural Society. This was put to the meeting by the chairman, and carried with acclamation.

Mr. T. W. Sanders proposed the healths of the donors of special prizes, saying that over £200 in cash, and £50 worth of plate had been raised in this way, which was a great assistance to the parent society. In responding, Mr. H. J. Jones stated that he was there not only as a giver but as a receiver of special prizes. Personally, he should always feel happy to do all he could to further the cause of the Chrysanthemum by continuing to offer special prizes.

The toast of "The President, Vice-President, and Officers of the Society" was given by Mr. C. Orchard, and spoken to by Mr. R. Ballantine, and Mr. C. H. Payne.

The chairman followed on with "The Visitors." Mr. J. W. Wilkinson (Royal Aquarium), acknowledged, and testified to the readiness of the Aquarium directors to do as much as lay in their power to meet the requirements of the society. When they were approached last year on the subject of the bad light, the result had been the installation at considerable expense, of the electric light. The roof had been originally composed of glass, but that was found to be unsuitable. Wire-woven glazing, said to be the very best roofing, was then employed. The roof would shortly need attention again, and he could assure them that the needs of their society would be considered.

Mr. Ballantine toasted "The Press, General, and Horticultural," to which Mr. E. T. Cook responded.

Mr. Wynne gave "The Chairman," whom he stated to be a good cricketer, an enthusiastic cultivator of the Chrysanthemum, and a genuine Britisher.

The proceedings terminated at an advanced hour.

LAW NOTES.

THE EXTRAORDINARY ORCHID DISPUTE: JUDGMENT.—In the City of London Court, on Wednesday, Mr. Commissioner Kerr delivered judgment in the case of Rappart v. Peat & Dillon, which was before him some time ago, and which raised questions of peculiar interest and importance to Orchid growers and others. The plaintiff, Mr. David B. Rappart, The Promenade, Liscard, Cheshire, sought to recover against the defendants, Mr. W. P. Peat & Mr. Malcolm Dillon, executors of the late Mr. G. D. Owen, 24, Grosvenor Road, Newcastle-on-Tyne, the return of the sum of £17 6s, 6d., which he had paid to them for certain Orchids.

Mr. J. G. Pease was counsel for the plaintiff, and Mr. Edwin Pollock for the defendants. The plaintiff's case was that he attended the sale of the Selwood collection of Orchids which was held at Selwood, Rotherham, Yorkshire, on April 24th, 25th, and 26th of last year, when the late Mr. Owen's fine collection was disposed of by auction. He purchased Orchids which were not, as he asserted, of the rarity represented, and he now wanted his money to be returned, as a mistake had been made. He bought an Odontoglossum elegans, a Dendrobium splendidissimum grandiflorum, and a Cattleya Skinneri alba. For those he paid £17 6s. 6d. The plants were not in flower when he bought them, so it was impossible to tell whether the plants really answered the descriptions contained in the catalogue upon which he purchased. When the plants flowered the Odontoglossum turned out to be a Halli (worth 2s. 6d. instead of the 5 gs. he had paid), the Dendrobium proved to be an Ainsworthii (worth 2s.) and the Cattleya Skinneri alba was not an alba at all, but quite an ordinary variety. As a mistake had been made somewhere he asked to have his money returned.

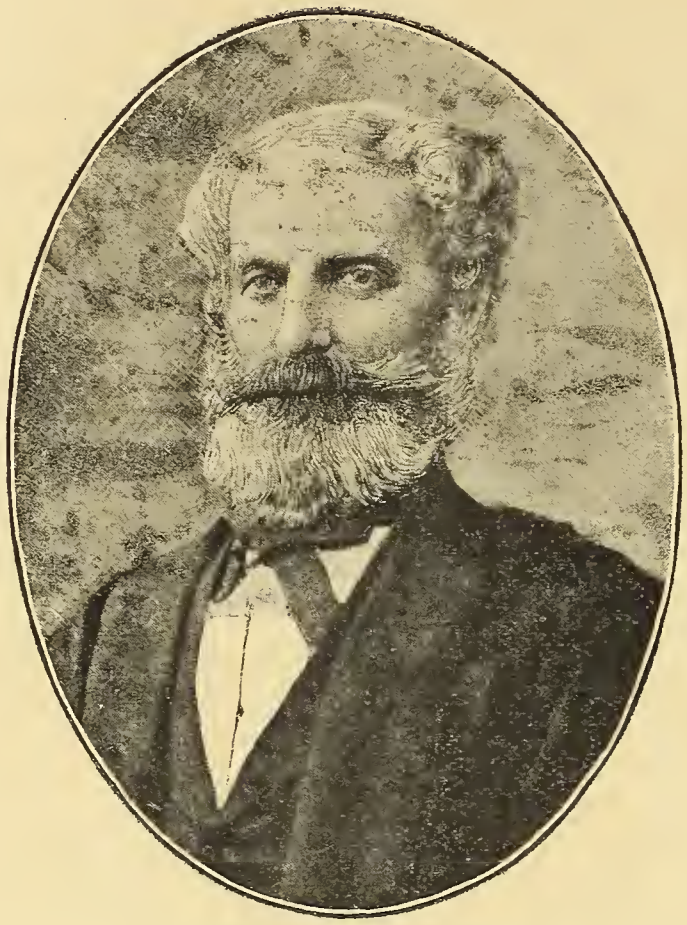
The defendants' case was that the plaintiff had purchased, as a fact, what the defendants pretended to sell him. The late Mr. Owen had seen the Orchids in flower, and when he bought them Mr. Owen paid sums far in excess of those paid by the plaintiff. The plaintiff must have mixed them up in some way or other. There could be no doubt that the defendants sold the plaintiff the genuine plants, and not the common varieties which was now alleged.

Mr. Commissioner Kerr, on the last occasion, said there was no allegation of *mala fides* on the part of anyone; but that as the case presented so many difficulties he would take time to consider his decision. He now gave judgment. He said the case had given him more trouble than any action had involved for a long time past. He could not satisfy his mind that he ought to give judgment for either the plaintiff or the defendants, as he was in so much difficulty. He was bound to say that the plaintiff had not satisfied him that he did not get the Orchids that he bought. That being so the plaintiff had failed in his action. As the plaintiff might be able to satisfy another Judge in another Court he would simply nonsuit the plaintiff, so that another action might be brought elsewhere. He allowed the defendants their costs.

Obituary.

MR. JAMES RUSSELL.—It is with much regret we announce the death of Mr. James Russell, late gardener at Poltalloch, Argyleshire, who died at Sandbank, Campbeltown, at 12.30 a.m., on Thursday, the 26th ult., in the 77th year of his age. Mr. Russell had been gardener to John Malcolm, Esq., of Poltalloch, for the long period of thirty-nine years, and needless to say his influence for good upon the place was visible in more respects than that of gardening.

Poltalloch is a beautiful estate situated amidst truly Highland scenery, about a ten-mile drive from Ardrishaig, at which the steamboats from Greenock for the West Highlands land passengers. Within the gates of the policies are numerous avenues branching out in all directions through rich pasture land, which has been reclaimed from peat bog. The precincts of the mansion were finely kept and in beautiful contrast to the wild scenery of the district. Mr. Russell had eleven hothouses under his care, including vineries, stove, Peach, Melon, Cucumber, Fig, Tomato, Orchid, and other houses, with a greenhouse and conservatory, in which various collections of plants were kept in excellent condition. Orchids, Pelargoniums, Petunias, Begonias, Chrysanthemums, Gardenias, Pancratiums, and Primulas were amongst the favourites at Poltalloch. Grapes, Peaches, Nectarines, and other fruits were admirably done. Hardy herbaceous flowers and climbers were features of the place. The large kitchen garden was surrounded with good brick walls, was covered with fruit trees on both sides, and enclosed collections of fruit trees and bushes, together with excellent examples of kitchen gardening. The highly-respected proprietor was very liberal-handed with the estate, and in Mr. Russell he found a faithful and skilful servant to carry out his wishes.



Mr. James Russell.

Mr. Russell retired from the keeping of the gardens at Poltalloch in 1893, and on October 3rd of that year a number of his friends met him at the Kilmartin Hotel, under the presidency of Mr. Meikle, factor of Poltalloch, and presented him with a gold watch in commemoration of the numerous friends he was leaving behind him by his retirement from the district. Mrs. Russell was presented with a gold brooch at the same time. He has been residing at Sandbank, Campbeltown, since then and died there as above stated.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Soil and Position for Potatos.—*R. Thatcher:* The best soil for Potatos is one that is light, friable and rich, but neither too wet nor dry. In the latter case the crop would be light, especially in dry seasons. Thin and gravelly soil would give poor crops but good quality. Soils lying near streams and water courses should be avoided because too wet as a rule for Potatos and likely to foster the Potato disease. The soil in your district is very much inclined to clay in places, but that could be improved by giving yours good dressings of coal ashes and rank stable manure in the autumn when digging the ground. The latter should be laid up rough so that rain, air, and frost may pulverise it during the winter. With regard to position you cannot do better than give full exposure to air or wind and sunshine. At the same time avoid those positions that are naturally water-logged or wet owing to the want of proper drainage.

Chrysanthemums not Flowering—*M. C.:* You made a mistake in taking off the tops of your Chrysanthemums in August. That should not have been done after May or the beginning of June according to the variety. The old plants can certainly be flowered next year by repotting them next spring into large pots. You will be able to get a large quantity of bloom from them by growing them in bush form; but you cannot expect so large blooms as you would get from young specimens. You should try the plan of taking cuttings in March, pot them finally into 6 in. and 7 in. pots, and leaving only one bloom upon each, if you wish the same to be large.

Angle of Elevation.—*Omega:* The piece of paper you sent us was cut at an angle slightly under 30° of elevation. This is very low for fruit houses, and represents a considerable loss of sun power, which might be remedied now you have the opportunity.

Diseased Malmaison Carnations—*Carnation:* For many years past we have seen specimens effected in the same way as yours. We believe it is caused by minute organisms known as bacteria in the leaves. The healthy portions of the leaves were well stored with starch and other reserve materials, but there existed pale and sometimes brown spots in which the contents of the cells were becoming disintegrated, and were swarming with microscopical organisms. The only thing you can do is to burn the very badly affected and useless plants. Keep the foliage of the others perfectly dry as well as the atmosphere of the house. If they get or are likely to get attacked by aphides, fumigate to destroy the same or sponge the foliage and shoots. When taking cuttings or making layers, use healthy plants only, and attend to potting in due season to encourage vigorous growth.

Hardiness of Vines.—*Omega:* Vines are perfectly hardy when at rest, and will stand any amount of frost they are likely to get in England, or even further north for the matter of that.

Willows for River Banks.—*Omega:* There are several which might be planted with great propriety and service, including Salix viminalis, S. alba, S. fragilis, S. Caprea, S. cinerea, S. alba vitellina, S. russelliana, S. babylonica, S. pentandra, and others. If you study their utility for basket making, you might plant S. viminalis, S. purpurea, and S. alba vitellina, particularly the two former.

Early Flowering Chrysanthemums.—*D.W.D.:* It would be difficult to say precisely when any particular variety would flower in your district, without a fair trial. In fine seasons they would flower easier in the open ground than in cold and sunless seasons. We recommend the following early flowering Japanese varieties:—Madame C. Desgranges, white; Mrs. H. Hawkins, bright yellow; Lady Fitzwygram, pure white; Madame Marie Masé, lilac-mauve; M. Gustave Grunerwald, silvery-white and rose; and Samuel Barlow, salmon-pink. The latter may be had in flower from May till November by arranging to have different batches. The rest flower during August and September in the south. Blushing Bride, rose-lilac; Manum, white; Flora, golden-yellow; and Précocité, light yellow, are pompons you might try. Take cuttings about the end of January, and another batch in March. Pot them off singly when rooted and pinch them several times to make them bushy. Harden them off and plant them in the open if the weather permits during May. Plant them in a sheltered and sunny position, but not overhung by trees nor anything else.

Violas for Exposed Position.—*D.W.D.:* The undermentioned varieties should do well with you, namely, Ardwell Gem, soft yellow; Duchess of Fife, pale yellow, edged purple; Sylvia, creamy-white; William Neil, rose; White Duchess, white, edged blue; Holyrood, dark blue; Countess of Hopetoun, white; Bullion, golden-yellow; Countess of Kintore, bluish-purple, and broad white edging; Duchess of Sutherland, bluish-mauve; Blue Cloud, white, with blue edging; The Mearns, plum, and upper petals white; Marchioness of Tweedale, white; and Violetta, small, white, sweet-scented.

Making Mushroom Spawn—*R. G.:* The process is simple enough but requires careful working to insure success. The details of preparation vary somewhat with different makers. Collect fresh horse-droppings and cow dung; mix them in the proportion of two parts of the former to one of the latter (some use an equal portion of each) and as much clayey loam as will serve to bind them together in making the bricks. Pour liquid stable manure over the whole till it is as soft as mortar when well worked up. Spread the mixture on the floor of a shed till sufficiently dry to be made into bricks. Set the latter on edge and turn them frequently till half dry; then make a hole 1 in. deep in each brick, put in a piece of spawn and fill up the hole with some of the same material as the brick. Make up a bed of fresh horse-droppings about 9 in. deep on a dry bottom. Pile the bricks on this, leaving a space between each. Cover with straw so as to retain a temperature of 60°. Examine the bricks frequently and remove them when they have become permeated with a white substance. Complete the drying of the bricks when they have been removed from the hot-bed, and store them in a cool dry place until required. Some dispense with the operation of putting pieces of spawn into holes in the bricks, by putting the spawn between the layers of bricks in the hot-bed. A book on Mushrooms is "Mushrooms for the Million," to be obtained from the *Journal of Horticulture* office, 171, Fleet Street, E.C.

Names of Plants *Geo. Russell*; Utricularia Echloni, Spreng. (It is not an Orchid).—*J. B.*; 1, Eupatorium riparium; 2, Acacia dealbata; 3, Solanum jasminoides; 4, Cyperus alternifolius variegatus.—*T. M.*; 1, Helleborus niger altifolius; 2, Chimonanthus fragrans grandiflorus; 3, Viburnum Tinus.

Names of Fruit—*W. R.:* 1, Cellini Pippin (synonym Phillips' Seedling); 2, is identical with the former although externally they appear to differ. *D. E.:* Apples—1, Emperor Alexander; 2, Bedfordshire Foundling; 3, Fearn's Pippin; 4, Claygate Pearmain; 5, Blenheim Orange. Pears—4, Winter Nelis.

Communications Received.—Sutton & Sons.—A. P.—J. G. Pettinger.—W. Evans.—George Potts.—R. S. Smith.—H. W. Fleming.—T. M.—J. S.—W. T.—A. West.—J. A. D.—R. M.—S. Hendry.—A. D.—S.—M. Temple.—Excolo.—P. D.—F. Shooter.—Y.—B. R.—Bray.—W. Ashford.—G. Lincoln.—T. R. N.—David Nash.—A. T. A. H.—A. G. Ireland.—George Williams (next week).

TRADE CATALOGUES RECEIVED.

Little & Ballantyne, Carlisle.—Planter's Guide. Trees, Forest, and Ornamental.

William Welch, F.N.C.S., Rush Green, Romford, Essex.—Welch's Descriptive Catalogue of New and Old Chrysanthemums.

Robert Owen, The Floral Nurseries, Castle Hill, Maidenhead.—Descriptive Catalogue and Price List of Chrysanthemums, Cannas, Tuberous Begonias, Primulas, &c.

A. Findlay, Markinch, Scotland.—Abridged List of Findlay's great, new, Disease-resisting Potatos.

LONDON SEED TRADE.

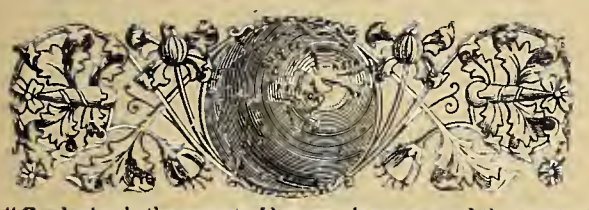
December 1st, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Mark Lane, report but little business doing in agricultural seeds. Finest grades of Canadian Red Clover, White Clover and Alsike offer at reasonable rates. Ryegrasses firm. Rape steady.

PLANTS & ROOTS . . . . FOR FORCING.

Sea Kale, extra strong, ... per 100, 16/-
Asparagus, extra strong .. .. ,, 21/-
Lilac, Marie Legray, and Charles the Tenth; pot grown and full of buds, per dozen, 30/-; Azalea Mollis, Selected "Improved" Seedling, with from 40 to 70 buds, per dozen, 24/-; Deutzia Gracilis, strong, pot grown, per dozen, 9/-.

CUNNINGHAM & WYLLIE,
98, Mitchell Street, Glasgow.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, DECEMBER 12th, 1896.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, December 15th.—Royal Horticultural Society: Meeting of Committees at 12 o'clock.

"THE SURVIVAL OF THE UNLIKE."*—This is the title of a book, consisting of evolution essays, which have been written at various times by Professor L. H. Bailey, of the Cornell University, Ithaca, New York, and read by him at the meetings of different horticultural societies when called upon to address them on some topic or other relating to this branch of science. The title is taken from the heading of the first chapter. We are already familiar with some of the teachings and deductions the author has made from his numerous observations, whether purely of a scientific nature or more or less decidedly and directly bearing upon practical horticulture. One who devotes a great amount of time to a subject, making and recording original observations, that is, who goes directly to the book of nature for his gleanings, is always worth listening to; but at the same time we must bear in mind and make due allowances for differences of climate and cultivation that may exist in other countries from whence the information may be drawn, when applying the instruction to horticulture at home. A large amount of the information furnished by Professor Bailey on this occasion, is of a scientific nature, though much of it is also experimental and historical. The book, moreover, embraces a wide variety of subjects dealt with in a popular way, and can readily be comprehended as a rule by readers who may take the trouble to think as well as read. It is divided into three parts, each consisting of allied subjects grouped together; and includes thirty chapters or essays in all.

The bolder problems of organic evolution are attacked in the first two essays, which are if anything more scientific and difficult to follow, but none the less interesting on that account. The author explains that in this collection of essays, the underlying motive is the stress which he lays upon "unlikenesses" amongst plants, and their survival because they are "unlike." The old assumption was that like produces like; but Professor Bailey takes a somewhat different view of the subject, and believes that heredity is an acquired force. Organisms originally simple have become complex because unlike produces unlike, in fact, has done, and continues to do so. We are all familiar with the expression, like as two peas, but anyone who takes the trouble to observe for himself will find that peas even in the same pod are often very unlike. The professor goes on to say that the closer we are able to approach to the primitive and unspecialised forms of life, the more we are impressed with the weakness of hereditary power; hence his reasons for assuming that it has been acquired by living organisms during the course of geological ages. As far as we can determine, his belief is that no two individual organisms ever are or have been exactly alike, notwithstanding any close similarity of allied subjects. What he says on this point will be more clearly brought home to the mind of the reader who studies his chapter on the natural history of synonyms, which furnishes many valuable suggestions to the practical cultivator and raiser of new varieties. The author quotes H. S. Williams in "Geological Biology" that "mutability is the fundamental law of organisms," and reasoning from that point of view considers it an inconsistency to continue the dogma that like produces like. Naegeli, a great thinker and author, pomulgated a similar theory in somewhat different words. His idea was that "the idioplasm of every organism tends to become more and more complex; that is, to become more and more completely differentiated physiologically and therefore morphologically." From this point of view it can readily be conceived that evolution is the expression of something more than fortuitous variation; on the other hand it would be the "inevitable outcome of a fundamental property of living matter."

Professor Bailey's diagnosis of the evolution of plants and animals along two different lines of development from one original starting point, is certainly interesting reading, but as far as originality of thought is concerned and the promulgation of the same, he considers that, if he is entitled to the honour of having contributed anything to positive science, it is on the subject of bud-variation as given in the third chapter of his book.

Leaving aside the more scientific essays, the cultivator will derive more direct advantage by a study of such subjects as experimental evolution amongst plants; Van Mons and Knight, and the production of varieties; some bearings of the evolution-teaching upon plant cultivation; a sketch of the philosophy of weedinees; and why have our enemies increased? These are the headings of chapters, under each of which a greater or less amount of useful information is given. The problem of the greater increase of injurious insects and fungi in our gardens and orchards during modern times, is discussed at some length, and bears out many of the statements which we made and for which we contended some years ago when speaking on the subject of insect pests and fungi. Professor Bailey says that there is something like an equilibrium between plants and animals in a perfectly wild region of the earth's surface; but that when the interrelations between one and the other are disturbed, by whatever cause, a fresh movement is induced in order to restore that equilibrium. When forests are uprooted, or animals destroyed through the agency of man, others of the same or different kinds strive to occupy the space rendered vacant. The destruction of the original vegetation, in order to allow of the cultivation of the land, brings a host of fresh arrivals, which in the case of insects and other animals may be highly injurious to the cultivated plants. The increase of the latter under the care of man means a great increase of the food supply of these invading pests. We cannot therefore be surprised that these enemies should increase in a like ratio to the quantity of food brought within their reach. If, for instance, the birds that feed upon certain insects are either killed or driven away, the insects will be liable to increase with great rapidity, provided other conditions are equal, and may become a nuisance to the cultivator. In modern times man is the most disturbing element of the natural or original order of things on the face of the earth. For this reason he is obliged to wage a continual war against insect pests and fungi in field, garden and orchard.

Other chapters of an interesting character deal with the longevity of Apple trees, reflections upon the longevity of varieties, as illustrated by Apples and Tomatos, novelties whether worth their cost, and why promising varieties fail. In speaking of the natural history of synonyms, the author considers that the more numerous the latter are, the plant or plants to which they refer, are the more likely to be valuable, and the synonyms merely an index of their popularity. He looks upon all seedlings as well as trees propagated by grafting or budding, as differing more or less from one another, however trivial the variations may be. The true synonyms are those only which have been given outright to one and the same type, that is, in cases of re-naming. Altogether the book runs to 515 pages, including a copious index, and is printed in large and easily readable type.

*THE SURVIVAL OF THE UNLIKE.—A Collection of Evolution Essays Suggested by the Study of Domestic plants. By L. H. BAILEY. Published by The Macmillan Company, 66, Fifth Avenue, New York; London: Macmillan & Co.. Ltd., 1896. Price two dollars (about 8s, 4d.)

Mr. O. F. Cook takes the position of Curator of the Cryptogamic collections of the National Herbarium U. S. A.

Mr. M. B. Waite has been appointed Professor of Botany in the Graduate School of the Georgetown University U. S. A.

Mr. Robert Stuart has been appointed gardener to G. Thompson, Esq., Pitmedden House, Dyce, Aberdeenshire. He had previously been employed at Norwood Hall, Cults, Aberdeenshire.

Mr. James Cowie, gardener for some time past to V. L. Oliver, Esq., Whitmore Lodge, Sunningdale, Berks, has been appointed gardener to Sir Thomas Lucas, Bart., Heathfield House, Ascot.

Hardy Fruit culture seems to be following a retrograde movement in Devon, Cornwall, Somerset and Hereford, the counties most suitable for this enterprise, and where we should expect to find the greatest increase.

Garden Insects was the subject treated upon by Mr. Berry at the Broadhempston horticulture class on Tuesday December 1st. The lecture was illustrated by lantern slides. Mr. Berry gave a very clear and succient account of the insects which worked harm amongst our vegetable crops.

Royal Horticultural Society.—May I ask you to be so kind as to allow me the use of your columns to ask the members of the Fruit Committee to come to the next meeting on December 15th prepared to revise the pamphlet "Fruits for Cottagers" published in 1892. About 65,000 copies have been distributed and a new edition is now wanted and the expediency of *revision* has been suggested.—*W. Wilks, Sec.*

Edinburgh Seed Trade.—The seed trade assistants of Edinburgh held their annual dinner in Messrs. Aitchison's Rooms, Queen Street, on the evening of Thursday, 3rd inst., under the presidency of Mr. Sclater. Over a hundred gentlemen sat down to an excellent menu. After the usual loyal and patriotic toasts, a very enjoyable programme of song and sentiment was gone through in a creditable manner by several talented amateurs. Fifteen seed houses in the city were strongly represented, and the committee are to be congratulated on a highly successful gathering.

Primroses have been flowering in the open-air at Booterstown, Ireland, for a month past.

The average amount of rain for the year has now fallen in the north of England and in Scotland, but in the south-west of England there is still a deficiency of 9 in.

The Queen has again granted the use of her private grounds at Windsor Castle, for the holding of the annual show of the Windsor, Eton and District Rose and Horticultural Society, in 1897.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, December 15th, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 4 p.m. New Fellows will be elected at 3 o'clock.

Tunbridge Wells Gardeners' Society.—Some fine plants and flowers were exhibited at Club Hall, Tunbridge Wells, by the members of this society on the 1st inst. Awards for points were accorded to Messrs. Greengoe, Bridger, Simmons, Booth, and Berwick, for their exhibits.

A huge Fungus.—One of the most conspicuous of the additions to the Botanical Department of the British Museum is a gigantic model of a specimen of Hydnum erinaceus. The actual specimen which was presented to the Museum by the Hon. Mabel de Gray, was found in the New Forest in the hollow trunk of an old Beech tree. Its weight was 22 lb. 6 oz. although it still retained the long teeth and heart-shape characterising H. erinaceus.

Dr. Martin, a well-known collaborator with Professor Huxley, has recently joined the majority, and thus has not survived for long his resignation of the professorship of Biology in the John Hopkins University, U. S. A. He was a graduate of Cambridge, England, and a Fellow of Christ's College. Professor Michael Foster, wrote an appreciative notice of his life and work which appeared in the columns of *Nature* for November 19th.

Scottish Horticultural Association.—A meeting of the Scottish Horticultural Association was held on the 1st inst. at 5, St. Andrew Square, Edinburgh—Mr. R. W. E. Murray presiding. There was a large attendance, and seventeen new members were proposed.—The treasnrer of the association (Mr. Alexander Mackenzie) submitted a draft report of the finances in connection with the Chrysanthemum show, which was of a satisfactory nature. The income was £1,100, and when accounts were squared a handsome balance would remain at the credit of the Association. Mr. Robertson Munro, Langside, Glasgow, read a paper giving "A Review of Scottish Horticulture during the last Forty Years."

Fire at Blenheim Palace.—A fire was discovered in an attic over the grand saloon at Blenheim Palace, Woodstock, Oxford, on the 2nd inst. The palace brigade attacked the seat of the fire with great promptitude and subdued the fire in three-quarters of an hour. The outbreak occurred in a large beam in the chimney of the state dressing rooms, where it had probably been smouldering for some days. A large portion of the roof was destroyed, and the great quantity of water poured into the building found its way to the basement. The splendid centrepiece of the ceiling, depicting the military career of the Great Duke, has been considerably injured and fears are entertained that it may collapse.

The English Illustrated Magazine.—The Christmas number of this monthly periodical is a fat one, running to something like 416 pages, the paper of which is good, and the printing and illustrations excellently executed. The greater portion of the number consists of fiction by some well known anthors, so that readers should have no lack of occupation during the spare hours of Christmas week. Some of the chapters are entitled Our great naval hero, impressions of Constantinople, stories of British battles (Blenheim), in the bonnie north countree, a corner of the kailyard, and campaigning in the Soudan. Illustrations of Fyvie Castle, Mill of fifty, and the grave of Annie in connection with the pathetic story of Tifty's Annie are given in the chapter, corner of the kailyard.

Ealing and District Gardeners' Society.—On December 1st, at the Victoria Hall, Ealing, an exhibition of "twelve miscellaneous plants" was promoted by this society. The prizes were generously supplied by J. Harris, Esq., and the society, and were keenly competed for. After prolonged consideration, the judges, Messrs. Cooper, Long, and Wilson, awarded the premier place to Mr. Holloway, gardener to H. Hyde, Esq., Castle Bar Hill, for a very neat and well-grown collection consisting of Primula sinensis, P. obconica, Fuchsia Phenomenon (white), Asplenium cicutarium, Adiantum cuneatum, Pelargonium F. A. Raspail Improved, Coronilla glauca, Asparagus plumosus, Pandanus Veitchii, Croton Countess, etc. Several of the above were especially worthy of comment, as for instance, the Primulas, both obconica and sinensis, the latter variety being of a very rich rose, and solidly built. The strain is Veitch's, and one of the individual blooms measured fully 2 in. in diameter. The second place was occupied by Mr. R. Green, gardener to W. Owen, Esq., who lives in the same favoured locality as Mr. Hyde. Mr. Green's collection came, in point of marks and merit so near to Mr. Holloway's, that there was little, if any difference between them. Some of Mr. Green's best plants were Cattleya labiata, Cypripedium insigne Maulei, Primula sinensis, and Cocos weddeliana. Mr. Green also exhibited a dozen white Roman Hyacinths, which were accorded the full number of marks. Mr. Woods, gardener to R. Willey, Esq., president of the society, under the above circumstances, had to be satisfied with the third place. Mr. Woods, however, had some very good Primulas, and foliage plants, and an exceedingly floriferous Epiphyllum truncatum. Mr. Crabb, gardener to Miss Percival, succeeded Mr. Woods, with Cinerarias, Primulas, and foliage plants, among the latter being Liriope graminifolia variegata. The Hon. Secretary, Mr. W. Roberts, read a paper on "Camellias," which was listened to with evident satisfaction, and which provoked a good discussion. The meeting, which was a very full one, was presided over by the chairman, S. Arthur Sewell, Esq., F.R.H.S.

"LIFE IN NANTES."

Our fellow citizens, on the occasion of its agricultural and horticultural show at the town of Rennes, had organised on November 22nd, one of the most complete floral shows at which the firm of Mourand alone represented the horticulture of Nantes. Nevertheless, so prosperous already at our show of November 8th, Mr. T. Mourand had distinguished himself by obtaining for his splendid collections of Chrysanthemums, six Gold and Silver Medals and an honourable diploma. At Rennes the success of the clever practitioner has been still greater. For his incomparable collection of Chrysanthemums of the most varied kinds occupying the whole central space the jury have unanimously awarded their congratulations and first prize, and the great diploma of honour. To our young fellow citizen we tender our sincere compliments for the great success he has obtained at Rennes.—*Le Cornu, Guernsey.*

PROPOSED AMALGAMATION AT EDINBURGH.

Suggested Fusion of the Royal Caledonian Society and the Scottish Horticultural Association.

Mr. R. W. E. Murray, Blackford House, Edinburgh, President of the Scottish Horticultural Association, has kindly accorded our representative an interview on this subject. Mr. Murray has the distinction of being the first amateur cultivator elected to this important post, and is well known as an enthusiast in all matters belonging to the Chrysanthemum in general, and the Scottish Horticultural Association in particular, and so our reporter went to see him for an expression of opinion on this subject.

Mr. Murray said, "I am most emphatically opposed to amalgamation with the Royal Caledonian Society on any lines whatever. I do not consider it would act favourably to the true interest of horticulture. What I mean to say is, so far as that section relatiug to Chrysanthemums is concerned, I am perfectly satisfied that the interests of that flower, and its cultivation in Scotland would be prejudicially affected were the Scottish Horticultural Association to be merged in the other society."

"You are aware," Mr. Murray continued, "that the Scottish Horticnltural Association has made the Chrysanthemum a speciality, but it did not do this until the Royal Caledonian Society refused point blank to take up the matter; moreover, where is the society which successfully conducts a series of shows at which more than one class of flower is made a leading feature?"

"There were a greater number of shows per year at one time in Edinburgh, I believe?" suggested our representative.

"Yes! the Royal Caledonian Society at one time held three shows a year; one in spring, known as the "Hyacinth" show; the summer, or "Rose" show; and the fruit show in the autumn; but then the Caledonian Society with all its strength found it impossible to go on with these three exhibitions without entailing considerable monetary loss; and as a matter of fact before the three shows were reduced to two their funds had begnn to disappear at an alarming rate."

"Is that when the Rose show was discontinued?"

"Yes, this was the time it was dscided to discontinue the summer Rose show."

"Was it the original idea to identify the Scottish Horticultural Association particularly with the Chrysanthemum?"

"Oh no," replied Mr. Murray; "on the other hand the Association, over which I have the honour to preside, never laid itself out at its inception to make a speciality of any one plant or flower, and it really only took up the Chrysanthemum, as I have said, when the Caledonian Society declined to do so. The original idea of the Association was rather the inner routine work of horticulture, the monthly meetings, lectures, and so forth."

"And it has always exhibited great vitality, has it not?"

"Certainly!" replied the President. "The extraordinary success which has followed its efforts, proves beyond a doubt that the Association has more vitality in its little finger than the Royal Caledonian has in its whole body, hence no doubt the anxiety of certain shrewd supporters of the latter body to absorb the young Association into their antiquated system. I admit that the Royal Caledonian stands very much in need of reformations; and there is no doubt in the minds of those qualified to judge that society would derive infinite benefit were the Scottish Horticultural Association merged with it; but where the benefit to the Scottish Horticultural Association would come in, is more than I have yet been able to find any man possessed of even the most powerful imagination, to explain. That being so, you will not wonder that I, as President of the Scottish Horticultural Association, should have resolved most strongly to oppose any scheme of amalgamation of the two bodies."

"Some mention has been made, Mr. Murray, of the waste of power, and the expenses of two distinct staffs of management?"

"This so-called waste of power I do not admit; I consider that the greater the number of individuals directly interested in the management of horticultural societies, the better for the well being of those societies."

"And so the taking up of the Chrysanthemum really marked a great departure in the work of the Scottish Horticultural Association?"

"Yes, as I have previously said, our association was originally founded for the purpose of assisting gardeners and amateurs interested in matters horticultural to obtain knowledge in important branches of their profession by the monthly meetings, at which papers and special subjects were dealt with, followed by discussion in which all were invited to take part. Then, when several members of the executive thought fit to draw the attention of the Royal Caledonian Society to the fact that a flower called the Chrysanthemum did exist, and in their opinion it was the duty of the Royal Caledonian to take up the subject, and do something for the encouragement of the cultivation of that superb flower, our executive were met with a flat refusal; and after very serious consideration, the Scottish Horticultural Association decided that if the other Society persisted in refusing to recognise the claims of the Chrysanthemum, then nothing remained but to take up the matter themselves, and start an exhibition. This was done with what success is already known to the gardening world."

"Then in your opinion no reason can be advanced to warrant amalgamation on the part of the Scottish Horticultural Association ?"

"No, decidedly no. The members of our Association I feel sure will resist the idea *in toto*, and stand shoulder to shoulder against any attempt that may be made by parties interested in the other Society to draw the Scottish Horticultural Association into any amalgamation which would be distasteful to them. I have long been a supporter of the Royal Caledonian Society, but I cannot admit that the true interests of horticulture would in any way be advanced were the proposal carried out."

CHRYSANTHEMUM NOTES.

SYON HOUSE.

The requirements of this vast establishment call for large quantities of cut flower, and, naturally enough in the autumn months, the major part of the burden is borne by the Chrysanthemum. Mr. Wythes grows upwards of twelve hundred plants, of which number some two hundred are treated as bush plants, the remainder being devoted to producing the large blooms up to show standard. Although it can scarcely be claimed that a plant that only bears two or three large blooms is nearly as useful for ordinary purposes as one which carries several dozen of small ones, still there is a demand for the large flowers, and not a few ladies and gentlemen are very fond of them in a cut state.

With the large area of glass at Syon House there is plenty of accommodation for the plants when in flower. A long range of vineries some 200 ft. in length has been devoted to this purpose this year, and all through November the sight has been magnificent. Indeed, in very few private gardens throughout the country could such a display be forthcoming. The Chrysanthemum season of 1896, despite its trying character, has been quite a success at Syon House Gardens, and some first-class blooms have been obtained.

Madame Carnot has done remarkably well, and thus added one more item to its long list of honours. On its merits this year, it would head the list of white Japanese varieties coming in during November. As a late flower, too, it possesses considerable value, and is well worth growing for this purpose alone. Mdlle. Thérèse Rey is still one of the best in this section, and no grower would consider his collection representative, unless it contained both of them. Etoile de Lyon is a great favourite here, and numbers of plants are grown. Mr. Wythes certainly had as good blooms of it as any we have seen this year, both with regard to size, and the not less important consideration of colour. W. H. Lincoln as a bush plant is a great success. Whether small or large, the rich yellow of the flowers is most conspicuous.

Amongst other well known Japanese forms Wm. Seward, Col. W. B. Smith, Charles Davis, Viviand Morel, and Amos Perry, have all done remarkably well.

Mrs. Libbie Allen, a bright golden yellow incurved Japanese is a grand thing, and the blooms last surprisingly. Robert Owen, belonging to the same section, forms a compact flower of great size. The florets are broader and more massive than they are in most varieties grouped under this division. Mr. Wythes has had some magnificent flowers of it, indeed, the masses of bronze-gold looked far too heavy for the stake supporting them. Hairy Wonder has been another striking success, for although the plants do not produce the huge stems characterising some other more vigorous growing varieties, they are strong and wiry, and usually produce capital blooms.

The incurved section is likewise well looked after. Baron Hirsch is a great favourite, and certainly deserves all the care and attention it gets. The Queens, too, have been good, and numbers of first-rate samples have been a conspicuous feature of the collection.

Trained plants are not, as a rule, very popular subjects with private gardeners, as they give such a lot of trouble in proportion to their value as decorative subjects. Mr. Wythes, however, does something in this way, and with conspicuous success too; for a number of dwarf trained plants of the single Miss Rose, of perfect hemispherical outline, amply demonstrated how good tempered this pretty variety is. The plants in question have bloomed profusely, and are excellent specimens of the trainer's art.

GREASE BANDS.

Our experience with these is somewhat limited, but it has set us thinking that the principle involved in their use admits of other and wider applications. We are using Horne's preparation, and the variety and multitude of insects which it entraps are most surprising. If any of the smaller flying insects come into contact with it in the slightest degree, their doom seems infallibly sealed. There are two ideas which we think it might be well to put into practice. We all know the trouble the Celery Fly frequently gives us. Since using the above mixture it occurred to us that by stretching cords smeared with it along the rows of Celery, very many of the flies would be caught by it and the harm done by them to this crop would be considerably loosened. And why not try bands around the Chrysanthemum pots to catch the earwigs? True, these fly during the night, but very many certainly creep up from the ground to the plants. It would extend the use of the mixture. We think if Mr. Horne could be induced to send it out in smaller quantities it would suit the requirements of small holders of gardens.—*W. B. G.*

CHRYSANTHEMUM GROUPING.

We have during the past few weeks passed through the annual autumnal visitation of 'mum fever, which rages with increasing severity each succeeding year, and with varying result. In the provinces, the last exhibition was (according to the local press) the best ever held, which is to the various committees no doubt satisfactory. Doubtless very few, able to do so, failed to visit the Jubilee Celebration of the N. C. S. at the Royal Aquarium, when, among the many attractions from a decorative point of view, not the least were the groups of Chrysanthemums. What a contrast did those groups present to the ordinary provincial groups! Surely after such object lessons, schedule possessors will not be found next year asking exhibitors to put up a group of Chrysanthemums of say 50 sq. ft. or 60 sq. ft. allowing 1 ft. only of Ferns or foliage plants. What beauty is there in a mass of bloom crowded together in a few square feet, each bloom touching its fellow? What pleasure does the sight of such a group give? I counted the other day nearly 300 blooms, fine and well-finished, on dwarf well-grown plants, in a group of 50 sq. ft. Now if half that number of plants had been used and well-grown foliage plants interspersed at the discretion of the competitor, a pretty group might have been arranged. Quality of bloom and effect might still be the leading feature. If readers would give their opinion on the matter, I do not suppose many would be found to uphold the old style of grouping. Perhaps this protest might call forth a few opinions from others interested.—*A. P.*

DUNDEE CHRYSANTHEMUM SHOW.

I was very pleased to see by this week's issue of The Gardening World that Mr. Machar had taken the courage, or rather has had the fortitude to come forward and defend the report of the Dundee Chrysanthemum Show. I will give Mr. Machar the benefit of the doubt regarding the authorship of said report, as reading his latest effusion I am inclined to think reading between the lines that he would much rather decline the honour; but why put, or allow his name or signature to anything he was not sure about? No man such as he, who has seemingly learnt the very essence of the *virtue of caution* would ever think of doing such a foolish action. Regarding Mr. Machar's remarks in reference to the pot plants staged by Mr. Kennedy, I am sure no one was more delighted than myself to see the grand show which he made in his class; but I am certain Mr Kennedy, if I know him rightly, is the last man to rejoice in the want of competition through competitors being *chary* of meeting him. Competition is the life of societies such as ours.

Now I come to the assertions in the report regarding the entries for the twenty-four: Mr. Machar still asserts there were eight entries, and by merely asserting the same assumes he has proved it. Now there were only four competitors, and I think when I say I can prove there were only seven entries altogether, I'm inclined to think Mr. Machar if not *fibbing*, to use his own expression, must have been stretching, well "just a wee" bit. My reason for singling out the second twenty-four was not to disparage the judging, but to show the closeness of the competition; and in my opinion if the second lot had been put up it is hard to tell how it might have gone. Now I think I have replied to Mr. Machar in the full.—*A. McDonald Helenslea.*

PRIMULA SINENSIS SUTTON'S SCARLET AND SUTTON'S STAR PRIMULA.

For a high class and highly-coloured Primula, Sutton's Scarlet is one of the best and earliest. Specimen plants well grown, over 2 ft. in diameter are not met with frequently, but at Beardwood Cliff, Blackburn, the residence of J. Thompson, Esq., are some grand examples of high class culture. Several of these are throwing from twelve to fourteen fine spikes of bright scarlet flowers, with a good yellow eye, and thrown well above the foliage; habit perfect; flowers large and fine for decorative purposes. I enquired of Mr. W. Bennett, the gardener, their age; he informed me they were sown January, 1895. Sutton's White, and Sutton's Rose, a year younger, are equally as well done, though not so large, and are certainly grand examples of cultivation. Let me recommend to those in search of a first-class decorative plant, Sutton's Star Primula; for the decoration of the conservatory it cannot be over-estimated. Here are plants in 6-in. pots, throwing many spikes, two feet high, of white flowers flaked with crimson, about ¾ in. in diameter, produced in whorls or tiers on a slender stem. As many as a dozen of these stems are produced, forming a beautiful pyramid of clusters of star-like blossoms; the habit is compact. For cut flowers it will prove invaluable as the spike remains in perfection for fully three weeks.—*Rusticus.*

CHRYSANTHEMUMS.

Quantity and Quality.

In referring to the 'mums around Liverpool previous to the exhibitions, mention was made of a system adopted by Mr. J. Jellicoe, of Camp Hill, Woolton, of securing an increased quantity of fine flowers for general decorative purposes. The heavy demands made at this establishment during the last three months of the year, induced Mr. Jellicoe to try and increase the number of blooms with but a slight depreciation as regards quality. Another satisfactory feature under the new order of things is the dwarf nature of the plants which permits of the beauty of the flowers being seen on the plants, and their being better adapted for groups either in the greenhouses or the dwelling house.

The selection of cuttings and system of propagation are the same as usually adopted; most of the Japanese are in the cutting pots already, and the incurved and other sections will be proceeded with as opportunity occurs; potting on as the plants may require it, but in the final shift, using 10-in. pots, and placing two plants in each pot. In February, the plants are stopped, and again in June; and at this stage, the system of dwarfing is carried into effect as follows:—the point of the shoot is taken out, and as soon as the side buds at the top of the leader start into growth, they in their turn are rubbed off, which induces a lower set of buds to start. This rubbing off is continued until the shoots near the surface of the pot start into growth, when four on each plant, or eight to each pot are grown on, taking one bud on each lead, thus giving eight flowers to each pot. With something like 500 pots, 4,000 excellent flowers are obtained, which will suffice for a vast amount of decorative work.

Under this treatment the following were under 2 ft. in height:—Louise, Mad. Ad. Chatin, Mrs. Dr. Ward, Etoile de Lyon, Bouquet de Dame, Mme. N. Brun, (Anemone), and Cloth of Gold (reflexed). Another important consideration is extending the season, which commences with October; and there is every promise of continuing the supply until after Christmas. The early flowers are Mme. Desgranges. George Wermig, Mrs. Pitcher, Blushing Bride, Rycroft Glory, Margot, Lady Selborne, Source d'Or, Boule d'Or (pompon), Miss Mary Anderson, and Jane (singles). The late varieties or those in flower at the present time include Lord Brooke, Good Gracious, Etoile de Lyon (Japanese), Delaware (anemone), and Mrs. J. Gardiner (incurved). Amongst bush plants the following are especially fine:—Lord Brooke, Tokio, Florence Percy, Thomas Wilkins (Japanese), Marie Stuart (Anemone pom-

pon), Nellie Rainford (pompon), Miss Rose, and Miss Owen (single).

The bush plants mentioned, and others, are not housed until November; and if frost occurs they are stood under the trees, or placed in a sheltered position and covered with tiffany. The mid-season varieties are those usually grown; the selection to a considerable extent is governed by form and colour, whites, yellows and dark varieties being much in evidence.—*R. G. W.*

VEGETABLE CALENDAR.

TRENCHING.—It often happens at this season of the year, that the labour connected with the kitchen garden gets called away to what appears more pressing work in other departments of the garden, and the thorough preparation of the vegetable quarters gets put off until work becomes so pressing, that many crops intended to stand the summer, are put out into half-worked land, with the result that, a short period of hot, dry weather nearly ruins the crop. Now is the time to lay the foundation for securing good crops next season, by thoroughly trenching all unoccupied ground during the next two months. No one should be satisfied with a kitchen garden that has not a tilth 18 in. in depth (2 ft. would be better, and 3 ft. deep better still). The first and second depths given, can be attained by the method termed "bastard trenching," and a lot of ground can be prepared in this way in a short time. To secure a root run 3 ft. deep, trenching will have to be resorted to, taking care to retain the best soil on the surface. Any refuse matter introduced into the lower layers of the trench will assist in improving the staple. Advantage should be taken of frosty mornings or dry days to get out manure on land it is intended to trench, and this should be spread evenly over the surface, with the object of keeping the ground free from frost, so that the work can be proceeded with during a spell of severe weather. All woody or other refuse unsuitable for trenching into the ground, should be burnt; and as a good deal of this accumulates at this season, in the shape of prunings, a smouldering fire should be kept going until the whole is consumed, when the residue should be placed under cover and kept dry. It will prove valuable for several purposes when crops require sowing and planting in spring.

PREPARATIONS should be made for hot-beds, by collecting a stock of leaves and stable dung, in readiness for forcing various crops. This should be turned frequently, and the leaves and dung thoroughly disintegrated and blended, so that when made into beds, it will give a steady, lasting heat.

EARLY POTATOS.—Where a heated brick pit is at command, a bed may be made for early Potatos at once; and if the tubers are started in a moderate heat before planting in the frame, and the early growth made under the influence of light, it will add much to the strength of the plant and quantity in the crop. Where quality is of first importance, the best forms of the Ashleaf Kidney should be grown. A crop of Radishes may also be secured from the same bed, while the Potatos are making growth.—*J. R.*

THE ORCHID HOUSES.

CYPRIPEDIUMS.—By a careful selection of this most beautiful genus it is possible and probable that you will have one or the other in bloom throughout the whole year. There are now so many splendid hybrids that in an article like this it is impossible to do them justice. I shall therefore confine myself to a few that are not only easy to grow, but are beautiful as well. For convenience sake I think it best to divide them into four groups or sections.

First, C. barbatum and the numerous hybrids, of which this is one the parents, do best in a compost made up of rough fibrous peat, sphagnum moss, bits of crock, and silver sand well mixed. Pot culture is necessary for all the Cypripediums, and on account of their moisture-loving tendency, they must have at least three inches of drainage, so that the water may pass freely away.

The second group includes C. insigne, one of the parents of some of the finest hybrids in cultivation; C. villosum, and C. spicerianum, too, come in this section, and are like the preceding species, answerable for some excellent free flowering hybrids. The compost differs very little from that suited to C. barbatum, the addition of a little turfy loam being perhaps beneficial.

The third section, C. caudatum, &c., have thick stiff leaves, and are some of the best exhibition plants grown. The compost should be of a lumpy description, finishing when potting with some nice live sphagnum moss.

C. NIVEUM, C. CONCOLOR, C. BELLATULUM, &c.—When well grown these are amongst the best in cultivation. They like bits of sand-stone mixed with the compost; failing this, burnt clay rubble is good for them. Judging from the particles of red earthy matter that is found clinging to the old roots of newly imported plants, this is something like what they get under natural conditions. Another useful group is Selenipedium, which may not inaptly be designated perpetual flowering. The hybrid C. Sedeni is one of the best, and one that is always in bloom. This hybrid does well in the Cattleya house; but the majority of the Cyprepediums require the heat and moisture of the East India house to do them with any degree of success.

INSECTS.—There is a little yellow thrip that attacks the young growths, and if not kept under will soon disfigure and weaken the plants. One or two dippings in weak tobacco water keep them in check.

REMARKS.—It is advisable to get in a good stock of peat and moss for future use; for should hard frosty weather set in it would, of course, be impossible for the moss to be supplied.

TEMPERATURES.—East India House 60° at night; Cattleya house 55°; Cool house 45° to 48°; a rise of 10° by day should be given in each division.—*C.*

THE PLANT HOUSES.

The Stove.

THE wisdom of airing the plants pretty freely towards the latter part of the summer, and thereby hardening the tissues of the leaves, will now be abundantly manifest. Plants which have been subjected to such treatment will be in a far better condition to stand the trying winter months than others which have been kept close and confined all through. Not only does a little judicious exposure mean increased strength of constitution, but from a decorative point of view such plants are far more valuable, as they are much better coloured.

A night temperature of about 60° Fahr., with a 5° rise during the day will be quite high enough now. In cold weather indeed, unless the house is well furnished with piping, it will be difficult to keep the house up to this without driving the fires a good deal. The aridity of atmosphere resulting from the application of so much fire-heat must be kept well under by judicious damping down both of the paths and the shingle upon the plant stages.

NYMPHAEAS.—These are, or should be, now entirely at rest, and nothing should be done to unduly excite them. The water may be lowered to about half way down the pots, and allowed to remain so for a few weeks. After the new year the cleaning out of the tank, and the potting up of the plants may be proceeded with.

CYCADS.—For large and roomy stoves there are few more handsome plants than these, but the great spread of their fronds precludes the possibility of their inclusion in small houses. If possible, they should be given a position at an angle or corner of the bed, where they will have space to spread out at least on three sides. Mealy bug is the insect pest that troubles them most, although scale will occasionally put in an appearance in force. Cycas revoluta is perhaps the dirtiest subject of any, and the bug sticks to the under side of the pinnae with great persistency. We have found Fir Tree Oil most efficacious for cleansing purposes. In syringing the plants they should be laid on their sides, for not only does this position admit of the under sides of the leaves being cleansed more easily, but it prevents the insecticide getting among the roots.

BAUGAINVILLEA GLABRA.—Whether grown in pots or planted out in specially prepared borders the plants will for some weeks past have been gradually going to rest. No water at all need be given now, the object being to ripen off the wood as perfectly as possible in order that pruning may be seen to. It is desirable to get this done as soon as practicable, for the long growths are taking away a good deal of light from plants standing on the stages beneath. Once the wood is well ripened the shoots formed during the past year may be spurred closely back to the main stems in much the same fashion as Vines. If mealy bug is apt to prove troublesome a washing of Gishurst Compound may be given with advantage, and this may be repeated twice or thrice if thought necessary. It is also not a bad plan to paint the larger branches with some of the same stuff as that used to paint the Vines; it can do no harm, and may be of some service as a preventive of insect attacks.

Pits and Frames.

CHRYSANTHEMUMS.—It is now quite time that the earliest cuttings should be got in. We have found that anything like attempting to strike cuttings in heat is a mistake. Fire heat should be avoided as far as possible. Use small thumb pots filled with light sandy soil, and insert one strong cutting in each. If any low pits are available some hand lights should be taken inside these, and brought up as close against the glass as will admit of the tops being taken off and on. A bed of ashes may be made up within these hand lights, and here the cuttings may be plunged. The Chrysanthemums may then be kept as close as desired until they are rooted, and they will then not interfere with other plants in the house. Fire heat may be turned on in sufficient quantities to keep out the frost, but if the cuttings are enclosed by the hand-lights they will not be so likely to suffer from the fire heat, as they will have an atmosphere of their own. Cuttings struck thus by cool treatment are invariably healthier, and give more satisfaction than do others which are coddled up in the early stages.

LILACS, STAPHYLEAS, and DEUTZIAS must be introduced into heat in succession batches with from ten to fourteen days' interval, and of a size according to the demand there is for them.

ASTILBE JAPONICA, or to give it the old name of Spiraea japonica, which seems as if it will ever be identified with it, is well nigh an indispensable subject for winter decoration. Clumps of it should either have been bought in from the nurseryman or lifted from nursery plantations in the open, and potted up several weeks ago. This latter operation, if it has hitherto been neglected, may be seen to now, although rather better results are obtained when lifting is performed at an earlier date. The form A. j. multiflora compacta is a great improvement upon the species. It is dwarfer and more compact in habit, as the varietal name would signify, and is, moreover, a rather freer flowerer.

Spiraea confusa is very amenable to forcing of medium strength, and when we take into consideration its beauty and elegance it seems almost inexplicable why it should not be a greater favourite with gardeners than it is. The flowers, it is true, possess no great amount of last, but then all forced flowers are inclined to be flimsy, in proportion to the degree of forcing. By placing the plants in a gentle heat of about 50° Fahr. by night, to start with, a 5° rise being given during the day, excellent results may be obtained, and those who give it a trial once, will be sure to follow it up. As the plant is perfectly hardy it may stand out of doors until it is necessary ta bring it in, only taking care that the pot is covered up from frost.

ROSES.—Where pot Roses are forced in any quantity it is advisable to set aside a small pit entirely for them. They are delicate subjects to manage at any time, and if the best results are to be forthcoming, no trouble must be spared. The pit should be furnished with a brick bed, to contain fermenting material, to plunge the pots in, and must be light and well-ventilated. All plants that are to be subjected to forcing should have been established in their pots for at least a year.

If the plants have been looked after for disbudding the H.P.'s will not need much thinning, but will only want to be shortened back to three or four eyes. The Tea varieties will require even less pruning.

Plunge the pots to the rims in the fermenting materials, and keep the plants up close to the glass to encourage short jointed and sturdy youth. In such a position they will obtain the maximum amount of light. The temperature should range from 50° to 55° by night, with a rise of not more than 10° by day. Keep the syringe well to work among the plants morning and afternoon. Give sufficient air to keep the atmosphere of the house sweet and wholesome, and take every precaution to avoid draughts.

If a sufficiency of covering material is to hand the house or pit should be covered over during frosty weather. Plants placed in heat about the middle of December will come into bloom from the middle to the end of March.—*A.S.G.*

PENTILLIE CASTLE, St. MELLION, CORNWALL.

A STROLL through these beautiful grounds is always a pleasure, and that it is much appreciated is evidenced by the large numbers of visitors, who, during the season avail themselves of the facilities at easy command, and by steamer from Plymouth and Devonport, and other calling places on the broad River Tamar, are safely conveyed and landed on the quay in the very Castle grounds. A short time ago I had the opportunity of visiting the place, reaching Saltash about noon on a clear, though cold, day. A five miles ride through a bracing atmosphere, with manifold signs of agriculture, meadows, moors, and hills on either hand, was calculated to give one at least some idea of the eastern side of Cornwall as well as the extreme western part of Devonshire. The River Tamar here divides the two counties, and in many respects the district is most interesting.

Arriving at Pentillie, I was fortunate in finding Mr. W. Johnson at home, with whom I had a ramble over the place. It is idle to speak of the expansive meadows and fields, or the winding and lengthy carriage drive, the great stretch of woods and plantations, or the river that runs along so large a portion of the estate. Time did not permit of too much inspection of these, though each was very interesting and deserving of it. Features of interest were the pleasure grounds, with their grand Conifers, Oaks, Beeches, huge branches sweeping the grass-sward underneath them; again the grand plants of Azalea indica alba, 10 ft. and 12 ft. through, A. amoena in large bushes, Benthamia fragifera, a grand tree, and the picture of health, large plants of Chamaerops, the grand pieces of Myrtle, fine plants of Camellia, as healthy as the Cherry Laurel, which, in their season, are full of flower, and Lapageria rosea in full flower planted and fastened up to the Castle walls. The latter was a most interesting object, and though in the morning after my visit ten degrees of frost were registered, none of the things mentioned suffered in any way.

In the rockery I noticed large tree Ferns, Dicksonia antarctica, Alsophilas and others, grand masses of hardy Cyclamen, with foliage of most beautiful marble shadings. On a border immediately below the terrace wall were to be seen masses of the Paper White as well as the Double Roman Narcissus, already well advanced in bloom. Chimonanthus fragrans on the wall was just about bursting into flower, whilst many late Roses flowering on the trelliswork over different pathways, gave one the idea of early autumn rather than November.

The whole of the grounds, which are very undulating, the shrubberies and plantations, are full of interest, and if one were to have time and tape, many trees and shrubs might be measured, which would be found to be of unusual size. In the niches or joints in the terrace walls I noticed a large number of dense clumps of Asplenium Trichomanes, that flourished, giving some idea of at times the humidity of the atmosphere.

The late vinery was still full of good useful bunches of Grapes such as Alicante and Lady Downes. The early Peach-house was already cleaned and tied in, ready for shutting up. Grand Melons were still hanging, whilst Tomatos and Cucumbers were very plentiful. The conservatory was gay with large flowering Chrysanthemums, whilst arching overhead and at the back wall were grand plants of Luculia gratissima, just about opening its lovely panicles of pale pink blossoms. Carnations, both indoors and out, in the borders are grown here in large numbers. The Nerines, also, with their scarlet flowers have been a great feature. Many large specimens of Dendrobiums including D. nobile, D. fimbriatum, D. densiflorum and D. dalhousieanum, are resting in the vinery and will be put into heat for flower as required. Calanthes in full flower just now with Poinsettias make several houses very gay.

On many of the Apple trees in the kitchen garden fine clumps of Mistleto are growing, some of which must be 8 ft. to 10 ft. through. Many small pieces of but one season's growth, are also pushing along nicely. The leaving on the following morning by the steamer, with its bustle and activity—this being one of the principal means of conveyance—was not the least interesting part of my visit to Pentillie.—*W. Swan, Bystock.*

CHRYSANTHEMUMS FOR DECORATION.

AT the present time our 'mums are making a very nice display in the conservatory. As we do not go in for exhibiting, and have convenience for growing only about 200, our aim is to have a display as long as possible, in fact to the end of December.

We inserted the cuttings last December, putting three or four round the edge of a 60-pot, filled with fine soil composed of loam, leaf mould and sand. They were stood on ashes in a one-light box and kept close, covering at night with mats, and banking the box round with long litter. When rooted, they were potted off into 60's, returned to a cold frame, keeping them close till the roots had taken hold, when they were allowed air on all favourable occasions, and shifted on into 32's and 48's before they became pot-bound. So soon as the weather was favourable they were stood in a sheltered position out-doors and kept well supplied with water, damping them overhead in the evening, following bright sunny days. They were cut down within a few inches of the soil in June 1st, syringed morning and evening, as little water was required, till they commenced to break; in fact if wet weather had occurred at that time they would have required the protection of a cold frame to prevent them becoming soddened.

When nicely on the move, they were transferred to their flowering pots, 16's, and the strongest growers to 12's. The soil for the final potting was coarser than that previously used, consisting of turfy loam of a sandy nature, one-fourth leaf mould, and the same quantity of old Mushroom bed manure, but run through a coarse sieve, with a little bone-meal added. They were potted rather firmly. The late Mr. Thomas Baines once wrote "that loose potting was the bane of plant culture" With that I concur; given a good compost firm potting is beneficial; but too much ramming of the rubbish some people use for plants—and think it good enough—makes matters worse. The roots cannot permeate, nor the water percolate, and stagnation and decay are the result.

When potted, the plants were stood in rows on an ash bottom in a good open position. The soil was in nice condition and the plants were watered a little time before potting, so that it was not necessary to water the newly-potted plants for a few days; but they were damped overhead, early in the morning and evening. Staking was performed when the shoots became long enough, choosing the strongest, allowing four to a 16, and five to a 12 pot. As they advanced in growth they were allowed more room, as, if too close, they draw each other up, like a Larch plantation. So soon as they were nicely rooted they received assistance to growth and good foliage by feeding. Had I my choice I should prefer rainwater for 'mums; but being under the necessity of using water from the "main," I filled a fifty-gallon water barrow, added some manure water from the cow yard, or a 32-pot full of sulphate of ammonia, and let it have the day's sunshine and air before using. When the pots become full of roots, they need water twice or thrice on hot, bright days. Water thoroughly, for if stinted, the bottom foliage begins to go off. The stimulants should be mild at first, increasing the strength when the buds are "taken." We attended to tying, and kept the side shoots vigorously pinched out of those we intended to flower on the "crown" bud. About forty plants I let go of their own free will, including such varieties as Lady Selborne, Mdlle. Lacroix, M. John Laing, Source d'Or, Mrs. Nisbet, Col. W. B. Smith, Mme. Baco, Cesare Costa, Mrs. C. H. Payne, Elaine, and Fair Maid of Guernsey. They make a variety of style, and come in very handy for cutting.

Some varieties come a better colour from the terminal bud, noticeably Mrs. C. H. Payne, and Etoile de Lyon. Last season Viviand Morel from the "crown" bud came nearly white; this season from the same bud it is a beautiful mauve; one may notice the same varieties in different shades of colour on the exhibition boards.

We have now a nice lot of plants, in different varieties, in a cool greenhouse, coming on to take the place of those that go off. If we aimed at having a mass at once our sixty to seventy different varieties would require "timing"; some would need cutting down a week, and others a fortnight sooner. They are furnished with foliage down to the pot, and are dwarf, W. H. Lincoln particularly so. L. Canning is a late white, coming on well for Christmas decorations.

I have a penchant for trained specimens, but they require a lot of time and patience, and as I was limited by the former commodity, I took them in hand in the evenings. I grew two specimens of Lady Selborne, and one Mons. W. Holmes, two Source d'Or, one Elaine, one Fair Maid of Guernsey, and one late yellow I have under the name of Miss Mary Weightman. I also have two standard trained specimens of Sunflower. The above varieties make a succession and a bold show, massed in front of the drawing room window. I may be accused of having the 'mum fever, but I certainly like to do court to the Golden Queen of the East.—*George Potts, November 30th.*

Gleanings from the World of Science.

The ultima Thule of Plant Life.—Mr. W. Botting Hemsley, F.R.S., and first assistant in the Herbarium, Royal Gardens, Kew, has been contributing a series of articles, entitled "Some Curious Facts in Plant Distribution" to *Knowledge*; and the December number contains the sixth article in which he gives some very interesting details concerning the extreme altitudes to which certain species of plants attain on the high mountains of the world, as well as in high, that is, Arctic or Antarctic latitude.

Saxifraga oppositifolia, well known in gardens, has been picked up in Ward Hunt Island, 83° 4', and at Cape Columbia, 83° 8' north latitude. Outside of Arctic regions it takes to the higher mountains in a state of nature, both in Europe (including Britain) and Asia, ascending to 17,000 ft. on the Himalayas.

Saxifraga Boussingaultii.—In the Andes of South America, this species reaches a greater elevation than any other flowering plant. The locality is close under the Equator, and when the discovery was made it was considered unlikely that flowering plants would be found at any greater elevation in the world. The supposition has since been dispelled. The elevation where it grows in the Andes is 16,500 ft.

Saxifraga bicuspidata—This member of the genus has the honour of reaching the southern limit of flowering plants in Hermit Island, Cape Horn. It has very small flowers and appendages to the leaves like the forceps of an earwig.

Papaver nudicaule, well-known in gardens as the Iceland Poppy, occurs all round the northern hemisphere, and was picked up on Ward Hunt Island about the northern limits of flowering plants. In these northern regions the plants diminish in size, and generally form isolated patches closely hugging the ground, and, as they seldom or never produce ripe seeds, they are regarded to be the remnants of a former vegetation, at some remote geological epoch when the Arctic flora was more extensive, and in all probability much more luxuriant. Is may be stated generally that vegetation is limited by the line of perpetual show.

Saussurea tridactyla.—Dr. Thorold, accompanying Captain Bower across Tibet from west to east, from Ladak to China, made a fine collection of high-level vegetation. The expedition passed through about twenty degrees of longitude, at an average elevation of 15,000 ft., in the course of which Dr. Thorold picked up only abont 100 flowering plants. Not a tree nor bush of any description was seen. Most of the plants did not exceed 2 in or 3 in. in height, and few reached one foot. They mostly formed isolated tufts and patches closely hugging the ground. They included Buttercups, Gentians, Poppies, Larkspurs, Asters, Scurvy Grass, Saxifragas, Wormwoods, Dandelions, Primroses, and grasses. At an elevation of 19,000 feet, Saussurea tridactyla, a plant belonging to the Composite family was picked up. It is covered with a dense coat of woolly hairs. No plant has yet been discovered at any higher attitude in the world. It is represented by S. alpina on the higher mountains of England, Scotland, Wales, and Ireland.

HINTS FOR AMATEURS.

Seakale Beds.—As soon as time can be spared these should he gone over, and the dead leaves cleared away, together with any weeds or other rubbish that may be present. Afterwards the crowns may be covered over with a little stable litter or some leaves. The buds will then have an opportunity of swelling, and when the pots are put on a saving of time will result. With all respect to the practice of lifting the roots and forcing them, the quality of the material obtained from plants covered with pots and leaves, and allowed to come on slowly in the open ground as they stand is superior to the quality of the forced material. Growers for market care very little about the quality of an article as long as it looks all right and will sell well, but those gardeners who wish to obtain Seakale of the highest excellence, both with regard to appearance and flavour, may well compare with each other the results obtained from both systems.

Forcing Seakale by lifting the roots is the most effectual and the easiest method of ohtaining early produce, and on the latter account, if on no other, it is the method that most warmly recommends itself to amateur cultivators. Seakale pots are rather expensive things to buy, and they take up a deal of room when they are not in use. For the man with the small garden, where room is necessarily a most important consideration, it is obvious that a stock of large pots of this kind is out of the question. Therefore to lift the roots and force them under cover is the only alternative.

A stock of roots ohtained from small root cuttings planted last March should be on hand. Such cuttings will make good stuff for forcing after a season's growth. The whole of the stock may be lifted from the ground, if desired, and covered over with sand or leaf mould in a shed or out-house, where they can be readily got at when wanted. They will take no harm if left in the open ground, but it must be remembered that it would be difficult to lift them during spells of severe frost.

Preparing the roots.—A little preparation will be necessary before the roots are potted up. The strongest side roots may be cut off with a sharp knife, as they would be of little value if left, and the forcing roots will take up less space after the trimming. The little pieces of thong-like roots removed should be tied up in bundles, and covered with sand or soil, in readiness for planting next spring, to produce next year's stock of forcing material.

Eight-inch pots make very handy receptacles for the roots. A single crock should he covered over the hole at the bottom. Leaf soil is capital stuff to use as a growing medium, inasmuch as it is light and cleanly. An eight-inch pot will comfortahly hold five good-sized crowns. No ramming of the leaf soil should be attempted, as a few taps on the bench during potting will impart all the firmness required. When potting is finished the terminal buds of the roots and a little of the woody portion should be peeping above the soil.

Perfect darkness must be obtained if the produce is to he well blanched, and whatever position the plants are placed in this must be seen to.

Temperature is a matter of equal importance. To place the roots in a hrisk heat would be simply ruinous to the quality of the produce. A temperature of above 60° Fahr. at any time would cause toughness and wiryness of growth, and the flavour would be correspondingly poor. The slower the crowns are allowed to come on the hetter. A period of from five to seven weeks is needed between the potting of the roots and the cutting of the Seakale. Five weeks represents the extreme of safety on the one side, and seven weeks is quite long enough to wait. Six weeks then may be considered the happy medium. After potting, a temperature of from 45° to 50° Fahr. is quite high enough. This may be increased gradually to 55°, and results have determined that this is the best temperature, as it will give us Seakale of first-class quality within a reasonable length of time.

From the above temperatures, which have been recommended as being the most suitable, it will be seen that the amateur need be in no great difficulty. There are plenty of positions that may be found in which such a temperature may easily be maintained. The Mushroom house is of course the very best place, as here we get not only an equable temperature of the required height, but the requisite amount of atmospheric moisure to insure the blanched stems being juicy and of good flavour. Various cupboards and cellars may likewise be utilised. Cupboards near to fireplaces should not be chosen if it can be avoided, as the atmosphere they contain is too dry and parching to yield the best results, but still they may be employed if no other convenience offers.

Strawberry Crowns for forcing. — Although Strawberries are hardy enough with regard to cold, the crowns, which have been potted up into six inch pots, should not be left out of doors any longer. Deluges of rain and heavy falls of snow tend to make the soil in the pots wet and sour, especially where they are plunged in ashes outside. If possible a cold frame should be spared for them, and they may either be plunged in ashes within it, or simply stood in it close together. Plunging in ashes helps to protect the pots from being splintered by sharp frosts, but as far as the plants are concerned it does not matter very much as to whether it is done or not. In a cold frame the plants will be shielded from all rain and snow, and will consequently be in a more favourable condition at the root to respond quickly to the influences of heat than they would if left outside unprotected. Plenty of air must he given at all times, and the lights should be pulled off whenever it is dry. This naturally does not apply to times when the glass is thickly coated by the frost, for although the frost would not hurt the plants, there is great danger of breaking the glass by shifting the light about when severe frost holds.

Endive in Frames.—The sudden spell of very mild weather following the frosts with which the month was ushered in, will do a deal of damage to plants of Endive, which were lifted and planted out in frames about the beginning of November. Give plenty of air here as soon as it is light in the morning, and leave it on as long as possihle. Cover the frames up each night regularly. With the atmosphere standing so close to saturation point water will not be required.

Lachenalias in baskets.—When grown in baskets Lachenalias are undeniahly useful and heautiful ohjects for the conservatory. They will now be calling for greater quantities of water, although it is too early yet to give them anything but clear water. Forcing should not be attempted to any extent, for the less fire-heat that is given the plants the sturdier will be the growth, and the finer and better the flowers. An ordinary greenhouse temperature will suit the plants well throughout the winter months, and we have noticed some grand baskets of Lachenalias in amateurs' greenhouses, from which the frost has been little more than barely kept out in the cold weather.

Roman Hyacinths in the drawing-room.—While the ladies of the household are fond enough of the delicate white flowers of the Roman Hyacinth, they are apt to inveigh very strongly against the clumsiness and unwieldly character of the pots. It is not generally known by amateur cultivators that it is possihle, if sufficient care is taken, to knock Hyacinths in flower out of their pots and transplant them into various fancy bowls and stands within the dwelling house. The rocts of the plants should be gently freed from soil, and every care taken not to bruise or injure them. Cocoa-nut fihre refuse should be used instead of soil, than which it is far more cleanly, whilst answering precisely the same purpose. Should any of the fancy receptacles, which it is desired to fill, be perforated at the sides or bottom to any extent, and thus render it rather difficult to keep the cocoa-nut fihre within bounds, a first lining of damp moss should be given. If desired also the upper surface may be entirely mossed over, as moss, if it gets a fair amount of light, will keep its colour for a long time, and thus produces a lasting as well as pleasing effect.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Winter Flowering Carnations.—The lowness of temperature is the reason why your Carnations do not open, *David Nash.* A heat of from 55° to 58° Fahr. by night is required to do Carnations properly at this time of the year. Be careful with the watering. Liquid farmyard manure may be given occasionally with good results. Take care, however, that it is not too strong. Only enough of it should be put in to colour the water a light brown. It is useless to give measurements, as farmyard manure varies so in strength.

Newly planted Fruit Trees.—Your neighbour has set you an excellent example, *F. Bray*, in mulching his fruit trees, and you will do well to follow it without delay. Stable manure about half decomposed is the best material.

Magnolia grandiflora. *M. York* wishes to know if it is necessary to cover up Magnolia grandiflora for the winter; also Tea Roses, and the best method of covering.

So far north as York, it will be necessary to cover the Magnolia, and such protection as is necessary can be easily given by Russian mats. These should be joined end to end until a blanket of sufficient size to cover the whole of the tree is obtained. This should be fixed over the tree in such a way that it can be easily rolled up to let the light in during mild weather. Tea Roses will likewise need protection, and a load of dry bracken is the very best thing to use. A little of this may be lightly shaken over each plant, and it is surprising how much frost it will keep out.

Campanula Medium calycanthema.—A cold frame will do for the plants throughout the winter, *S. T. T.* Cover the plants up well in frosty weather, and do not give much water.

Pruning Lapagerias.—My Lapagerias have flowered fairly well through the latter part of last summer, and as they had made a lot of growth previously, I suppose they will want some pruning. Will you kindly inform me, first, what is the best time to prune? and second, how to do it? *F. Shooter.*

You may prune your Lapagerias at any time from now until the plants start into growth in the spring. The exact time at which they will do this, will entirely depend upon the way in which you keep your house with regard to temperature. The warmer you keep it the sooner they will start. In pruning you may cut out the growths that have already flowered, which you can easily pick out from the rest, owing to the remains of the flower stalks still being attached. Then the weakest growths may follow. You must leave enough of the strongest and healthiest growths to cover the space thinly, thus leaving room for the tying in of the young shoots as they become long enough. String is the best thing to tie the tender shoots to, as they take kindly to it and grow freely along it, which cannot be said of wire.

Making Mushroom Spawn.—You will find directions for the making of Mushroom spawn on p. 222 of the last issue of THE GARDENING WORLD, *Excolo.* You will there see that it is a somewhat tedious operation. For the small quantities you require, it is certainly not worth your while to attempt to make your own spawn, it would be far cheaper for you to buy.

Tomatos not setting.—It is always difficult to induce Tomatos to set during the winter months, *P. D.*, lack of sunlight being the cause. You may try artificial pollination with the camel's hair brush. The night temperature should not fall below 58° Fahr., and if you can keep it up to 60° so much the better.

Tying Fruit Trees.—Certainly, the plan of fitting the wall with wires is the better plan, *W. Ashford.* Nailing is all very well in its way, but it spoils the look of a wall to keep knocking nails into it for a few years. If you draw the nails again, some of the mortar is sure to be loosened and subsequently falls out. In such a case, where appearances are studied, it is necessary to have the wall "re-pointed" now and again.

Cool Fernery.—A temperature of about 45° Fahr. by night during mild weather, and 2° or 3° lower than than that in frosty weather will do for your fernery for the winter, *M., Hendon.* A rise of 5° by day will be sufficient. The less fire heat you use the better. Such a house will suit Lapagerias to perfection, as the cool, moist surroundings are just to their likings. The Ferns moreover do well under their shade.

BERTONERILA MADAME DU TOICT.

With the exception of Medinilla magnifica and a few other Melastomads, the Sonerilas and Bertolonias are amongst the most familiar genera of the order in gardens. The beautiful spots and markings, as well as the various green and olive tints of the leaves make them popular favourites in gardens, where they are reckoned amongst the most choice of stove fine foliage plants. The subject under notice is a hybrid between a Bertolonia and a Sonerila, so that by virtue of its bigeneric origin, the name Bertonerila has been derived from a combination of those of the two parents. B. Madame du Toict is one of a number of beautiful seedlings raised from this cross. In habit, size of the leaves, and general aspect, it is intermediate in character between the two genera which it represents. The leaves are oblong-ovate, olive-green, and thickly dotted with silvery-white markings all over the surface, but more or less run together in large blotches on either side of the mid-rib. These markings have been described as pearls ncased in emerald. The under surface of the leaves is of a lively rose-purple, and that together with their size shows the influence of Bertolonia, in which rose, pink and purple markings predominate, or in which the ground colour of the leaves may be wholly of that hue.

Of the two well known genera Sonerila is the most easily cultivated and kept in a healthy condition. Bertolonia is generally more difficult; and the plants require to be kept under bell-glasses or in frames in the stove or propagating pit, according to the experience of most cultivators, although a few can manage them without such protection. The subject under notice partakes largely of the hardy character of Sonerila, so that cultivators should succeed with it under ordinary stove conditions. The next improvement should be to get more of the lively and bright colour of the Bertolonias into the Bertonerilas. Bertonerila Madame du Toict was raised by Messrs. Linden, L'Horticulture Internationale, Parc Leopold, Brussels, who have enabled us here to give an illustration of it.

Bertonerila Madame du Toict.

BAMBUSA FORTUNEI VARIEGATA.

This is, we think, not half so much grown as it should be; for in very many establishments it is an unknown plant. A well-grown plant in a 4-in. pot makes one of the very best decorative plants we know of for either vase, table, or fireplace; for the latter purpose we consider it unequalled. A really good plant in a 4-in. pot will measure from 10 in. to 11 in. across. It is quite hardy, but when grown under glass it forms a much better looking subject, its colouration being cleaner and brighter.—*W. B. G.*

SEED GROWING.

The Rev. W. Wilks occupied the chair at the meeting of the Royal Horticultural Society on November 10th. The meeting was pretty fully attended, for the subject of seed growing, which was taken in hand by Mr. Robert Fife, and Mr. Long, was evidently a popular one. Papers were read by both these gentlemen.

Mr. Fife.

In his opening remarks Mr. Fife dealt with seed growing generally, and touched upon its importance to the people at large. There were, he said, two great industries—one by which the people are clothed, and one by which they were fed. With the latter industry seed growing was closely connected, for ninety per cent. of our food material is the direct produce of seeds. It was a remarkable fact that seed growing as an occupation became more and more important as nations rise in the scale of refinement and civilisation, although it has been practised in all ages. It follows that the best flowers and vegetables can only be produced from the best seeds, and it is expected by the people at large that we should not only maintain the improvement in our modern races of flowers and vegetables, but surpass them. Hence the best methods must of necessity be adopted. He was aware that the sow and reap system was practised by some growers in order to place their seeds upon the market at a cheap rate, but he would remind his audience that low-priced seeds were not the cheapest.

Selection played a most important part, in fixing any type or race. There were various ideas, continued Mr. Fife, as to what selected seed really meant. Personally he maintained that such seeds should be the produce of plants picked out as seed bearers, from the produce of selected seeds. In the case of Beetroot, for instance, every shapely root was cut or notched with a knife to distinguish it from the coarser forms which were always discarded. Carrots were served in the same way, and Cabbages, Kales, Asters, etc., were all marked to denote the plants showing the highest quality. The practice of such a system meant time, labour, and incessant care.

He would only touch on artificial fertilisation. This became necessary in the case of flowers that bloomed too early to be pollinated naturally. With regard to the question of reversion—it had seriously to be reckoned with, and as an American once said, "eternal vigilance is the price of safety." Many things, however, will not come true from seed. Thus fancy Pansies can never be relied on, and where attempts have been made by cultivators, the beds of seedlings looked as if they had been carefully mixed. Calendulas, too, behaved strangely, and were most intractable. The yellow form, if lifted and potted up would produce lemon flowers, owing to the temporary check, but as soon as they recovered from that check it would go back to the old yellow type. Quilled Asters, again, had never yet yielded a cross or a sport.

Isolation, continued Mr. Fife must bulk largely in the vocabulary of every seedsman. Thus Antirrhinum Yellow Queen had only been fixed after years of selection and isolation.

The question of intercrossing presented some curious aspects. Thus the garden Turnip showed no inclination whatever to cross with any of the Cabbages, Kales, etc., although he had found when different varieties of Turnips were planted closely together the seedlings varied a good deal. Mr. Fife exhibited some samples of seedlings of Turnips possessing rather mixed characteristics.

The more highly developed the plants were, the less tendency they had to produce seed, and the lower germinating power that seed has. Fancy Pansies, for instance, of poor varieties produced plenty of seed, but the better forms were much shyer in seeding. The same thing might be said of Cockscombs, and highly bred Cabbages were usually poor seeders. In fact, the cost of production was in inverse ratio to the quantity of seed produced.

Mr. Fife concluded a very able and interesting lecture by remarking that plants lend themselves readily enough to improvement by the florist for our good but not for their own.

Mr. Long.

This gentleman confined himself to the subject of agricultural seeds, as the question was such a vast one and he could do more justice to it by simply taking a section such as this. In speaking of the kind of soil required he said that it was necessary to have a variety of soils ranging from that of a light to that of a heavy character. This, together with several kinds of manures were required in order to command success in dealing with each crop. The land must also be well cultivated, and cleanliness from weeds was of the first importance.

The careful selection of roots and plants from which stock seeds were to be produced must receive the closest attention, and he fully endorsed Mr. Fife's statements concerning the value of consistent and careful selection.

Isolation, although a most necessary precaution, was rather difficult to practise, as while it was easy enough to keep the bees and other insects away from small patches of any plant in flower by netting them over, it was obviously impossible to adopt this plan where acres were affected. It was needful to isolate varieties of sweet Turnip, or they would be sure to get mixed. The Queen and Purple Top were especially difficult to deal with in this respect. Brassica

oleracea would not cross with B. napis, or B. campestris, although they were so closely related.

Mr. Long dealt at some length with the tendency exhibited by most races of vegetables to revert back on the slightest provocation. He assured his audience that this susceptibility gave seedsmen an infinite amount of trouble, and even then after all precautions had been taken they could not prevent a few customers from getting an occasional disappointment. He was of opinion that a wet season often produces these reversions as he had proved that, when during such a year there had been a great many runaways, if the next year proved dry, seed taken from the same parcel of plants would produce a very low percentage of runaways.

An enemy in the form of a small beetle had wrought untold damage to the mustard crops of late years, whole fields having been totally destroyed. He would be pleased to hear of any scientific gentleman who would find an efficacious method of dealing with this scourge. Votes of thanks to both lecturers terminated the proceedings.

SCOTTISH NOTES.

It is not pleasant for gardeners any more than proprietors of domains and fine gardens, to hear that reductions must take place on the outlay associated with the maintenance of these possessions; yet, by agricultural distress and other causes, we hear frequently that retrenchment, in many establishments is very common, and sales of the entire property are not infrequent. There is (in some respects) a ray of brightness among these clouds, and that is, many places which were almost in a state of destitution have recuperated, and are in better condition than they ever were.

Fourteen years ago in the locality where I now write, there were seven places of the better class, which were in as poor a plight as they well could be, but are now in the hands of new proprietors, who may be ranked among the plutocracy of the nation, and who understand that when a property is worth maintaining it should be of primary importance to give the necessary support to meet the requirements. Some remarkable transformations have taken place, and the fact that so many successful competitors emanate from this district, means that there are good gardens, and successful horticulture somewhere. So there is in the places which appeared to be so destitute some years ago.

We cannot cram all we would like into this short paper, but would wish permission to give tangible proof of what we assert by referring to at least one seat among many which is now rendered worthy of the change to affluent and liberal proprietorship, and only a few miles from us—viz, Larbert House, Stirlingshire, the beautiful seat of John Graham, Esq, who (in his retirement from business duties) has found much pleasure in co-operating with his most zealous and talented gardener, Mr. Airdrie, in remodelling his park, pleasure grounds, and gardens, and the work has not yet ended. The work of renovation being completed additions are being made. After the erection of a very complete range of glass structures in the kitchen garden, for the growth of choice flowers and fruits, a handsome conservatory by the country mansion is being built.

Some three months ago we were pleased to make notes on what progress had been made since our previous visit. The houses (all new) had been furnished with vines, Peaches, Figs, and other permanent fruit-bearing trees, and the show houses were redolent with perfume, and charming to the eye, the whole forming a range of over 300 ft. in length. Some of the objects having a prominent position were Crotons, doing capitally, the colour being finer than is generally seen. Some of the most striking were Lord Salisbury, a seedling of Mr. Airdrie's raising, with green and yellow spots, pale pink and golden centre; Flamingo, Prince of Orange, Magnifica, Countess, and others from seed on the place, were good. Begonias have for several years been notable for their excellence—many raised from seed and retained among the finest named varieties, one fine scarlet being 5 in. across. Great numbers of fine foliaged plants were conspicuous for excellence of culture, Caladiums and Dracaenas especially.

Passing onwards (noting abundance of Tomatos on the way), we spent some time among the Peaches. A selection has been made with consummate care; and all doing well, and bearing abundantly. Violette Hative, Dymond, Gos-hawk and Sea Eagle, are in favour as reliable varieties. Among Nectarines we noted Elruge, Newington, and Cardinal in full crop giving a mid-season supply. Grapes were about their best; Madresfield Court, Black Hamburgh, and Muscat Hamburgh were prominent among the first-class sorts. Gros Maroc, Gros Colman, and Lady Downes are valued for general late supply. In addition to the foregoing, others have had an impartial trial. All sorts are not alike in giving necessary finish of flavour and appearance to fruits; palates, too, are not all in accord; and the fact that we see in catalogues fruit cracked up as excellent in every respect, and by others denounced as worthless, is very striking among Peaches.

Figs (as they should be) are in great request, and we pity any proprietor who does not care for the tempting delicious Figs now so abundant in variety, and easily grown when there are means set apart for their cultivation. They are mostly in pots at Larbert and are well done. We noted dwarf trees in full fruit of the following:—Gros Verte (a very delicious sort), Monaca Blanche, Osborn's Prolific and Bourjousite Blanc.

Passing from the glass structure we had a shy at the Chrysanthemums. Mr. Airdrie grows a great number, gives them great attention and is rewarded by abundance of inflorescence of the highest order. Some capital blooms from Larbert have graced the tables at Edinburgh, Stirling and Glasgow exhibitions. Fruit, too, has successfully competed among the enthusiasts of the north. But to know what good gardening is one must visit the gardens and gardener. After a hasty run through the thoroughly cropped vegetable garden (where vegetables have done extra well this season) we had to make a retreat, feeling much indebted to Mr. Airdrie for his communicativeness and urbanity.

While speaking of improved gardens and property increased in value, the work seems to become contageous. Around Larbert there is evidence of this, even if less significant than at Larbert House. There are numerous villa gardens springing up where flowers especially are predominating features; and often in such suburban gardens things are remarkably well done. Money is frequently spent freely on establishment of grounds and for plants under glass. As an example of a new place, the residence of Major Dobbie, of Beechmount takes a lead in the district with elegant and well furnished conservatory, vineries, greenhouses, etc. Chrysanthemums have special attention, and pot plants of them were remarkably fine. Vegetables (especially Onions, such as are freqnently seen at northern shows) are under good management, all doing great credit to Major Dobbie's gardener. Bedding plants and flowers for cutting were in great profusion. and choice shrubs well planted enhanced the beauty of this new residence.—*M Temple, Carron, Stirlingshire.*

THE CYCLAMEN.

When chill November's surly blast,
Makes fields and forests bare,
It makes whatever flowers we have,
Seem precious, rich and rare.

No marvel then we love those flowers
That make our houses gay,
All through the dull and cheerless hours
That gloom the winter day.

But then, at times our mistress comes
And tells us to prepare
The decorations, for to-night
A party claims her care.

Ah! then to thee, fair Cyclamen,
We turn in grim despair;
O must we pluck the lovely flowers
To fill the glasses there?

Alas! we must! though with regret
We spoil thy grace renooned,
And rob the plant whereon you sat
In mystic beauty crooned.

But then, we need no more delay,
Nor look with mournful eye;
For we can cut, and come again
To gather by-and-bye.

So then I'll up and gladly sing
Thy praise to fellow men;
For art thou not our winter king,
Quaint, bonnie Cyclamen?

The Gardening World in London toon
May help my humble muse;
I'll beg the Editor to think
My theme a fair excuse.

And if his colums, crammed with facts,
The needful space can spare,
Inserting this will much oblige
His frien,—*A Youth from Ayr.*

CLASSIFICATION OF CHRYSANTHEMUMS.*

It has been with some diffidence that I have undertaken to speak on the question of a fuller classification of Chrysanthemums, for the subject is one that does not readily lend itself to picturesque treatment; and in dealing with it, it is necessary to pass over much ground that is of necessity more or less familiar to those who take any considerable amount of interest in Chrysanthemums and Chrysanthemum culture. The subject is not one of my own choosing, but is, nevertheless, one of considerable importance in its bearing upon the exhibition of Chrysanthemums, which now occupies so prominent a position among horticultural activities. The committee of the National Chrysanthemum Society decided that the time had arrived for considering whether or not a fuller classification than that now generally adopted should not be made, and they invited me to open the discussion.

In discussing questions of classification of the types of the Chrysanthemum, or, indeed, of any other flower, there are two points which, in my opinion, should be kept in view. One is to so arrange the groups, sections, or classes that the multitudinous forms can with the aid of technical descriptions be alloted a place in their proper section without any great difficulty. The other is to adopt as the basis of classification, the grouping, and designations that have come to be generally adopted by the cultivators of the flower. Such a classification will necessarily lack novelty, but it will prove useful, and in a question of this kind utility should be the first consideration. The necessity for placing the varieties of the Chrysanthemum in proper order has long been recognised, and several attempts, with varying success, have been made. Sixty-three years ago, Mr. A. H. Haworth, with a view to obviate the difficulties that were then felt in distinguishing the several types grown at that time, undertook the task of classifying them, and contributed his classification, under the title of "A New Arrangement for Double-flowered Chinese Chrysanthemums," to the *Gardeners' Magazine* of 1833 (page 218). Mr. Haworth arranged the varieties then grown in six classes which he distinguished as follows: (1) Ranunculus-flowered, (2) Incurving Ranunculus-flowered, (3) China Aster-flowered (4) Marigold flowered (5), Tassel-flowered, and (6) Half-double Tassel-flowered. The first section comprised varieties with flowers of medium size, and having reflexed florets; the second, the large-flowered varieties, with blooms of which the florets showed an indication to incurve; the third, large-flowered single and semi-double varieties; the fourth, varieties having blooms of medium size double and neat in form; the fifth, varieties with very large double and more or less conspicuously drooping flowers, and elongated and quilled florets; and the sixth, varieties of which the blooms were similar in character to those in the preceding section but only semi-double. In this classification, no provisions were made for the incurved or the pompons, for in those days the pompons had not been introduced to this country, and the incurved varieties as we know them did not exist. This classification created some interest at the time, but it had no practical value, and, so far as I have been able to ascertain, was not recognised by cultivators; and I am not surprised that this was the case, for what Mr. Haworth attempted was equivalent to arranging the present race of Japanese into six classes. To remedy the obvious defects of Mr. Haworth's classification, Mr. Salter proposed, in his book on "The Chrysanthemum," published in 1865, to amend it by adding four new classes, instead of attempting a quite new classification adapted to the requirements of cultivators of that day. Mr. Salter proposed four additional classes, and these were: (7) Incurved form, (8), Pompon Ranunculus-flowered, (9) Pompon Anemone-flowered, and (10) Matricarioides or Feverfew form and size. It is, of course, an easy matter to criticise classifications prepared at periods in the history of the flower when other conditions obtained; but it is somewhat singular that Mr. Salter, so recently as thirty years ago, should not have attempted in his extension of Haworth's classification to include the large Anemone and the reflexed varieties, which were then plentiful, and of greater relative importance than they are at the present day.

*A paper read by Mr. G. Gordon at the N.C.S. Conference, 5th November.

Seventeen years ago I prepared a wholly new classification, which, I venture to believe, found considerable favour, from the fact that it has, with the exception of one class, been generally adopted by Chrysanthemum Societies in the United Kingdom. In this classification there were seven sections, and these were: (1) Incurved, (2) Reflexed, (3) Large Anemone-flowered, (4) Japanese, (5) Pompon, (6) Anemone-flowered, and (7) Intermediate. The last class was formed for the purpose of providing a section for the varieties intermediate in size between the pompons and the reflexed, which were generally termed hybrids. It failed in its purpose, and I shall make no attempt to justify it. We have still varieties with blooms so large so as to suggest that they do not belong to the pompon section—Soeur Melaine, for example—and some, like Julie Lagravere, which have blooms so small that they do not, at first sight, belong to the reflexed section. These intermediate varieties have occasioned considerable difficulty to judges and others in determining the classes to which they properly belong. It is, however, a very simple matter, for all pompons have small leaves and reflexed large ones, and it was by means of the leaves, as well as the flowers that, in the preparation of the classified lists in the society's catalogue for 1888, I succeeded in placing the doubtful varieties in their proper classes.

Since the publication of my first classification in 1879 the Chrysanthemum has undergone a remarkable development, and several new types have been added, with the result that it is no longer sufficient. I would, therefore, suggest that the classification of the types of the Chrysanthemum be increased, and I have no doubt that the suggestions I shall make will be really accepted, as the greater portion have already had practical effect given to them in modelling the society's catalogue, in which, with the exception of the jubilee edition, I have had a large share since 1888, when this important work was given its present form. My suggestions are that the classification should comprise twelve sections, and that these should be arranged as follows:—(1) Incurved, (2) Japanese, (3) Japanese Incurved, (4) Large Reflexed, (5) Large anemone-flowered, (6) Japanese Anemone-flowered, (7) Hairy or Hirsute, (8) Pompon, (9) Pompon Fringed, (10) Pompon Anemone-flowered, (11) Large-flowered Single, and (12) Pompon Single. These classes will provide for all the varieties of which at present we have knowledge, and, with the aid of the technical descriptions that I have prepared, there should be no difficulty in relegating the varieties to their proper sections or classes. Difficulties will, of course, occasionally arise in determining the exact position of varieties, owing to the gradual manner in which the several sections merge into each other. In the case of varieties that form the connecting link between two sections, I would suggest that they should be referred to a small sub-committee for consideration, who would be able to give more time to the matter than is possible at the meeting of the Floral Committee, and be able to determine, after a careful examination of the blooms and the definitions of the two sections, with exactitude the classes to which they belong.

With reference to the definitions, I would take advantage of this opportunity for suggesting the desirability of members of committees, of judges, and indeed, of all who have to deal with new varieties, making themselves familiar with the points defining the several classes, for it is only by a fullness of knowledge that we can hope to avoid mistakes. This appears to be especially necessary in the case of the incurved, for a danger has been foreshadowed of varieties being added to the class that properly belong to the Japanese incurved. No one could be more ready to welcome additions to the class than myself, but I do not want it to be the receptacle for Japanese incurved that are neither bold enough nor sufficiently beautiful to justify their being distributed as such. So long as the incurved are retained—and I see no signs of their being pushed out by their more showy rivals—let us insist upon regularly-arranged and overlapping florets that, when properly developed, will form a bloom, globular in form and full in the centre. On the other hand, the florets of the Japanese incurved must not be so regularly arranged as to form a globe. With regard to the typical Japanese, it is not necessary I should say much, because I have now nothing to do with the merits of blooms when in competition, but I would, in passing express my entire concurrence with the action of the Catalogue Committee in abolishing the class for Japanese reflexed. I have never liked the class, and experience in judging has convinced me that it was unnecessary and undesirable. The reflexed section does not require any special comment except to say that it would be a great gain to improve the class by adding to it a considerable number of varieties, that we may have finer flowers and a greater diversity of colour in the section.

No change, in the present state of our knowledge, is necessary in the case of the large and Japanese Anemones, and with reference to the question that is sometimes raised as to the desirability of merging them into one class, I will say that the operation will be just as reasonable as merging the incurved and Japanese into one section. Were these two Anemone-flowered sections to be formed into one, the effect would probably be to give rise to a race lacking the perfection of form of the large-flowered and the lightness and elegence of the Japanese. It is assumed that there is a special difficulty in distinguishing the two sections, but this is not so when it is remembered that both the cushion and ray florets of the large-flowered should be quite regular, and that in the other both may be of varying lengths, and should be characterised by irregularity. I have arranged the pompons in three classes, and in suggesting one for fringed pompons I do so for the purpose of giving those with florets, fimbriated or fringed, an equal value to these in which the florets are regular at the margin and not divided at the apex. The fringed varieties are rapidly increasing in numbers, and comprise many that are of exquisite beauty, and I am of the opinion that we should fully recognise all thoroughly distinct types. In the case of varieties with hirsute appendages, I would suggest that those varieties only having blooms on which the production of glandular hairs is constant should be admissible to the class. I mention this because under certain conditions the florets of some of the incurved varieties, such as Princess Teck and its several forms, become hirsute, and to include these would be absurd.

The single varieties, owing to the great diversity in the form of the flowers, have occasioned some difficulty; but I have thought it advisable to limit them to two classes for the present, one embracing those with blooms not exceeding 3 in. in diameter, and the other those of which the blooms exceed that size; single blooms should not, as a rule, contain more than two rows of ray florets, but in some cases three rows may be admissible. With reference to this point, it appears desirable to state, although it should not be necessary to do so, that a semi-double variety is not converted into a single by the removal of a portion of the ray florets.

(*To be Continued.*)

CHRYSANTHEMUM SHOW.

LEEDS.—*Nov. 24th and 25th.*

THE Leeds Paxton Society's seventh annual show was held in the Town Hall, and was opened by A.T. Lawson, Esq., J.P., who was accompanied to the platform by His Worship, the Mayor (Sir James Kitson, Bart., M.P.,) and Grosvenor Talbot, Esq. Mr. Lawson considered the list of subscribers a small one and appealed to all lovers of flowers to increase it. The Mayor in proposing a vote of thanks to Mr. Lawson, said it was a pleasure to gentlemen to encourage their gardeners to compete, as it stimulated them to greater efforts, and made their occupation more interesting.

The show was the best ever held in Leeds; in quality, number of exhibits, and financially it far exceeded that of any other year in the history of the society. There were nearly 500 entries, most of which were staged. Although there was a slight falling off in the vegetables, it was more than made up for in the increase in cut blooms. On entering the large hall, the scene was most charming. Great credit is due to the curators, Messrs. Bailey Bussie, Daniels, and Benham, for the very effective manner in which they arranged the specimen plants, entered for competition, on the orchestra, with Chrysanthemums dotted here and there in betwixt them, which greatly enhanced the appearance of the hall. The groups were arranged, the Chrysanthemum on one side and the miscellaneous groups on the other of the hall. The cut blooms, fruits and table plants were staged on tables running across the centre of the hall, while the vegetables were in another room off the large hall.

In the open class for miscellaneous groups E. B. Faber, Esq., Belvedere, Harrogate (gardener, Mr. Townsend), was an excellent first with a well-arranged group forming a square, for which in addition to the first prize, the committee awarded him a special Certificate of Merit for artistic arrangement. Raised on rustic corkwork, in the centre of this group was an exceptionally well-grown piece of Cocus weddeliana surrounded by well-coloured Crotons and Orchids. Mr. Taylor, nurseryman, Potternewton, near Leeds, was second. There was a keener competition in the local class for miscellaneous groups. These were arranged to form a semi-circle. L. Clayton, Esq., Oak Hill, Moortown (gardener, Mr. Fleet) was placed first; Mr. J. W. Oxley, Esq., J.P., Spenfield, Headingley (gardener, Mr. Richer), second; and G. R. Portway, Esq., Ashfield Grove, Headingley (gardener, Mr. Edwards), third.

In the Chrysanthemum groups the quality of blooms was a great advance on former years. The first prize was awarded to Mrs. Tetley; the second to Mr. Pettinger, nurseryman, Harrogate; third to M. Kitchen, Esq., Ellerclose, Roundhay (gardener, Mr. Gamble); and the fourth to Miss Lambert, Rose Courts, Headingley (gardener, Mr. Warren).

In the open classes for cut blooms there was a marked increase upon former years in the entries. The Rt. Hon. The Earl of Harrington, Elvaston Castle, Derby (gardener, Mr. G. H. Goodacre) was the most successful in these classes, having gained the Challenge Cup both in the class for eighteen "incurves," and for eighteen Japanese. The latter cup he has won for the second time in succession, consequently he has won it outright this time. There were nine entries in this class, the competition was very keen, the blooms being exceptionally good for so late a date. The Earl of Harrington staged most magnificent blooms in the following varieties:—Mrs. W. H. Lees, two blooms of Edith Tabor, two of Mme. Carnot (one a massive bloom which gained premier prize as being the best Japanese bloom in the show), Mutual Friend, John Seward, Golden Gate, Duke of York, Mrs. H. Weeks, Etoile de Lyon, Jules Chretien, Mr. C. H. Payne, International, Niveus, Rose Wynne, Silver Ring, and Miss Rita Schroeter. C H. Wright. Esq., J.P., Halston Hall, Oswestry (gardener, Mr. Roberts), was second in this class, having staged excellent blooms of the following:—Mme. Carnot, Etoile de Lyon, Primrose League, Thomas Wilkins, Rose Wynne, Viviand Morel, Mrs. C. H. Payne, Mrs. W. H. Lees, Duke of York, Mrs. E. D. Adams, Amos Perry, Mme. Ad. Chatin, Hairy Wonder, L'Isere, W. H. Lincoln, Olive Oclee, and Mons. Gruyer. Mr. J. Backhouse, Beverley, was placed third.

In the class for eighteen "incurves" the Earl of Harrington again took the first place of honour with the following: two blooms of C. H. Curtis, one of which a very fine bloom, gained the premier place as the best "incurve" in the show, two of J. Agate, J. Fulford, W. Tunnington, Empress of India, Golden Empress, two of Princess of Teck, Hero of Stoke Newington, Charles Gibson, Mrs. J. Gardiner, Mrs. S. Coleman, Miss Haggas, Major Bonaffon, Lord Alcester, and Mrs. W. Carpenter. Messrs. Pearson & Sons, Notts, were a good second; and C. H. Wright, Esq, was third. In the class for twelve "incurves," distinct, the Earl of Harrington was again first; the Marquis of Ripon, Studley Royal, Ripon (gardener, Mr. Kneller), second; and C. H. Wright, Esq., third. For twelve Japanese distinct, the Earl of Harrington came first; C. H. Wright, Esq., second, and C. J. Ormerod, Esq., Green Royd, Brighouse (gardener, Mr. Barber), third.

In the local classes for cut blooms, a marked improvement was noticeable; indeed, some of the blooms were almost equal to those in the open classes, which must be a great encouragement to the committee. The principal prize-winners in these classes were Mrs. Bowering, Mrs. Tetley, Sir James Kitson, Bart., and A. T. Walker, Esq. The committee offers here again two Challenge Cups, one for twelve incurves and one for twelve Japanese. In the former class, Mrs. Bowering, Allerton Hall (gardener, Mr. Moore), was first, and therefore winner of the Challenge Cup, with splendid blooms of C. H. Curtis, J. Agate, Mrs. R. C. Kingston, Lord Alcester, Alfred Salter, Golden Empress, Empress of India, John Fulford, M.P. Martignat, R. Bahuant,

Brookleigh Gem, and John Lambert. Sir J. Kitson, Bart., Gledhow Hall (gardener, Mr. Grix), was second; and Mrs. Tetley, third. In the class for twelve Japanese, Mrs. Tetley was first, with Princess Mary, Duke of York, Marie Hoste, Mrs. C. H. Payne, V. Morel, W. Seward, International, M. Gruyer, W. H. Lincoln, Viscountess Hambleden, and Niveus. Mr. Bowering was a close second; and A. T. Walker, Esq., third. For twelve Chrysanthemums, three incurved, three Japs., three reflexed, and three Anemones, Mrs. Bovering was first; Mrs. Tetley, second; and Mr. A. T. Walker, third. For table plants, Primulas and Ferns, Mrs. Bowering and Sir J. Kitson, Bart., were the principal prize-winners.

In the vegetable classes was noticeable an excellent tray of eight varieties from Mrs. Bowering. One of the most pleasing features of the show was an exhibition of Pelargoniums from Messrs. H. Cannell & Sons, Swanley, Kent; and a table of plants and Chrysanthemum blooms from Messrs. Clibran & Son, Altrincham, Manchester. Mrs. Hodgkins showed an exhibit of skeleton leaves. Mr. R. Sydenham, Birmingham, had a display of choice rustic table decorations, made of hollow metal tubes and ornamented to imitate stems of trees, &c., neatly filled with small Ferns and berries. This is really an excellent introduction. The Ichthemic Guano Co., as usual, staged one of their well-known exhibits.

LAW NOTES.

WATER COMPANY'S CHARGES FOR GARDENS.

Before Mr. Montagu Sharpe, and other magistrates, at the Brentford Petty Sessions, on November 30th, Mr. Hugh Powell Davies, a solicitor, summoned the Grand Junction Waterworks Company, in the matter of a dispute between himself and the company in respect to the annual value, for water-rate purposes, of No. 1, Grange Road, Ealing, occupied by him. Mr. F. Low (instructed by Mr. Davies on behalf of the Ealing Water Consumers' Protection Association) appeared for the appellant, and Mr. Ram (instructed by Messrs. Bertram), for the respondent company. The latter claimed to levy a special charge of one guinea a year for a garden supply, and this was a test case to decide the legality of the company's claim.

Two questions—one of law, and one of fact—were placed before the justices for decision by Mr. Low. The most important was what should be included in property assessed for domestic supply. The second was what was the annual value of the property which the justices decided should be included in the assessment? The real point at issue was whether the company had any legal wright to levy a special rate on gardens and another rate for domestic purposes on both house and garden.

In 1885 a special garden charge was imposed by the company, and a Mr. Peal paid this charge and then claimed that his assessment for domestic purposes should be reduced by the annual value of the garden. This claim was allowed by the justices at the time, and the company agreed to drop the special sharge for gardens. The company revived it again, however in 1894 but did not reduce the assessment for domestic purposes in a like ratio.

Mr. Davies had paid the guinea charged for his garden, but claimed that the assessment for domestic supply should be reduced by the value of the garden, which could not participate in that supply, which was paid for separately. The Company's Act Section 49 expressly excludes gardens from domestic supply.

The only case reported bearing on the point was that of the Bristol Waterworks Company *v.* Uren, in 1883. On that occasion the presiding justice decided that the garden was properly included in the assessment for domestic purposes. The Bristol Waterworks Company's Act only excluded those gardens furnished with special taps, pipes and hose from the domestic supply. The present case was entirely different.

Mr. Ram submitted, for the Grand Junction Waterworks Company, that the decision at Bristol should entitle the company to include the garden in the assessment for domestic supply.

The settlement of the case was adjourned, but came on for hearing again when the parties concerned met to conclude the hearing at Westminster Guildhall, on December 5th.

In giving judgement, after hearing further evidence, Mr. Montagu Sharpe said that they had come to the conclusion that no more land should be assessed with the house for a domestic supply of water, than could reasonably be considered a necessary appendage of the same. The reasonable amount of land would have to be decided in each separate case. A portion of the land attached to Mr. Davies' house was not a necessary appendage of it and could not be assessed for water purposes, though it could be rated otherwise. The assessment would therefore be reduced from £100 to £80, the difference being, in the opinion of the Court, the value of the land.

He decreed that the company pay costs, and consented to state a case for a higher court at the request of Mr. Ram.

Obituary.

M. AUGUSTE ADOLPHE LUCIEN TRECUL.—The death is announced on October 17th of this eminent French botanist, at the age of seventy-eight. M. Trécul's work has extended over the last half century, and his communications to various French scientific journals number 154 in the Royal Society's Catalogue. The greater number will be found in the *Annales des Science Naturelles* from 1843 onwards, and in the *Comptes Rendus* of the French *Académie des Science*. They are chiefly concerned with the anatomy and morphology of seed plants. Among the many subjects at which M. Trécul worked we may mention the following—the origin of roots and buds, secondary growth in thicknes in the stem of Dicotyledons, laticiferous vessels and sacs, leaves, the nucleus, chromatoplasts, the origin and structure of starch grains, yeast and fermention. He also published numerous valuable papers on the structure of different members of the Nymphaenceae, and a useful monograph on the Artocarpeae. Treculea, a genus of the latter order, was named in his honour by Decaisne. M. Trécul was a member of the Institute.—*Natural Science, December.*

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

Chrysanthemums for Exhibition Groups.—*George Williams*: The undermentioned varieties will answer your purpose admirably. Dwarf or medium in height are H. L. Sunderbruck, rich yellow, Duchess of York, canary-yellow, Edwin Molyneux, crimson, Emily Silsbury, pure white, G. C. Schwabe, carmine-rose, Mons. Chénon de Léché, rosy-salmon, Madame Ad. Chatin, pure white, Mrs C. Harman Payne, rose, Mephisto, bronzy-yellow, Calvat's Australian Gold, pale golden-yellow, Charles Davis, rosy-bronze, Viviand Morel, rose, Amiral Avellan, rich yellow, John Shrimpton, bright-crimson, Louise, blush-pink, Boule d'Or (Calvat), golden Buff, Col. W. B. Smith, light terra-cotta, Lady Byron, white, Mons. Panckoucke, rich-yellow, Pride of Madford, rosy-amaranth, Viscountess Hambleden delicate-pink, E. S. Trafford, rosy-buff, Eda Prass. blush-pink, and Madame Gustave Henry, white. Tall ones that might be included for the back of the group are Edith Tahor, rich-yellow, and Madame Carnot, pure-white. Both are grand flowers. Striking late and growing them in small pots is a good plan.

Peach and Apricot trees.—*A. G. Ireland*: The present is a good time to buy and plant those trees, while the weather continues open. In fact, we should have advised to plant during the last two weeks of October, and the first two of November. On the north aspect of the wall, we should advise you to plant Morello Cherries or Plums. Peaches and Apricots are quite hardy. Plant them the same depth as they had been in the soil before, firm the soil well about the roots, and then put a good dressing of rank manure over the surface; no other protection will be necessary. Tie up the branches loosely, but do not nail them to the wall till the soil settles. The roots should be spread out evenly and regularly, about 9 in. below the surface. Some good fruit growers advertise in our columns from week to week, and would no doubt supply you with the best if you tell them exactly what you want.

Planting out Chrysanthemums.—*A. T. A. H.*: Planting in the open ground has a tendency to make Chrysanthemums flower later than they would otherwise do. The autumn rains keep them growing later than they would do in pots; and the buds are more backward in setting and swelling up. You would find little or no trouble in keeping up a display during the autumn months, if you cared to do so by commencing with the small, early, decorative varieties, and following on with Soured'Or, Mons. Wm. Holmes, and others of that class. The varieties you mention would probably come in a little later, and the naturally late varieties would follow last of all. Some people do grow a large number belonging to the different sections in the open ground, then lift and pot them up for indoor decoration. In order to encourage early flowering you could lift some about the end of August, and others during September. Lift them with good or fairly good balls of soil and put them into as small pots as you can without interfering too much with the roots. Keep them carefully watered and shade all the early lifted plants from sunshine for a few days, till they get re-established.

Weight of Tomatos.—*X. Y. Z.*: It would be difficult to give a correct average for the whole country or even for England, because methods of culture and treatment vary so. The plants may and do range from 2 ft. to 12 ft. in height. Under bad treatment even the tall plants bear very indifferent crops owing to bad setting. Your 158 plants gave 1,050 lbs. of fruit, making an average of slightly over 6½ lbs. to the plant. We should consider this a very fair average, but not so much as Tomato plants under good cultural treatment are capable of producing. We have seen Tomatos planted out in a cool house, and allowed to run up with a single stem about 10 ft. high, producing more nearly three times the weight of yours. As a rule, however, you may reckon 6 lbs. to 9 lbs. a good crop to take from a plant. Three or four fruits would weigh a pound; but in private establishments, the fruits of the Perfection type often run to half or three-quarters of a pound each. Dwarf plants about 3 ft. high in the open air often produce 4 lbs. to 6 lbs. of fruit though some of it does not ripen.

Eczema and Bulbs.—*R. S. S.*: It is just possible that the potting of Hyacinth bulbs may bring on eczema. All people are not affected alike, however, and it would be entirely wrong to say that "anyone working amongst common garden Hyacinths is subject to eczema." We are never affected by it although we have handled and worked amongst bulbs of a very varied description, including Hyacinths. But as we said, all are not affected alike. For instance, some people get their hands and arms badly affected by the handling of Primula obconica When obliged to handle bulbs you might wear gloves to protect the hands, and thereby determine whether the bulbs are to blame in your case or not.

Utricularia Eckloni.—*G. Russell*: There are three British species of Utricularia, namely, U. vulgaris, U. intermedia and U. minor, as you are doubtless aware. U. Eckloni is, therefore, represented in this country, by plants, however, of a very different habit, seeing that the British species live submerged in water, not amongst the vegetation growing merely on moist soil like U. Eckloni. The seedling Disas you mention are exceedingly interesting, and we hope you will be able to rear and flower them.

Varieties of Chrysanthemums.—*W. Evans*: Of the two you mention, we should say that Thos. Wilkins is the better one. The blooms are large with drooping but compactly arranged deep chrome-yellow florets. Mon. Charles Molin is of a different colour, being of a rich chestnut-red. The crown or early buds, however, give flowers that are pale yellow in the centre. We do not recollect having seen Mrs. Walter Cutting, and therefore conclude that it does not find favour with many growers. The flowers are pale rose, lined with white. Secrétaire-Général Delaire is of a dull rose colour with a straw-yellow reverse, more or less flushed with rose, and, therefore, not what you desire. Neither surface of the incurved florets is very bright.

Le Chrysantheme.—*G. Foster*: At the time we reviewed the book, *Le Chrysanthème, à la Grande Fleur*, by Anatole Cordonnier, there was no English edition of it, and no promise that there would be one. We fear the author did not receive sufficient encouragement to have a translation of it effected.

Names of Plants.—*A. J., W.*: 1, Cymbidium Mastersii; 2, Cypripedium Sedeni; 3, Odontoglossum Rossii majus; 4, Oncidium varicosum.—*A. S.*: 1, Chimonanthus fragrans grandiflorus; 2, Jasminum nudiflorum; 3, Lonicera fragrantissima; 4, Sequoia sempervirens.—*J. Wood*: 1, Selaginella uncinata (not S. caesia); 2, Asplenium bulbiferum minus; 3, Nephrodium decompositum glabellum; 4, Strobilanthes isophyllus; 5, Peristrophe speciosa; 6, Coleonema album.—*J. G. Stone*: a, Adiantum concinnum; b, Adiantum Ghiesbreghtii; c, Adiantum cuneatum Legrandi.—*E. W. M.*: 1, Cotyledon retusa; 2, Cotyledon pulverulenta; 3, Aloe mitraeformis; 4, Gasteria verrucosa.—*F. H.*: Haemanthus coccineus. Yes. It will thrive in a greenhouse kept at less than 45° in winter.

Communications Received. — A. Grigor. — R. Veitch & Son.—A. F. B.—J. Weathers.—L. D.—A. C. R.—W. Herd.—S. M.—A. J. W.—F. N.—George Taylor.—X.—T., Bristol.—R. B.—Scotia.—Reader.—J. S. J.—Amateur.—A. B.—Joe.

TRADE CATALOGUES RECEIVED.

W. ATLEE BURPEE & Co, Philadelphia, Pa., U.S.A.—Preliminary Wholesale Price List of Vegetable Seeds, &c.

OTTO PUTZ, Seed Merchant and Grower, Erfurt, Germany.—Annual Trade Seed List.

DICKSONS, The Nurseries, Chester.—Forest Trees, Ornamental Trees, Evergreens, &c.

Telegrams—"CONSERVATORIES, LONDON." Telephone No. 8246.

Notice to Builders, Seedsmen, Nurserymen, Market Gardeners, Hot Water Fitters, Timber Merchants, and the Trade generally.

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CONDITIONS OF SALE.—Goods are offered subject to being on hand on receipt of reply. Cash to accompany all orders, and prices to be strictly *net* All orders will be executed in rotation, and carefully packed and put on rail, except those otherwise stated.

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GREENHOUSE DEPARTMENT.

Amateur Span-Roof Forcing House.

TENANT'S FIXTURE.

For Cucumbers, Tomatos, Melons, &c.

Everything complete, and ready for erection.

Lot.	Length.	Width.	Height.	Usual Price. Packed on rail.	Sale Price. Packed on rail.
1 to 4	7 ft.	5 ft.	7 ft.	£2 10	£2 0
5 to 7	8 ft.	5 ft.	7 ft.	3 0	2 5
8 to 12	9 ft.	6 ft.	7 ft. 3 in.	3 10	2 10
13 to 15	10 ft.	7 ft.	7 ft. 6 in.	4 10	3 10
16 to 18	12 ft.	8 ft.	8 ft.	5 10	3 15
19 to 21	15 ft.	10 ft.	8 ft. 6 in.	7 15	5 10
22 to 25	20 ft.	10 ft.	9 ft.	10 15	7 10
26 to 30	25 ft.	10 ft.	9 ft.	14 5	10 0
31 to 34	50 ft.	10 ft.	9 ft.	27 0	20 0
35 to 40	100 ft.	10 ft.	9 ft.	45 0	25 0

21-oz. glass for roof 5 per cent. extra.

Amateur Forcing House.

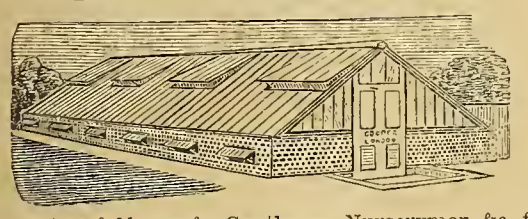
TENANT'S FIXTURE LEAN-TO.

Lot.	Length.	Width.	Height.	Usual Price. Packed on rail.	Sale Price. Packed on rail.
41 to 44	7 ft.	5 ft.	7 ft.	£2 4	£1 16
45 to 49	8 ft.	5 ft.	7 ft.	2 14	2 0
50 to 53	9 ft.	6 ft.	7 ft. 3 in.	3 10	2 5
54 to 58	10 ft.	7 ft.	7 ft. 6 in.	4 5	3 3
59 to 61	12 ft.	8 ft.	8 ft.	5 0	3 7
62 to 65	15 ft.	10 ft.	8 ft. 6 in.	6 15	5 0
66 to 70	20 ft.	10 ft.	9 ft.	10 10	6 15
71 to 74	25 ft.	10 ft.	9 ft.	13 15	9 0
75 to 77	50 ft.	10 ft.	9 ft.	25 5	18 0
78 to 80	100 ft.	10 ft.	9 ft.	40 10	22 10

In ordering, it should be stated at which end door is to be inserted, when facing house from outside.

21-oz. glass for roof 5 per cent. extra.

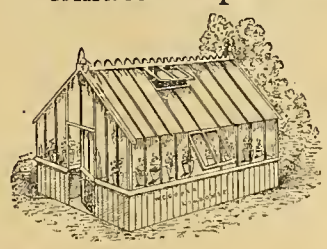
Span-Roof Forcing House.



A most useful house for Gentlemen, Nurserymen, &c., for forcing and growing tomatos, cucumbers, melons, &c. Complete and ready for erecting on brickwork.

Lot.	Leugth.	Width.	Usual Price Packed on rail.	Sale Price Packed on rail.
206 to 309	20 ft.	9 ft.	£8 0 0	£6 0 0
310	30 ft.	9 ft.	11 0 0	9 0 0
311 to 313	40 ft.	9 ft.	15 0 0	12 0 0
314 to 316	60 ft.	9 ft.	22 0 0	18 10 0
317 to 319	100 ft.	9 ft.	35 0 0	25 0 0
320	20 ft.	12 ft.	10 0 0	8 0 0
321	30 ft.	12 ft.	14 0 0	11 10 0
322 to 325	40 ft.	12 ft.	19 0 0	16 0 0
326 to 329	60 ft.	12 ft.	27 0 0	23 0 0
330 to 332	100 ft.	12 ft.	42 0 0	33 0 0
333	20 ft.	14 ft.	13 0 0	11 0 0
334	30 ft.	14 ft.	18 0 0	16 0 0
335 to 337	40 ft.	14 ft.	22 0 0	20 0 0
33 to 341	60 ft.	14 ft.	32 0 0	29 0 0
342 to 346	100 ft.	14 ft.	50 0 0	40 0 0

Amateur 8span-Roof Greenhouse.



TENANT'S FIXTURE.

Complete with ventilators, irons for opening same, door, staging, &c. all ready for erection.

Lot.	Length.	Width.	Height.	Usual Price Packed on rail	Sale Price. Packed on rail.
81 to 89	7 ft.	5 ft.	7 ft.	£2 16	£2 8
90 to 93	8 ft.	5 ft.	7 ft.	3 10	2 18
94 to 99	9 ft.	6 ft.	7 ft. 3 iu.	4 0	3 0
100 to 105	10 ft.	7 ft.	7 ft 6 in.	5 0	4 5
106 to 120	12 ft.	8 ft.	8 ft.	6 0	4 15
121 to 125	15 ft.	10 ft.	8 ft. 6 in.	8 10	7 0
126 to 127	20 ft.	10 ft.	9 ft.	12 0	9 10
128 to 131	25 ft.	10 ft.	9 ft.	16 0	12 0
132 to 136	50 ft.	10 ft.	9 ft.	30 0	23 0
137 to 139	100 ft.	10 ft.	9 ft.	50 0	30 0

21-oz. glass for roof 5 per cent. extra.

Amateur Lean-to Greenhouse.

(No, 5 in list.)

TENANT'S FIXTURE.

Everything complete and ready for erection.

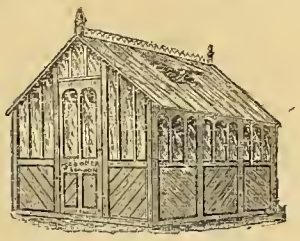
Lot.	Length.	Width.	Height.	Usual Price. Packed on rail.	Sale Price. Packed on rail.
140 to 143	7 ft.	5 ft.	7 ft.	£2 8	£2 0
144 to 148	8 ft.	5 ft.	7 ft.	3 0	2 10
149 to 153	9 ft.	6 ft.	7 ft.	3 10	3 14
154 to 157	10 ft.	7 ft.	7 ft. 6 in.	4 10	3 12
158 to 159	12 ft,	8 ft.	8 ft.	5 10	4 0
160 to 162	15 ft.	10 ft.	8 ft. 6 iu,	8 0	5 18
163 to 165	20 ft.	10 ft.	8 ft. 6 iu.	11 10	8 2
166 to 167	25 ft.	10 ft.	9 ft.	16 10	10 16
168	50 ft.	10 ft.	9 ft.	28 0	20 15
168A	100 ft.	10 ft.	9 ft.	45 0	27 0

21 oz. Glass for roof 5 per cent. extra.

Wheu ordering it should be stated at which end door is required (wheu facing front of house outside). If desired it can be inserted in front for 10s. extra for alterations.

Span-Roof Conservatory.

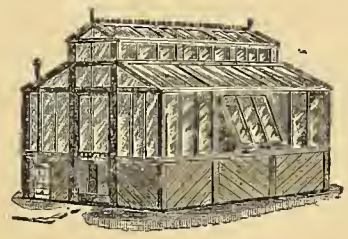
TENANT'S FIXTURE.



Substantially constructed. Everything complete and ready for erection.

Lot.	Length	Width	Usual Price. Packed on rail.	Sale Price Packed on rail.
210	7 ft.	5 ft.	£6 0 0	£5 15 0
211	8 ft.	5 ft.	7 0 0	6 0 0
212 to 213	9 ft.	6 ft.	8 0 0	7 0 0
214	10 ft.	7 ft.	9 0 0	7 15 0
215	10 ft.	8 ft.	10 10 0	9 0 0
216 to 220	12 ft.	8 ft.	12 10 0	11 0 0
221 to 222	15 ft.	10 ft.	18 0 0	16 0 0
223 to 224	18 ft.	10 ft.	21 0 0	18 0 0

Lantern Roof Conservatory.



An elegant and highly-finished structure. Everythiug complete and ready for erection.

Lot.	Length,	Width.	Usual Price. Packed on rail.	Sale Price Packed on rail.
225	10 in.	7 ft.	£15 0 0	£13 0 0
226 to 227	12 ft.	7 ft.	16 0 0	14 0 0
228	15 ft.	9 ft.	20 0 0	17 0 0
229	20 ft.	10 ft.	26 0 0	22 0 0
230	25 ft.	12 ft.	38 0 0	30 0 0

If preferred for brickwork, these houses will be altered free o(charge.

Odd Greenhouses.

These houses are all complete as per list, with doors lock and key, ventilators, irons for opening, staging, glass, &c., perfectly new.

Lot.		Usual Price.	Sale Price.
608	Lean-to Conservatory, 14 ft. by 8 ft.	£10 10	£8 0
609	Span-roof Conservatory, 12 ft. by 8 ft.	9 10	8 0
610	Ditto 18 ft. by 10 ft.	13 0	11 0
611	Span-roof circular light Conservatory 9 ft. by 6 ft.	8 10	7 0
612	Lean-to Forcing House, for 3 ft. brickwork, 20 ft. by 12 ft.	9 10	8 0
613	Leau-to Greenhouse. 15 ft. by 8 ft., door and two ventilators in front	8 0	8 0
614	Lean-to Greenhouse 10 ft. by 5 ft.	6 0	4 0
615	Span-roof Greenhouse 20 ft. by 10 ft.. for 2 ft. ft. 6 in. brickwork	12 0	9 0
616	Span-roof Greenhouse, 30 ft. by 10 ft., portable	22 0	15 0
617	Span-roof Forcing House, for 3 ft. brickwork, 20 ft. by 12 ft.	10 0	7 15
618	Five Cucumber and Tomato Houses, 100 ft. by 11 ft., for brickwork, complete with centre gutters, top ventilators, doors, &c , &c., 21 oz. glass. everything new and complete, ready for erecting. The lot	200 0	100 0
	Or can be had separate at £22 10s. each.		
619	Three Cucnmber Houses, complete as above, 150 ft. by 10 ft. The lot	200 0	100 0
620	One Cucumber House, complete as above 50 ft. by 10 ft.	20 0	12 0
621	Lean-to Greenhouse, for brickwork, 15 ft. by 10 ft.	8 0	6 0
622	Lean-to Greenhouse, 50 ft. by 12 ft., portable, with partition complete	32 0	21 0
623	Three-quarter Span Greenhouse, for brickwork, 30 ft. by 10 ft.	25 0	14 0
624	Span-roof Greenhouse, 60 ft. by 10 ft., with three partitions, makiug a complete range of houses	55 0	32 0
625	Lean-to Greenhouse, 20 ft. by 10 ft., door and two veutilators in front	15 0	9 10
626	Lean-to Greeuhouse, 6 ft. by 5 ft., door in frout	3 5	2 0
627	Lean-to Greenhouse, 14 ft. by 9 ft., for brickwork	7 0	4 10
628	Span roof Forcing House, for brickwork, 15 ft. by 9 ft.	8 0	5 0
628A	Four Span-roof Forcing Houses, each 20 ft. by 9 ft. 6 in., 18 iu. wood work at base instead of brickwork, 21 oz. glass each	10 0	7 10
629	Lean-to Conservatory, 19 ft. 8 in. bv 10 ft.	16 10	12 0
629A	Lean-to Greenhouse, 9 ft. by 6 ft., for brickwork	4 0	2 10

CONTINUED ON NEXT PAGE.

FULL CATALOGUE POST FREE ON APPLICATION.

W. COOPER, Ltd., Horticultural Providers, 755, Old Kent Road, London, S.E.

W. COOPER, Ltd., Tenth Annual Clearance Sale—*continued.*

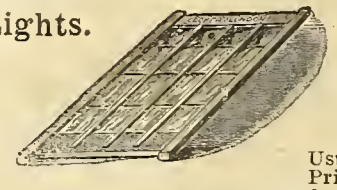
Span-Roof Conservatory.

Substantially and Handsomely Built.

Everything Complete and Ready for Erection.

Lot.	Length.	Width.	Usual Price.	Sale Price.
261	15 ft.	9 ft.	£25	£21
262	20 ft.	12 ft.	42	33
263	25 ft.	14 ft.	65	50
264	30 ft.	15 ft.	80	60
265	40 ft.	16 ft.	100	75

Garden Lights.



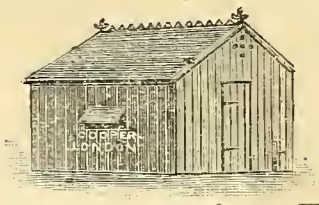
Lot		Usual Price. each—s. d.	Sale Price. s. d.
353 to 370	3 ft. by 2 ft.. painted and glazed	5 0	3 9
371 to 395	4 ft. by 3 ft., „ 21 oz.	7 6	5 9
396 to 503	6 ft. by 4 ft., „ „	10 6	8 0
504	About 30 good sound second hand Lights, glazed 21 oz., stiles 2½ in. by 1¾ in.	10 6	6 0
505	4 Glazed Lights, 6 ft. by 4 ft., 21 oz.. stiles 3 in. by 2 in.	12 0	9 0
506	4 Glazed Lights, 7 ft. 10 in. by 3 ft. 6 in., with iron bar	17 0	12 0
507	12 Glazed Lights, 4 ft.. by 3 ft., stiles 2½ in. by 1⅝ in.	7 6	5 6
508	50 Unglazed Lights, 6 ft. by 4 ft , style 2 in. by 2 in	4 0	3 0
509	6 Unglazed Lights, 1 3 ft. 9 in. by 3 ft 8 in.; 1 2 ft. by 4 ft.; 1 2 ft. 5 in. by 2ft. 6 in.; 1 3 ft. 3 in. by 2 ft. 6 in.; 2 7 ft. 6 in. by 4 ft. (the lot)	25 0	15 0
510	13 Unglazed Lights, 1 6 ft. by 4 ft. 1 in.; 1 5 ft. by 3 ft. 5 in.; 2 5 ft. by 4 ft. 2 in.; 1 4 ft. 4 in. by 4 ft. 3 in.; 2 7 ft. by 1 ft. 6 in.: 1 3 ft 9 in. by 3 ft.; 5 3 ft. 6 in. by 1 ft. 6 in. (the lot)	55 0	40 0
511	6 Old Glazed Lights, 5 ft. by 3 ft. 7 in. (the lot)	40 0	20 0
512	2 „ „ 4 ft. by 3 ft. 10 in. (the lot)	12 0	6 0
513	5 „ „ 8 ft. by 3 ft. 7 in. (the lot)	60 0	30 0
514	1 Old Door (half glass) 6 ft. by 2 ft. 6 in.		3 6
515	1 „ „ 5 ft. 2 in. by 3 ft.	7 0	3 0
515A	50 Unglazed Lights, 3 ft 6 in. by 2 ft. 6 in., suitable for Small Frames and Ventilators each	3 6	2 0

Melon and Cucumber Frames.

Lot		Usual Price. s. d.	Sale Price. s. d.
516 to 525	1 Light Frame, 4 ft. × 3 ft.	18 0	14 0
526 to 534	2 „ 6 ft. × 4 ft.	32 0	25 0
535 to 542	1 „ 6 ft. × 4 ft.	30 0	24 0
543 to 550	2 „ 8 ft. × 6 ft.	54 0	44 0
551 to 553	3 „ 12 ft. × 6 ft.	75 0	58 0
554	Two Second-hand Span-roof Frames, 6 ft. × 4 ft , 2 lights	40 0	20 0

POULTRY APPLIAFCE DEPARTMENT

Moveable Poultry Houses, Span-Roof.



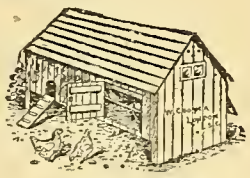
Well and substantially constructed, warranted waterproof, complete with door, ventilator, and slide.

These houses are adaptable for Potting, Tricycle and Coal or Wood Sheds.

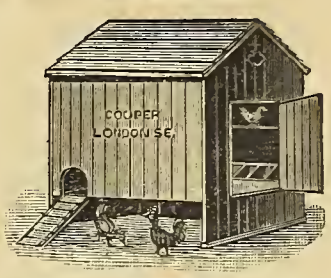
Lot.	Length	Width	Usual Price. s. d.	Sale Price. s. d.
640 to 647	5 ft.	4 ft.	25 0	20 0
648 to 655	6 ft.	4 ft.	30 0	24 0
656 to 666	7 ft.	5 ft.	36 0	27 0
667 to 679	9 ft.	6 ft.	42 0	32 0

The following are extras:—
Nest Boxes, 9d. each. Perches, 1d. per foot.

New Span-Roof Improved Poultry House.



Lot	Length,	Width,	Usual Price.	Sale Price.
680 to 691	4 ft.	4 ft.	30s.	23s.
692 to 697	5 ft.	4 ft.	33s.	25s.
698 to 708	6 ft.	4 ft.	38s.	32s.
709 to 716	7 ft.	5 ft.	45s.	40s.
717 to 725	8 ft.	6 ft.	60s.	45s.



Span-Roof Improved Poultry House.

Lot	Length.	Width.	Usual Price.	Sale Price.
725 to 734	5 ft.	4 ft.	45s.	35s.
735 to 739	6 ft.	4 ft.	50s.	40s.
740 to 748	7 ft	5 ft.	55s.	45s.
749 to 756	9 ft.	6 ft.	63s.	50s.

Nest Boxes.

Lot 810 to 870.

This is the popular method of sitting hens, and should be universally adopted. The bottom is of wire netting, made concave so that no eggs are left uncovered by the hen. It is also a protection against rats burrowing into the nest. These boxes are constructed of thoroughly well-seasoned, tongued, and groved matchboards, painted outside one coat of good oil paint. complete, with handle, size 1 ft. 8 in. high. 1 ft. 4 in. wide, 1 ft. 3 in. deep. Securely packed and put on rail at the following respective prices: Usual price, 4s. each. Sale price 3s. each; 6 for 16s. 6d.; 12 for 30s.; 36 for £3 15s.

Safety Chicken Coop.

These coops are constructed on the most approved principle, and are very neat in appearance. They are made of good, sound, well-seasoned, tongued and grooved matchboards, are fitted with a shutter as a protection against winds, sun, and vermin at night, and are painted outside one coat of oil colour. Securely packed on rail at the following prices: Size—2 ft. wide, 1 ft. 10 in. deep. 1 ft. 10 in. high at front, 1 ft. high at back.

871 to 899 Usual price, 5s. 6d. Sale price, 4s. each; 6 for 22s.; 12 for 40s.; 36 for £5 5s.

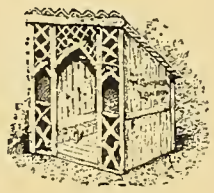
900 to 920 3 ft. moveable wire runs. Usual price, 4s. each extra. Sale price 2s. each.

RUSTIC DEPARTMENT.

Lot 1165.

5 ft. wide, 3 ft. 6 in, deep.

Usual price £4. Sale price. £3 5s.



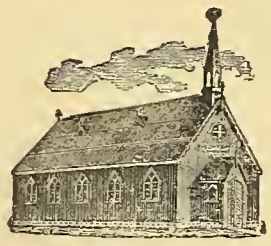
Lot 1159 to 1161.

5 ft. wide 3 ft. 6 in, deep.

Usual price. £4. Sale price £3 5s.

IRON BUILDING DEPARTMENT.

Chapel or Mission Hall.



A Handsome Building, with Organ Chamber, Vestry, and Porch, complete, neat in design and cheap. Ventilation is here supplied through the upper portion of Windows at sides, being made to open and shut; also Ventilators in Roof. A Circular Window hung to swing in each gable end creates a through circulation of air.

Everything complete. Ready for Erecting. Matchlining, Felt, &c.

Lot 1205 40 by 20 Usual Price, £140 Sale Price. £100
„ 1206 60 by 30 „ £270 „ £180

Mission School.

Usual Price.	Sale Price.	Usual Price.	Sale Price.
£10 0 0	£8 0 0	£115 0 0	£85 0 0
£24 0 0	£19 0 0	£170 0 0	£130 0 0
£59 0 0	£45 0 0		

See Sale List.

Cottage, Workshop, or Store Room.

See No. 206 in List.

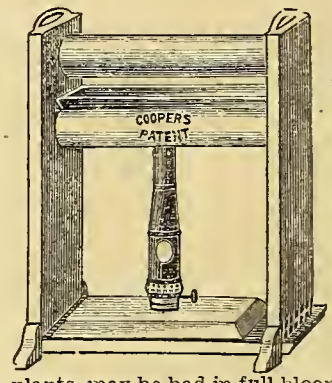
Wooden Framework covered with Corrugated Iron, Suitable for Cottage, Store Room, or Workshop. Made in Sections.

Lot		Usual Price. £ s. d.	Sale Price. £ s. d.
1212	10 ft. by 8 ft. complete	7 0 0	5 0 0
1213	14 ft. by 10 ft. „	11 0 0	8 0 0
1214	18 ft. by 12 ft. „	16 0 0	11 0 0
1215	22 ft. by 14 ft. „	22 0 0	15 0 0

GLASS DEPARTMENT.

		Usual Price. s. d.	Sale Price. s. d.
1248	40 Boxes 200 ft. 4/21 oz., 8 × 6 (each)	21 0	13 0
1249	73 „ „ „ 9 × 7 „	21 0	14 0
1250	110 „ „ „ 10 × 8 „	21 0	14 0
1251	55 „ „ „ 12 × 8 „	21 0	14 6
1252	49 „ „ „ 12 × 9 „	21 0	15 0
1253	312 „ „ „ 12 × 10 „	21 0	15 0
1254	108 „ „ „ 11 × 9 „	21 0	15 0
1255	90 „ „ „ 13 × 9 „	21 0	15 0
1256	110 „ „ „ 14 × 9 „	21 0	15 0
1257	All other sizes in stock, 4/21 oz., per 200 ft. (each)	23 0	21 0
1258	121 Cases, 15 oz., 300 ft. large sizes for cutting up (each)	30 0	25 0
1259	85 „ 21 oz., 200 ft., ditto (each)	30 0	25 0
1260	9 „ 21 oz. ground, large sizes 200 ft. (each)	40 0	27 0
1261	13 „ 15 oz. ground, large sizes 200 ft. (each)	35 0	27 0
1262	15 „ 15 oz. Ruby large sizes, 200 ft. (each)	55 0	38 0
1263	21 „ 15 oz. enamelled ditto, 200 ft. (each)	55 0	40 0
1264	30 „ 15 oz. blue and ruby, 12 × 10, 50 ft. (each)	14 0	7 6
1265	15 „ 15 oz. blue and ruby, 10 × 8, 50 ft. (each)	13 0	7 0
1266	440 Bent Glass Tiles, rolled plate, per doz.	10 6	7 0
1267	10 Ditto ditto 4/15 oz., per doz.	8 6	5 6
1268	1250 ft. boxes 3/15 oz. Picture Glass, 32 × 28 (each)	10 0	7 6
1269	20 50 ft. boxes 3/15 oz. Picture Glass, 20 × 18 (each)	10 0	7 6
1270	9 Boxes 4/21 oz., (3 14 × 14, 2 18 × 16, 2 20 z 14, 2 20 × 14), about 150 ft. in each box, nearly new, been in greenhouse about three months, (each)	18 0	12 0

HEATING APPARATUS DEPARTMENT.



Hygienic Heater.

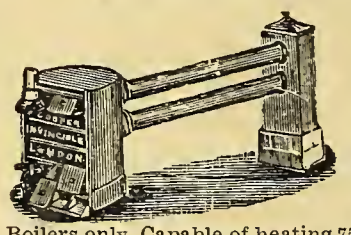
Burning Paraffin or Gas without smoke or smell. These heaters are constructed as a means of Heating by Hot Air without the use of hot water or fires. Its peculiar construction economises the heat generated, so that there is no waste of heat or fuel. There being perfect combustion in this Stove, and nothing whatever injurious to plants, but actually everything conducive to their health, it should be observed that plants may be had in full bloom throughout the severest winter. This cannot be obtained in stoves of other systems. See list for full description.

Lot.	Usual Price.	Sale Price.
1275 to 1277—No. 0	£1 0 0	£0 15 0
1278 to 1283—No. 1	1 10 0	1 0 0
1284 to 1290—No. 2	2 5 0	1 10 0
1291 to 1295—No. 3	3 5 0	2 0 0
1296 to 1297—No. 4	3 10 0	2 5 0
1298 to 1299—No. 5	4 0 0	2 10 0

1300—No. 0 Heater for Gas, Usual Price, 20s. Sale Price 16s.
No. 4 Slightly Damaged, Usual Price, £3 10s. Sale Price, £2.

"Invincible" Hot-Water Apparatus.

Most efficient and cheapest in existence.



Requires no sunk stokehole and no brick setting. Will last all night without attention. Burns house cinders, therefore costs next to nothing for fuel. Any one can fix it. A child can stoke it. Success guaranteed. No. 1 Boilers only, Capable of heating 75 ft. 4 in piping.

Lot 1301 to 1305.
Usual Price, £2 15s.; Sale Price, £2.

Sale prices for Complete Apparatus:—Cost of Complete Apparatus for Greenhouses with 4 in. pipe, flow and return along one side out and fitted; so that if the internal measurement of the Greenhouse is given the Apparatus will be sent completely ready for fixing, an advantage which will be appreciated by all. Securely and carefully packed on rail at the following respective prices: 7 ft. by 5 ft., £2 12s. 6d.; 9 ft. by 6 ft., £2 17s. 6d.; 10 ft. by 7 ft., £3; 12 ft. by 8 ft., £3; 15 ft. by 10 ft., £4; 20 ft. by 10 ft., £5; 25 ft. by 10 ft., £6.

Lot.	Usual Price. s. d.	Sale Price. s. d.
1306 to 1319—Sets of stoking tools	3 0	2 0
1320—About 1½ cwt. of Round Indiarubber Rings, for 4 in. Socket H. W. Pipes, at per lb.	6 0	3 6
1321—About 1 cwt. Square Indiarubber Rings, for 4 in. Expansion Joints, at per lb.	4 6	2 3
1322—Second-hand "Invincible" Boiler, No. 2, equal to new, usual price, £3 10s.; sale price, £2 12s.		

CONTINUED ON PAGE 239. FULL CATALOGUE POST FREE ON APPLICATION.

W. COOPER, Ltd., Horticultural Providers, 755, Old Kent Rd., London, S.E.

FOR PLEASURE AND PROFIT

Fruit NOTHING SO PROFITABLE AND EASY TO GROW.

80 Acres of Saleable Trees.

Roses HUNDREDS of THOUSANDS

Bushes in variety Packing and Carriage Free, for cash with order, 8s. per dozen, 60s. per 100.

ROSES IN POTS From 15s doz

All other Nursery Stock carriage forward

Ornamental Trees, 91 Acres. Four Acres of Glass. A Superb Collection of Herbaceous Plants. Clematis (80,000) from 15s. per doz.

N.B.—Single Plants are sold at slightly increased prices.

Seeds THE BEST PROCURABLE

Lists Free.

GENERAL CATALOGUE.—(Over 170 pages) of Nursery Stock, artistically produced, containing some hundreds of illustrations, and full of valuable information, free on receipt of 3d. for postage. Please mention this paper.

RICHARD SMITH & CO., WORCESTER

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, DECEMBER 19th, 1896.

HOME OF HORTICULTURE.—THE need of a suitable building in a convenient and central place in London has long been felt. A scheme for the accomplishment of this was inaugurated some years ago by the Royal Horticultural Society under the able guidance of Baron Schroder, but owing to financial collapse and commercial depression at the time, the plan had perforce to be abandoned indefinitely. A bold scheme has now been brought forward by Mr. James L. Wood, F. R. H. S., of Oakleigh Park, Whetstone, the details of which will be found in another column. The various issues at stake have been carefully worked out, and numerous suggestions made which, if acted upon, could hardly fail to be carried to a successful issue. We read or hear from time to time of various cities and towns, both at home and abroad, having provided themselves with a horticultural hall, yet London still waits for such a convenience, which on all hands is admitted to be a desideratum and a real want. London, with its immense wealth and teeming population, is well able to build a horticultural hall, or home of horticulture, and all that it wants is combination amongst the numerous important societies to whom a sufficiently large and suitable building, in which to arrange their several annual exhibitions, would be an advantage of the first importance. The scheme promulgated by Mr. Wood makes provision for assistance being rendered by the provinces. In connection with new plants, fruits and flowers, a decision from London is highly appreciated, independently of the competitive and non-competitive exhibits sent up from the provinces. All this is evidence that those at a distance would benefit by the establishment of a home of horticulture in London, so that help can reasonably be expected from the provinces and no doubt cheerfully given by those who are alive to their own interest. The combined influence of the London societies is, however, the primary desideratum.

IRISH GARDENERS' ASSOCIATION.—AT the great Tercentenary Exhibition and Conference, held at Dublin last week to commemorate the introduction of the Potato to Europe, Mr. A. O. Watkins, the president of the association, made a few preliminary remarks concerning the work and object of this young society before calling upon Lord Powerscourt to preside at the Conference. The Gardeners' Association felt proud of having inaugurated that meeting, and an exhibition of Potatos such as had never before been seen in Ireland, probably not in the world. Over and above the mere fact of celebrating the introduction of the Potato and commemorating the name of Sir Walter Raleigh, it was their earnest hope that their people of the future would be benefited by it. By improved cultivation and the raising of new varieties of a disease-resisting nature, they hoped to be able to stamp out the dreaded disease. As the historical and economical uses and diseases of the Potato would be fully dealt with by lecturers and readers of papers, the speaker would not occupy the time concerning that, but explain the objects of the association itself.

The association was established as recently as the spring of 1895, and had prospered ever since, the members numbering between 200 and 300. It was created to constitute a bond of union between all those who follow the profession of gardening in Ireland; and by means of lectures, papers and discussions on any or every horticultural subject to foster mutual improvement and extend the knowledge and love for horticulture in a wide sense. As such associations usually are, it was strictly of a non-political character, and not intended to promulgate the views of any particular sect. Nor was it intended to encourage trades unionism in any way, and had no sympathy with the causing of difficulties to arise between employers and employed. On the other hand they aimed at the encouragement of anything or everything which tended to elevate the dignity of the gardening profession, and give employers confidence in the ability of their gardeners, thereby promoting good feeling and harmony between the respective parties. At present the numerous members of the association were all working harmoniously together with the fullest intention of carrying out these principles to the best of their ability. Encouraged by the successful results of their united efforts hitherto, they felt prepared to go a step further by establishing a Gardeners' Benevolent Fund for Ireland, as a memorial to Sir Walter Raleigh and to commemorate the tercentenary of his introduction of the Potato.

The proceeds of the Conference are to be devoted to the purpose of forming a nucleus to this fund, which they hoped the generosity of the public would help them to augment. Such a fund was very much needed, and he appealed for subscriptions and donations to ensure its establishment. The gardener was subject to the same ills and accidents of life as other people; and his risk was great owing to his having to pursue his vocation through long hours, exposed to all weathers and extremes of temperature. What was worst of all, the emoluments attached to his services were generally very slender; while on the other hand he often had a large family to support, and was consequently unable to lay by a reserve against the proverbial rainy day, or in other words old age and the accidents of life. Whatever sum might be forthcoming, they intended to invest it in reliable securities, and utilise the interest only for the purpose they had in hand. The first use would be to advance relief to members during sickness. The second use was to provide for the funeral expenses on the death of a member, or of his wife. Thirdly, they would grant relief to members in distressed circumstances. The fourth object was to provide a pension for old age.

In all these arrangements, and transactions of the Irish Gardeners' Association, we note a life of activity and vigour that is characteristic of many of the thriving mutual improvement associations that have sprung into existence during the last few years. The Scottish Horticultural Association is another instance of this activity in the Scottish capital.

The Eastbourne Horticultural Society are congratulating themselves on a very successful season, both financially and otherwise. In view of this a more liberal programme is expected for next year

Old leaves on Yuccas.—Judging from the behaviour of Yucca treculeana in the United States, the old and dead leaves are meant by Nature to protect the stems. A plant, which had the old leaves pulled off, died, while another, not treated in that way, lived through the same severe winter.

Royalty at the Cattle Show.—H.R.H. Prince Christian honoured Messrs. Carter & Co., the Queen's Seedsmen, with a prolonged inspection of their large stand. H.R.H. appeared to be greatly interested in the marvellous roots, and the very fine samples of Wheat, Oats, and Barley exhibited by Messrs. Carter. It is some years since the galleries have been honoured with the presence of royalty, and it must be gratifying to Messrs. Carter that they should have been so specially favoured.

Distinguished Lady Gardener.—In consideration of the services rendered to horticulture by the Hon. Alicia Tyssen-Amherst, by her book "The History of Gardening in England," that lady has had conferred upon her the freedom of the Worshipful Company of Gardeners. The ceremony took place at the Grafton Galleries in the presence of the master, Mr. N. N. Sherwood, the Wardens, and Court. It is not the first occasion on which the "gardeners" have had a lady's name upon the rolls, as Miss Dobell, in 1818, and Mrs. Fry, in 1822 were both admitted, although there are no records extant as to the exact reasons.

Mr. P. Weathers, of Isleworth, has been successful in securing the important post of curator of the Manchester Botanical Gardens. The appointment was in the hands of the Corporation of the City, and there were many applicants for the post. Mr. P. Weathers commenced his gardening career in the Royal Gardens, Kew. From Kew he went to Messrs. F. Sander & Co., St. Albans, where he got much insight into quite a new line of work, thereby greatly extending his experience. He afterwards occupied an important position with Messrs. Lewis & Co., of Southgate. Then he became the representative of Messrs. Linden, Brussels, in this country. For some time past he has been carrying on a nursery at Isleworth and leaves that place for Manchester at the New Year.

Sherborne Gardeners' Mutual Improvement Society. The programme and rules for 1896-7, of this society, show us that at the monthly meetings, exhibitions of fruits, flowers, and vegetables are held in addition to an annual show on a much larger scale. The last show held in September was a very successful one. One and sometimes two papers are read at ten of the annual meetings, followed by a discussion. These papers cover a wide range of subjects. Mr. J. Crook, gardener to W. H. Evans, Esq., Forde Abbey, Chard, will read a paper entitled "Can a garden be made effective with Hardy Plants and Annuals only." Mr. Stacey, the Royal Nurseries, Merriott, will deal with "Hardy Shrubs." Mr. G. H. Copp, gardener to Erle Drax, Esq, will take the "The Strawberry" as his subject. "Maidenhair Fern and White Flowers the year Round" will be read by Mr. H. Baker, gardener to Messrs. E. Foot & Son, in January next.

Bournemouth Gardeners' Mutual Improvement Society were favoured on Tuesday, December 1st, by a paper on "Nut-growing in England," by Mr. J. O. Cooper, a well-known cultivator of Nuts and Filberts.

Gardeners' Royal Benevolent Institution.—Lord Rothschild has fixed Wednesday, May 26th next, for the celebration of the 58th Anniversary Festival Dinner of this Institution, which will be held at the Hotel Métropole under his Lordship's presidency.

Flowers for the London Hospitals.—A rumour is afloat of an intention to station authorised persons at the various London termini for the purpose of receiving fresh flowers from dwellers in the suburbs, who may be willing to bring such with them in the morning for the use of the various hospitals. City men, it is thought, would only be too pleased to befriend such an arrangement.

Ayrshire Gardeners' Mutual Improvement Association.—The monthly meeting of this Association was held in the Carrick Street Hall on Thursday evening last, when there was a fair attendance of members—Mr. Thomas Gordon, Ewenfield, presiding. Mr. A. H. Scott, Cambusdoon, read a very instructive paper on "How Plants Feed, and the Chemistry of our Garden Crops," in which he strongly advised young gardeners to study chemistry in connection with their trade as much as they could. The reader illustrated his paper by means of diagrams, which he explained for the benefit of the young members. A long and interesting discussion followed, at the conclusion of which Mr. Scott was accorded a hearty vote of thanks. It was intimated that the next meeting would take place on January 7th, 1897, at half-past seven o'clock, when Mr. Thomas Bryden, Dennison Nursery, would read a paper on "Hardy Climbers." A vote of thanks to the Chairman brought the meeting to a close.

Death of M. Charles Van Geert.—With deep regret we learn of the death on the 12th inst. of M. Charles-Prosper Van Geert, of Antwerp, in his 79th year. M. Van Geert, who was one of the oldest and most distinguished of Belgian Horticulturists, was born at Ghent in 1817, and was a brother of the late M. Auguste Van Geert, so well known in his time as one of the leading nurserymen of the old Flemish city. In early life M. Charles Van Geert settled down to business in Antwerp, and carried on much of the tree planting and landscape gardening which makes the latter port so interesting to Horticultural visitors. He was a chevalier of the Leopold Order, for many years a member of the municipality of Antwerp, a member of the Council of the Belgian Royal Society of Horticulture, and a corresponding member of numerous learned sccieties. The personality of M. Van Geert was singularly attractive, and gained for him the warm personal esteem and regard of all who knew him. He has passed away after suffering a long and painful illness, and we are sure that the warmest sympathy will be felt for the family in their bereavement by all his friends in this country.

Ealing Gardeners' Society.—On the 8th inst., at the Victoria Buildings, Ealing, Mr. J. Hudson, of Gunnersbury House, Acton, read a paper on "Apples and Pears," to a large and appreciative audience, which was presided over by S. Arthur Sewell, Esq., F.R.H.S., the genial chairman of the society. Mr. Hudson gave a most exhaustive account of the ways which lead to success, his own manner and method of cultivation, and a long selective list of varieties which he had obtained from various sources. Mr. Hudson premised his remarks by the statement that science should be the stock on which culture is grafted, and then success would be almost sure to follow. He gave it as his opinion that Cox's Orange Pippin was the prince of dessert Apples, while Doyenné du Comice occupied the same position among Pears. Mr. Hudson also gave some hints concerning gathering, preserving, and cooking, and otherwise afforded a variety of information which had been acquired by long observation and experiences. The exhibitors of Apples and Pears were Messrs. Bridges, R. Green, Edwards, Cox, and Woods. Other exhibits came from Messrs. Cottrell, Frost and C. B. Green, the former staging Cattleya labiata and Oncidium tigrinum, and the latter Chrysanthemums Good Gracious, and Rose Wynne, respectively.

The Small Tortoise-shell Butterfly seems to have forgotten the season of the year. A fine specimen of it was caught the other week in Tollington Park, about 4 miles from Charing Cross.

Bistol Amateur Horticultural Society held its annual general meeting on the evening of Wednesday, December 2nd, Mr. T. B. Sibly presiding, when the prizes won at the monthly and annual shows were given to their respective recipients. The report of the committee showed a highly gratifying increase in the membership. The entries at the Chrysanthemum show were also said to be greatly augmented. At the election of officers Mr. E. M. Dyer was elected president, and Mr. E. G. Machon, and Mr. E. Melville were re-elected treasurer and secretary respectively. Various gentlemen were likewise chosen to make good the vacancies on the committee.

Spring Flower Show for Cornwall.—In response to an invitation issued by the Hon. J. Boscawen, and the Rev. A. T. Boscawen, a meeting was recently held at Truro to make arrangements for a Daffodil show to be held at Truro in the spring of 1897. The Mayor, Mr. Dorrington, presided. It was decided that the show should last over two days. Mr. J. C. Williams, Caerhayes, was elected president, and Mr. T. A. Dorrien Smith, Scilly, vice-president. The Hon. J. Boscawen will discharge the duties of secretary and treasurer.

Montrose Chrysanthemum Show.—The good people of Montrose have signalised 1896 by holding a most successful Chyrsanthemum, fruit, and vegetable show in the Guildhall, during the last week in November. This exhibition was the first of its kind that has taken place for fourteen years, and in view of the success that attended it, it is hoped that it may, for the future, constitute an annual feature. The entries. it is true, were not too numerous, but they were strong in quality. Mr. T. Methven, Links House, was placed first for twelve Japs. Mr. Thomas Ness, Rossie Castle Gardens, had the best collection of Apples, and Mr. W. Douglas the best Black and White Grapes. Amateurs were well represented.

Tunbridge Wells Gardeners' Association.—Mr. A. Charlton, the president of this association took the chair on Wednesday, December 10th at the annual dinner. After the customary loyal toasts had been honoured, at the chairman's invitation, Mr. E. Charlton proposed "continued success to their society." He briefly touched upon the readiness with which gardeners communicated to each other the results of their experience, and the meetings of such associations as theirs, afforded suitable occasions for the interchange of such experiences. The chairman briefly responded. One of the most important events of the evening was the presentation to Mr. Grengoe, of a handsomely bound volume of travels as a recognition of the value of the services he had rendered to the society.

The Royal Caledonian Horticultural Society held its annual meeting on Thursday, December 3rd, in Dowell's Rooms, Edinburgh, Mr. David Thompson presiding. The hon. treasurer, Mr. Fraser, submitted the report and balance sheet up to November 30th. The receipts had been £1,188 10s. 9d., and the expenditure £1,107 15s. 3d., leeving a balance of £80 15s. 6d. The funds invested up to November 30th, 1895, were £1,046 5s., and by November 30th, 1896, they had increased to £1,137 15s. 3d. Mr. Malcolm Dunn moved the formal adoption of the report, saying that it was very satisfactory to find that the old society could still weather it to the tune of nearly £100 a year. Mr. A. Milne seconded, and stated that the Royal Caledonian did not exist specially to make money, but to advance the interests of horticulture. The Marquis of Lothian was re-appointed president, whilst Mr. C. W. Cowan, Valleyfield, was chosen to fill the post of vice-president rendered vacant by the retirement of Sir Charles Tennant. Mr. Murray, Blackford, was chosen to represent the amateur element upon the council, whilst Mr. P. M'Intyre was elected as a gardener member of the same body. Mr. Neil Fraser still continues the duties of hon. treasurer. The chairman alluded to the late death of Mr. W. Young, who had for a long time been assistant secretary of the society, and moved that there should be recorded upon the minutes a testimony of their appreciation of his services. A committee was appointed to see to the erection of a tombstone over Mr. Young's grave.

Platform Gardens on the Midland Railway.—A sum of £200 is offered in prizes by the Midland Railway Company for the best kept and most attractive platform gardens, and the awards for the past summer have lately been officially announced. The first prize has again been won by the station-master at Matlock Bath. Second honours have gone to the stationmaster at Wickwar, and the third award goes to Cardington.

Eastbourne Horticulturists.—The fifteenth annual dinner of this society, held at the Queen's Hotel, Eastbourne, was presided over by the president, Mr. George Boulton. The Mayor (Alderman J. A. Skinner), and several members of the corporation attended. In proposing "success to the society," Mr. Standen Triggs referred to the chairman as the mainstay of the institution. It had been decided to discontinue the spring show owing to the lack of funds, and he thought that taking all things into consideration this was a wise conclusion.

National Chrysanthemum Society.—The gleanings of the season came up before the floral committee of the above society on the occasion of the last meeting of the year. Mr. W. Wells submitted cut blooms of a very pretty single variety, Disraeli, which received a "commended." The florets are long and narrow, and bright primrose-yellow in hue. The plant is said to be dwarf, barely exceeding 2 ft. in height, and very floriferous. It should prove a favourite. Messrs. Cannell & Sons, Swanley, sent a very distinct lilac-coloured decorative variety classed as a Japanese pompon, and named Midget. Some large blooms of the White Sport Florence Chandler came from Mr. Chandler, Wyn Park, Northend, but they were passed. Mr. P. Ladds, Swanley, Kent, had blooms of Christmas Gold, a large Japanese incurved late form exhibiting a rich shade of golden yellow, and said to be a great favourite in Covent Garden. The chief defect of this variety, however, is the weakness of its flower stems. After the Chrysanthemums had received attention, the secretary, Mr. R. Dean, submitted a list of dates for the meetings of the floral committee next year, the 7th September being the date of the first, the others being arranged to take place nearly weekly through October and November, with the exception of the week set apart for the great show. Two meetings were also proposed for December. The floral committee elected not to deal with these fixtures on that occasion.

Smithfield Show.—The gallery of the Agricultural Hall was again crowded with the stands of seedsmen, nurserymen, implement makers, and manure merchants last week. Messrs. Sutton & Sons, Reading, displayed huge banks of mangels labelled as "grown by Lord Wantage at Lockinge," quantities of Sutton's Giant White Belgian Carrot, and their disease-resisting Potatos. Messrs. Carter's fine stand displayed samples of Swedes, Onions, Potatos, Carrots, Peas, &c., grown presumably from their well-known seeds. Messrs. Ed. Webb & Sons, Stourbridge, again filled their grand erection with splendid samples of appropriate growths. Messrs. Dicksons, of Chester, included a collection of Apples gathered from young bearing trees, with handy specimens of Quicks, Forest Trees, &c. Messrs. Jarman & Co. submitted Mangels, Parsnips, Turnips, Onions, and specimens of their New Crimson King Apple. Messrs. Harrison & Sons, Leicester, staged large quantities of vegetables, and some neatly arranged specimens of dried grasses. Mr. John K. King attracted attention to his exhibit by announcements that his roots were not forced specimens, but fair field culture. Messrs. Fidler & Sons, of Reading and Mr. A. Findlay, of Markinch, confined their attention to Potatos; Mr. W. Horne, Cliffe, to Apple trees, and fruit; Mr. B. Wells, Crawley, to fruit; and Messrs. Thos. Kennedy & Co., Dumfries, to forest trees. Agricultural manures were represented by Mr. Wm Colchester, Ipswich, with some fine Potato tubers, said to be grown by Naylor Mearns, Esq., Outwell, Norwich, and specimens of Inch's Purple Top Swede. Mr. Andrew Potter filled a corner of the Berner's Hall with poultry-houses, hose, roofing felt, galvanised sheets, horse-clothing, &c., from his branch works at Reading. Mr. Thomas Mellonie, Ipswich, tendered a sample of pure fish salt as a good manure for growing Cabbages, Turnips, &c., in light soils. Messrs. Gaymer & Sons, Attleborough, had their usual table of cider and Apples.

PEOPLE I HAVE MET.

MR. THOS. LUNT.

MR. LUNT's name is familiar to the majority of my readers because of the frequency with which it is associated with the prize lists at the various shows; but the subject of this sketch has a host of personal friends, who know him not only to be an excellent competitor, but a rare good example of his race.

MR. THOS. LUNT.

Born in Ardgowan, in Renfrewshire, of English parents, who still reside there, Mr. Lunt owes to his father his early instruction in horticulture, for he was apprenticed with him at Ardgowan, where, for so many years, Mr. T. Lunt, sen. has superintended the gardens of Sir R. Shaw Stewart, Bart. Then Lunt *pere* sent his son to the famous Dalkeith establishment, and he successively passed on through useful years at Thorsby, Mentmore, and Crichel. It was nine years ago when Mr. Lunt, jun. received his present appointment at the old family seat of the Stirlings of Keir. The estate is situate in Perthshire, near Bridge of Allan, Dunblane, and the gardens themselves contain some 45 acres walled in, of which the pleasure grounds, kitchen garden, hot-houses, &c., find ample work for a considerable staff under the direction of Mr. Lunt. For close upon six years as an exhibitor of foliage plants, Peaches, Nectarines, and Cyclamen, he has achieved a great fame, particularly at the last International Show at Edinburgh, four years back. He has since added considerably to his list of achievements in the high position he has taken up, and successfully maintained as an exhibitor in the front rank classes for cut blooms of Chrysanthemums; his recent notable entries at Glasgow and Edinburgh affording ample evidence of high cultural skill.

Mr. Lunt married, in 1888, Miss Thomas, of Woodford, Essex, and that lady is as enthusiastic as himself in all that appertains to horticulture, and delights to visit the Edinburgh shows with the two charming youngsters, of whom both father and mother are equally proud.

Mr Lunt's cheery, good-natured manner, and the kindliness with which he is always ready to extend the principles of good fellowship commend him as one of the best, which indeed he is.—*Gyp*.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned Chrysanthemum received a First-class Certificate at the meeting of the Floral Committee of the National Chrysanthemum Society, at the Royal Aquarium, on December 9th.

KING OF ORANGE.—A medium-sized incurved bloom of fair depth, old gold in colour, the lower florets being suffused and striated with bronzy chesnut. The bloom fills up well in the centre, as the florets are of great length. T. W. Flight, Esq., Cornstiles, Twyford, Hants.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cattleya labiata superba, *Nov var.*—Some weeks ago, when Chrysanthemums were monopolising all our space, we noted the above grand variety in the collection of R. I. Measures, Esq., Cambridge Lodge, Flodden Road, Camberwell. The flowers measured 7¼ in. across each way, and were massive in appearance. The sepals were of a deep rose, and the petals, similar in colour, folded back, widely outspread, of great breadth and prepossessing. The intense crimson, orbicular, and wavy lamina of the lip measured 2½ in. across. The margins were lilac, and two pale blotches ornamented the throat, while the crimson was continued down the centre to the base of the tube. On the whole the variety strongly resembled an autumn-flowering C. Warneri in colour. It came out of one of Messrs. Linden's importations. Mr. H. Chapman, the gardener, places great value on it, and that not without reason.

Oncidium Forbesii.—Some flowers of a magnificent form of this species have been sent us by Mr. Alexander Grigor, gardener to Alex. O. Gill, Esq., Fairfield, Aberdeen. He also sent a bloom of an inferior variety grown in the neighbourhood, and the contrast was great. The flowers of the large form measured 2¾ in. across the petals, being slightly larger than the recorded size, but agreeing in colour, and scarcely warranting a new name. The whole flower was of a glossy, shining, chestnut-red, and the margins of the petals and lip beautifully marbled with irregular blotches of the same hue on a yellow ground. They were also beautifully undulated at the margins. This fine form was recently imported, and the spike carried fifteen of these large and finely formed flowers. The owner and the grower may well be proud of this fine form. The inferior flower only measured 2 in. across, and by comparison was of a pale dull chestnut-red.

FAMOUS GARDENS ABROAD AND AT HOME.

At a meeting of the Devon and Exeter Gardeners' Association, in the Guildhall, Exeter, on the 2nd inst., Mr. F. W. Meyer, landscape gardener to Messrs. R. Veitch and Son, Exeter, gave a most interesting lecture on this subject, illustrated by about 100 lime-light views. The lantern threw pictures about 12 ft. in diameter on the screen. Amongst ancient gardens were excellent reproductions of Egyptian gardens, the hanging gardens of Babylon, Roman gardens, and the glacier garden at Lucerne. The latter was formed by a prehistoric glacier, and is well-known to geologists. Mr. Meyer then passed on to modern gardens, and remarked that because he presented them with numerous pictures of foreign gardens his hearers must not infer that English gardens were less beautiful. He merely presented them for the sake of comparison, because they were less generally known in this country. About 12 views of Japanese and Chinese gardens were then given, followed by views from Jerusalem, India, Madeira, and Italy. Some of Nature's gardens, amongst the peaks of Switzerland, were thrown on the screen. Gardens of Paris and the famous gardens at Versailles, with their artificial adornments, were well represented. Germany was well represented by views from the Berlin Exhibition of 1896, the public gardens of Berlin, Cologne, Wiesbaden, and Frankfort. The celebrated Palm gardens of the latter place were illustrated by several fine pictures; and Mr. Meyer said they were some of the most beautiful he had seen on account of the happy way with which their designer, Mr. Siesmeyer, had combined the regular and irregular style of landscape gardening. English gardens were then represented by 22 pictures, including views of Her Majesty's private grounds at Buckingham Palace and Virginia Water. Other views were of Hampton Court, Crystal Palace, London parks, Kew Gardens, Sefton Park, Liverpool, Birkenhead Park, Chatsworth, and Tresco Abbey in the Scilly Isles. The interior of the conservatory of Col. Halford Thompson, East Cliff, Teignmouth, was thrown on the screen and described as famous, in the sense that it was possibly the only structure of its kind filled with plants grown entirely in Jadoo fibre. The Devon and Exeter gardeners were then entertained with a view of themselves as they appeared as the guests of Col. Halford Thompson during their summer outing last July. Some of the gardens laid out by Mr. Meyer for Messrs. R. Veitch and Son were then shown on the screen. Mr. A. Hope proposed a vote of thanks to Mr. J. I. Pengelly for assisting with the lantern, and other votes of thanks brought a most interesting meeting to a close.

OUR GARDENING CHARITIES.

DURING the past few weeks much has been written as to the best way of commemorating the sixtieth year of Her Majesty's reign from a gardener's and a gardening point of view.

Undoubtedly a horticultural hall in London is a much needed establishment, and the more so if it was arranged so that gardeners, when going to London, could find good hotel accommodation at a moderate charge; and on show days arrangement should be made for a luncheon at a moderate cost. This would afford gardeners and all those connected with horticulture an opportunity of meeting their friends, and form a connecting link amongst horticulturists generally.

I could name several other benefits; but it is on behalf of the gardening charities that I am thinking just now. If such a thing could be obtained as a horticultural hall, what a splendid place for holding the annual meeting of these charities, as there are many gardeners from the country who would often attend these meetings were it not for the obstruction of hotel accommodation. We want a horticultural club on a lower grade so as to meet the wants and the pocket of the working gardener.

Should he not be able to scale as high as a horticultural hall, there is one way whereby every gardener (let his position be what it may) could help to commemorate Her Majesty's sixtieth year of reign, namely, by making a strong effort to give what he can afford and by collecting from others with whom he is acquainted. I venture to think every gardener (let his position be what it may) has some opportunities of helping on the funds of these institutions. It often occurs to me that gardeners have many openings so that they could bring these institutions before the flower-loving public.

It would be a good thing in many places if the gardeners would have a collecting card or box in the gardens, and whenever anyone wished to look round the place, before they leave, make a point of introducing the card or box; or whenever anyone wanted a few plants or any favour, the gardener might make a point not to give unless the visitor put some coin into the box. In some country places this would be a good method, as the gardener gets these callers often from the tenants on the estate, and many owners are only too pleased that gardeners should give such surplus to their tenants rather than throw it away. The owner of the establishment under my care takes this view of the matter.

I have resolved to adopt either the card or the box during the coming year. I may add that I shall show it to any brother gardener or member of the craft should he show his face inside of this garden, so that I may catch his offering in the event he may not have a box at home.

There is another way that may be adopted with good results. Every gardeners' mutual society might make a point of having collections at one or more meetings each year, at the close of the meeting in aid of these charities; or they might have an open night, allowing the public to be admitted free or by a small payment, or having a collection at the close. I have suggested this to several societies for the coming year, and to one in this neighbourhood. I have offered to give them a lecture, am set down for paying my own expenses, and have a considerable distance to go by rail, providing they will make it an open night. I think all these meetings should be open to the public by payment of an admittance fee for the evening.

It is gratifying to see how much is raised by the sale of flowers, &c., at flower shows, and much more could be done if those for whom these charities are for, would but make a larger effort to assist them in small ways. During the past summer, I was astonished at the indifference many gardeners showed toward these institutions, when I was at a flower show and had resolved to sell my flowers, &c., in aid of the Royal Gardeners' Orphan Fund, at the

close. There was a good number of gardeners exhibiting. I made a point of acquainting them with what I was doing, intimating to them I should be glad of their assistance, but was disappointed when *not one* would give a helping hand. I consoled myself by hoping they might do so another year, as this was the first time it had ever been tried in this neighbourhood, and if I only raised a few shillings and set them an example, then it was a step in the right direction.

Few people are called upon so much as gardeners, &c., to assist at harvest and other festivals, and to give flowers, &c., to it; but how seldom does one ever see a collection made for the gardening charities? This is to be regretted; but gardeners should act accordingly, and assist as much as possible when asked to do so.—*J. C., Chard.*

A NEW VARIETY OF THUYA ORIENTALIS.

T. ORIENTALIS FALCATA LUTEA.

GROWING at Southend, in Essex, is a very distinct and beautiful variety of the Chinese Arbor Vitae, to which I have affixed the above name. It is of neat, pyramidal habit, with comparatively short and lithe branches, the foliage differing in no way from that of T. orientalis falcata except in colour, this being of a rich, subdued yellow, whereas that of the parent is a dark, almost sombre green. This colouring extends not only to the foliage in every part of the shrub, but to the bark of the branches as well. The cones are larger than those of the parent, being fully 1 in. long, and are rendered curiously conspicuous by reason of the sickle-shaped appendage to each of the scales. The latter resemble nothing so much as the fangs of a tooth. Already there is ample confusion amongst the many forms of the Eastern Arbor Vitae, but the present is so distinct from every other that there is just reason for bringing it prominently under notice.—*A. D. Webster.*

CLASSIFICATION OF CHRYSANTHEMUMS.

(*Concluded from p.* 235.)

IN submitting the proposed classification to this conference in accordance with the wishes of the society's committee, I have carefully avoided disturbing recognised classes, but instead have endeavoured to formulate from the materials at command a classification that shall possess scientific exactitude, and be generally acted upon and readily understood by all who have a practical acquaintance with the Chrysanthemum.

The suggested classes are as follows:—

1. INCURVED.—The incurved varieties represent in the matter of form the highest degree of perfection to which the Chrysanthemum has been brought, and the perfect bloom does not require the trained eye for the full appreciation of its beauties. The incurved bloom should be as nearly globular as possible; the florets broad or of medium breadth, with perfectly smooth margins and entire apex, rounded or passing to a point, and to be finely incurved and so closely and regularly arranged as to form a solid ball; the colour to be clear and decisive. In determining the relative merits of incurved Chrysanthemums when placed upon the exhibition stage, flatness of the blooms, irregularity of the florets, hollow centres, weakness of colour, and want of freshness, are serious defects which should be given full consideration by the judges in making their awards.

2. JAPANESE.—In this class we group all the large-flowered varieties with blooms remarkable for their irregular and fantastic form; and as these evince so great a diversity of character it is practically impossible to give a definition that would apply with any degree of exactitude to any considerable proportion of them; nor is it desirable to mould them according to any set of rules, as one of their most valuable attributes is the great variety in form as well as colour afforded by the blooms of the varieties belonging to the section. The blooms of the Japanese Chrysanthemums should be of medium or large size, and more or less irregular in form; the florets may be broad or thread-like, or of any breadth between these extremes. They may be entire or divided one or more times, drooping, horizontal, erect, or incurving; but there should not be any great difference in the size or form of the florets of any one bloom; the colour should be pure in the case of the white varieties, clear in the light shades, and rich and effective in the high-coloured forms. Size of bloom according to the respective varieties; fulness, uniformity in the size and shape of the florets; and purity or brightness of colour are merits; and extreme regularity in the arrangement of the florets, coarseness, confused or thin blooms, and ineffective colouring are defects.

3. JAPANESE INCURVED.—The varieties forming this section are distinguished from the typical Japanese by the incurving of the florets. The blooms of the Japanese incurved should be of large size, globular in outline and have florets, narrow or of great breadth, and irregularly incurving. In the varieties of this section, depth as well as diameter of bloom is of importance, although less so than in the case of the incurved; but like the blooms of these the whole of the florets should incurve, the incurving of a few of those in the centre not being sufficient to entitle the variety to a place in the section. Large size, without coarseness, effectiveness of colouring, and well incurved florets are merits; and the reflexing of the florets, whether from age or any other cause, thinness and want of brightness, are defects. For the present the varieties properly belonging to this section are admissable in all classes for Japanese, unless special classes are provided for them, in which case, provided it is desired to exclude them from the other classes, there should be a stipulation to that effect in the schedule.

4. LARGE REFLEXED.—The varieties belonging to this class should have flowers that are more or less circular in outline, and with regularly-arranged florets. The blooms of the reflexed should be from medium to large, perfectly circular at the circumference, and with high centre; the florets may be narrow or broad, but should have a regular margin and an entire apex, and regularly reflex, the colour to be clear and decisive. Evenness of outline, regularity in the arrangement of the florets, are merits; and irregularity, whether in the outline or the florets, or hollow centre and dulness of colour, are defects.

5. LARGE ANEMONE-FLOWERED.—These comprise a very distinct and extremely beautiful class, and they should on all occasions be kept quite distinct from their more showy, but less refined, rivals the Japanese Anemones. The Anemone Chrysanthemums, without respect to class, consist of two distinct sets of florets—one strap-like, drooping or spreading out horizontally, and known as the ray florets, and forming the border; and the other quilled, and forming the cushion or disc. In the case of the Large Anemone-flowered, the ray florets should be broad, and so regularly arranged as to form an even and perfectly circular outline, and clear or rich in colour; and quilled florets so arranged as to form a hemispherical cushion-like centre. Regularity of the ray florets, high centre, and bright colouring are merits; and unevenness in the outline, hollowness in the centre, and in effective colouring are defects.

6. JAPANESE ANEMONES.—These as in the ordinary type of Japanese have blooms distinguished by their large-size, fantastic form, and effective colourings. In the Japanese Anemone Chrysanthemum the centre should be full, but not necessarily hemispherical, as in the Large Anemone-flowered; and the ray florets of varying breadth, short or of considerable length, drooping or horizontal, curled or straight, but more or less irregularly arranged. The irregularity of the ray florets is one of the most distinctive characteristics of the section; and it should be distinctly understood that roughness in a Large Anemone-flowered does not justify it having a place in this section, of which elegance is one of its most distinctive characteristics.

7. HAIRY OR HIRSUTE.—Though the varieties having blooms with glandular hairs on the back of the florets belong almost exclusively to the Japanese sections, it does not follow that this class should be limited to them. On the contrary, all varieties, of which the flowers are constantly hirsute, are admissible. The blooms, therefore, may be incurved, or reflexed, or fantastic in form, have Anemone centres or not; but they must be constantly, in a greater or less degree, furnished with glandular hairs on the back or reverse of the florets, and the profusion of these should be regarded as one of the chief points of merit.

8. POMPON.—The small-flowered or pompon Chrysanthemums are so valuable for various purposes, that any tendency to excessive size relatively speaking, or coarseness, should be effectually checked The pompon Chrysanthemum may have blooms rather flat or globular, and the florets may be flat, fluted, or quilled, spreading out horizontally, erect, or incurving; but the blooms should be neat, and not exceeding 2 in. in diameter.

9. FRINGED POMPON.—In this section the distinguishing characteristic is the division in the florets, which, instead of being entire as in the typical pompon, may be fimbriated at the margin or deeply cut. In all other particulars the varieties belonging to the section agree with the typical forms, and they may be shown with them unless there are stipulations in the schedule to the contrary.

10. POMPON ANEMONES.—These, as in the case of the pompons, have a dwarf habit, small foliage, and neat blooms; but they differ from them in the blooms consisting of two distinct types of florets. The pompon Anemone is a miniature counterpart of of the Large Anemone-flowered. The ray florets should be flat and regularly arranged, forming a complete circle, the disc full and hemispherical, and the colour clear and decisive. Irregularity in the ray florets and a low cushion are serious defects.

11. LARGE-FLOWERED SINGLES.—The single varieties are rapidly acquiring importance, and the diversity in the size of the blooms has rendered it necessary to form them into two groups, the first group to comprise those varieties which have blooms exceeding 3 in. in diameter and large foliage. The blooms of the large-flowered singles should be not less than 3 in. in diameter under ordinary culture, and contain not more than two rows of ray florets; the latter may be long or short, drooping, horizontal, or incurving, and regular or irregular in arrangement, while the disc florets must not be sufficiently raised to form a cushion in the centre.

12. POMPON SINGLES.—Varieties to be admissible in this class should have the short sturdy habit and the small foliage characteristic of the Pompons and the Pompon Anemones. The blooms of the Pompon Singles should not exceed 3 in. in diameter when grown under high culture; they should not have more than two rows of ray florets, and these should be regularly arranged and perfectly flat; the disc must not be raised or unduly prominent. In determining whether a single variety belongs to this or the section immediately preceeding it, the size and character of the foliage should be taken into account. —*G. Gordon.*

BEDINGTON, CARSHALTON, AND WALLINGTON HORTICULTURAL SOCIETY.

THE annual general meeting of the members of the above society was held at the Committee Room, in the Public Hall, Carshalton, on Dec. 1st. Mr. William Brown presided over a good attendance. A letter was read from A. H. Smee, Esq., stating his inability to attend. The annual report was then read, and gave great satisfaction, touching upon the work accomplished for the year. The number of visitors paying for admission to the last show was upwards of 8,000, whilst the entries for exhibits totalled 700. The competition of gardens and allotments had proved a signal success, a very high standard of merit having been attained by the cultivators. The Bronze Banksian Medal, presented by the council of the Royal Horticultural Society to the cottager winning most money in prizes, had been won by Mr. Harvey Hopkins. A conference had been held upon "the management of poultry," presided over by A. H. Smee, Esq, and had proved a popular feature. The athletic sports, too, had proved a very great attraction. The committee felt that their best thanks were due to Capt. J. W. B. F. Taylor for the loan of Carshalton Park for the use of their show. An honorarium of 10 guineas was voted to Mr. G. W. Cummins, the painstaking hon. secretary. This Mr. Cummins refused to accept, however, saying that he did his work for the love of the thing, and should therefore leave the money in the society's funds.

The balance sheet was next presented, which showed £345 7s. 4d. as the totality of receipts, the expenditure amounting to £296 8s. 6d., the remainder being left as balance in the hands of the secretary and treasurer after £40 had been paid to the reserve fund.

The election of officers was then proceeded with. Mr. H. Cosmo Bonsor, M.P., was unanimously called to the presidential chair. The vice-presidents were again returned, with the addition of Mr. E. Cobb, to their number. Mr. Lee Clarke was elected to the post of treasurer vice Mr. W. J. Baker, resigned. Mr. G. W. Cummins continues the secretarial duties, which he has hitherto so ably performed. The general, the sports, and the poultry committees were re-elected *en bloc.*

Mr. C. P. Lovelock moved that a dinner or social gathering of some kind should be held, as he believed that such a departure would be the means of popularising the society. On this gentleman's motion a committee of six was appointed to arrange matters.

TWO GOOD VEGETABLES.

When cultivators meet with really good improved kinds of Vegetables, etc., they are doing their brethren in the craft a good turn by chronicling their results in the columns of The Gardening World. This has induced me to forward you the following notes on two of the best vegetables I have proved of late years. Webb's Sensation Pea I have now grown for two years, and in both it has proved first-rate. It grows with me about 3 ft. high, is very strong growing, and crops close to the ground.

The pods are produced most abundantly, being well filled, and the Peas of very good flavour. In the past unfavourable summer for Peas this proved to be amongst the best. I grew it beside several other new kinds, several of which I shall not have in my garden again, but hope to continue growing Sensation. I gave a cottager a few seeds to try and he was delighted with it. Tomatos are like Peas; they are not lacking in number of kinds, and a good many of the so-called new ones we, as cultivators, could do without. But in Webb's Regina you have a really first-rate kind. I have been growing it for three years, and every season it has given me the best results. It is not a large sort, but very solid, and just the kind to weigh well. I remember Mr. Castle, when at Fordingbridge Vineyard, used to grow it most extensively, as I saw a grand lot of it when there one autumn. When speaking to a big vegetable exhibitor recently about it, he said it was amongst the very best kinds, but though not large enough for exhibition, he grew it mostly for supplying the kitchen.—*J. C., Chard.*

THE CALANTHE AND ITS CULTURE.

The treatment of the pseudobulbs has been so often given that one feels a bit shy in taking up your valuable space, unless one has something new to disclose; but generally speaking each successful grower has a different method of cultivating these almost indispensable winter-flowering Orchids, so that it should not be out of place for one who considers himself fairly successful to give details to your many readers as to how that success is obtained. As these plants are about at their best just how they should be kept dry overhead, and in a temperature of about 60° (see issue of December 5th). A little water should be afforded them until pretty well the last flowers open, say once a week.

As soon as they have passed out of flower or have been all cut, the pots of pseudobulbs should be put together and given a fairly light position in the temperatures previously given and kept dry until potting time comes round again, which will be early in March, or as soon as the new growth is about half an inch in length, and before any new roots make much headway. They should then be shaken out clear of the old soil, great care being necessary now and in potting them not to bruise the young growth or decay will ensue. The two-year-old pseudobulbs, the old back growth can be dispensed with and the roots of the past flowering pseudobulb shortened to within an inch or so of the base. I like to preserve a few as they assist in keeping the pseudobulb in its place when potted. In the meanwhile pots and soils should have been prepared. Of the former I use 5 in. 6 in. and 7 in sizes. These must be perfectly clean and dry, and rather more than half filled with crocks, which should have been washed. Over this are placed a layer of spagnum and some lumpy pieces of the potting soil which should consist of three parts good fibrous loam to one of good peat, the heavier the loam the more peat should be added. A fair sprinkling of well-pounded dry cow manure, and some rough silver or river sand and a little broken pieces of charcoal should be added.

All being thoroughly mixed and workable, not too wet nor too dry, a start should be made by filling your pot to an inch of the rim. This should be made firm, and I prefer to have it a trifle higher in the centre. I pick out the strongest of the pseudobulbs and place them singly in 5-in. pots, or three in a 7 in., and three of the smaller size in the 6 in. Each pseudobulb whether potted singly or not, must be made quite firm, an eye being kept, when three are potted together, that the new growths are kept as wide apart as possible, and away from the side of the pot, so that they may not get jammed before growth is nearly finished.

Some of the largest pseudobulbs generally require a short stake, and to be tied to keep them in position ere the new roots have taken to the soil. After potting they should be put into the stove or forcing house that is kept about 70° through the night, placed near the glass and lightly shaded from the sun. They should get a dew overhead with the syringe twice daily if bright, but great care is necessary to see that they are not kept too moist or decay will set in. Very little water is required until you see that the new roots are fairly occupying the surface of the soil; but this must be increased as the pots get full of roots. At this latter stage they will take plenty of it, diluted with farmyard drainings, twice a week preferably from the cow sheds.

As the growth extends more space should be given them, still keeping them fairly close to the glass, though not in touch with it. They must be lightly shaded from the sun up to 4 p.m. through the summer months, decreasing it gradually towards the end of August and dispensing with it by the second week in September. Calanthes do not appreciate syringing overhead too much as the water is liable to run down the leaves into the centre and cause decay. A light syringing underneath the foliage and among the pots is beneficial. As soon as you can perceive the bloom spikes showing at the base of the new pseudobulbs then is the time to feed them, rather top-dress them with cow dung that has been collected and placed under cover some time previously. I find this assists them greatly.

No manure water should be given them, and the quantity of water should be reduced when the foliage shows signs of turning yellow. Towards the end of October I have had a few in flower and have been able to keep up a succession until the end of January. My experience is limited to about four varieties,—namely, C. Veitchii, hybrid, C. vestita rubro-oculata, C. vestita lutea and C. Turneri, the last two being white with a yellow and rose eye.

Calanthes are not much troubled with insects, scale being the worst enemy that I have had to contend with. These must be carefully removed with a soft sponge. Mealy bug will thrive on them if left alone; it too must be served in like manner.

A stock can soon be worked up by preserving the old back growths, these should be laid in fairly thick in a box with some soil around their base, and put in with the potted ones. Most of them will throw out a new growth, some of them two. These can be potted up before they get too far advanced. I have had as many as fifty flowers on a spike of C. Veitchii, and twenty-six open at one time. I have read of some growers having as many as sixty to seventy on a spike, but it has not been my pleasure to have seen such.—*J. M., B.*

THE FLOWER GARDEN.

The open weather, that we have up to the present been favoured with, has afforded an ample opportunity for getting the work well forward. Autumn is a terribly untidy season, and there is usually plenty to do in tidying up.

Vacant Beds that will remain so until next summer, should be dug over and thrown roughly up for the winter, wherever it is possible to do so, without offending the eye too near the mansion. Where the land is naturally heavy, this practice is an excellent one, for it facilitates the aeration of the soil to a vast extent.

Shrubberies.—Where it is possible to do so, these should be dug lightly over as soon as time can be spared; the sooner the better, in fact, for this will get rid of some of the loose leaves lying about, and which would, after a spell of dry weather, be blowing about the place.

The hardy fernery is not exactly the tidiest spot in the garden just now, and but little can be done to remedy this, for the dead fronds are better left on the crowns for the purposes of protection. A mulching of leaf soil may be given with advantage. It should be from 2 in. to 3 in. in depth. This will also form an extra protection to any Snowdrops, Scillas, etc., that may have been planted amongst the Ferns during the latter part of the summer.

Mulching Border Carnations.—Where these were transferred to their flowering quarters at the commencement of the autumn, they have made good progress. A top-dressing of about 1½ in. in depth, should now be given. We have found the manure from a spent mushroom bed answer the purpose well. It is cleanly, and the Carnations seem to like it.

Renovating old Gravel Paths.—Where gravel paths have been in constant use for several years, the surface is apt to get rather dirty and rotten. Such a surface wears badly in wet weather, and gives anything but a pleasant foothold. Accordingly a little labour spent upon them now and again, before they get very bad, is to be recommended. The top layer, to the depth of at least a couple of inches should be broken up by means of the pick, and a coating of about 1 in. of clean new gravel laid on. Two or three good rollings with a heavy roller will send this down firmly, and the new material, incorporating and binding with the old path, will make it as good as new again.

Covering up.—The frost up to the time of writing has been nothing to speak about, only a couple of sharp nights, but we must not argue from this that there is not more to follow. In localities where the winters are more severe than they usually are in the southern counties, it is a regular thing each year to cover up Roses and the tenderest of the climbers. For dwarf Rose bushes, whether of Teas or H.P.'s, a little dry bracken shaken around them is an easy method of giving the desired protection. For Roses and other climbers on walls the supply of mats has to be eked out with branches of evergreens, such as Conifers and Laurels. On most estates there are supplies of such material to cut from, and these are taken advantage of.

Pruning Roses.—In the southern counties, some of the H.P.'s, particularly the standards, may be pruned now. Such plants, it will be found, will break rather sooner than those which are not pruned until spring, as the sap being distributed amongst fewer buds naturally exercises more power.

Pruning Deciduous Hedges.—These may be dealt with as soon as circumstances permit. In trimming, take care to leave the hedge broadest near the ground line, and taper it gradually upwards.

Continue the planting of deciduous trees and shrubs when the state of the weather will allow. The rainy spell has been rather a drawback of late to this kind of work. Newly planted subjects should receive a good mulching of half-decayed stable manure at once. Staking must likewise receive attention, for such trees, not having a good hold of the soil will be liable to be blown out of the perpendicular by rough winds. Three stout stakes placed pyramid fashion with the stem of the tree enclosed within the apex is a good way to afford support, and much safer than the plan of driving in one large stake close to the main stem of the tree. Bands of hay should be inserted to prevent the bark of the saplings from being chafed by the supports.—*A. S. G.*

Gleanings from the World of Science.

Pterisanthes polita.—At a meeting of the Linnean Society of London, on November 19th, Mr. A. D. Michael, Vice-President, in the chair, Dr. D. Morris, C.M.G., exhibited from the Royal Gardens, Kew, the inflorescence of Pterisanthes polita, a singular species of the Vine Order (Ampelideae), received in 1894 from Mr. H. N. Ridley, F.L.S., of Singapore, and now in flower for the first time in Europe. It is a slender plant, climbing 15 ft. to 20 ft. over trees, native of the Malay Peninsula, Sumatra, and North Borneo. The cordate leaves are entire and spinose; the tendrils bifurcated, with the lower branch bearing a pendulous, flat, fleshy receptacle, irregular in outline, reddish brown in colour, and varying from 4 in. to 6 in. in length and ½ in. to 1¼ in. in breadth. The flowers, embedded on both sides of the receptacle, are mostly hermaphrodite, while on its margins are ranged several unisexual or sterile flowers on slender pedicels ½ in. to 1 in. long. The fruits, where produced, are small flask-shaped berries with one to four seeds. Pterisanthes is closely allied to Vitis, but shows in a more interesting manner the true nature of the tendrils, and a special modification of the receptacle suggested only in Vitis macrostachya. Some supplementary remarks were made by Mr. C. B. Clarke, F.R.S., and Sir Hugh Low, G.C.M.G.

A giant Drosera binata.—At the same meeting Dr. Morris also exhibited dried flower-stems of the Australasian twin-leaved Sundew (Drosera binata, Labill.), received at Kew from the Sheffield Botanic Garden. In this instance the stems were 3 ft. 6 in. high, bearing about thirty to fifty large pure white flowers, nearly 1 in. across. The plant grown in gardens in this country is seldom more than 9 in. to a foot high. Some comments were offered by Mr. Hiern and Mr. Thomas Christy.

HINTS FOR AMATEURS.

Pruning.—With so much mild and open weather favouring us, a start should be made without delay upon the pruning of the fruit trees of which all gardens of any size are well nigh sure to contain a few examples. It is not desirable to prune in frosty weather when the wood is frozen. Also wet weather will prove a great hindrance to operations, more especially when the soil is heavy in character, for to tread upon such a soil in wet weather is not only exceedingly uncomfortable, but is attended with more or less injury to the soil itself.

The Pruner's Stock-in-trade is not a very extensive one as far as tools go. First and foremost, a good strong knife is needed, with a blade capable of receiving a keen edge. The steel should not be too soft, or the knife will require continual sharpening. On the other hand, if it is too hard the twisting that the blade is sure to experience in a greater or less degree will chip pieces out of it until a hybrid compound of knife and saw is the result, a tool with which it is impossible to make a clean cut either with ease or certainty. The make of knife stamped "Saynor" is the one generally favourved by gardeners. The blades are inserted in strong horn hafts, which afford an excellent grip for the hand, a matter that is of the utmost importance. These knives combine the qualities of strength, durability, and efficiency in the highest degree.

A small hand saw will be necessary for severing any large branches which have to be removed for any reason or other, and which would be too stout for the knife to deal effectually with.

It may be of service here to make mention of those handy little contrivances known as secateurs. Some gardeners use them instead of a knife, and they certainly have this great advantage that they work much more speedily. In establishments where there is a lot of pruning to be got over, this gain in time is a very material consideration. It is a moot point, however, whether, the cuts made by secateurs are so clean and satisfactory as those made by a knife. No matter how delicately and well the blades may be adjusted there must be a little bruising of the wood. The point is, therefore, whether such bruising is of sufficient importance as a drawback to counterbalance the advantage gained in time. We scarcely think it is, as we have used secateurs for pruning hardy fruits and fruit trees under glass without any ill effects being apparent, either in the health of the tree or the weight of the crops.

The reason why we have recommended the knife to amateurs is chiefly on account of its cheapness, as good secuteurs cost more than a good knife, and sooner get out of order, whereas a knife may be sharpened at any time and is always ready for use when wanted.

So much for edge tools—now for the means of reaching the trees. Thanks to our great fruit nurserymen, it is possible to have fruiting trees of Apples, Pears, etc., quite dwarf with regard to stature, so much so in fact that a man of ordinary height can reach to the top of them quite comfortably standing on the ground. For the larger pyramidal trees, a pair of steps is necessary. These can be shifted round the tree as required, and the dressing done by the operator without any bruising or breaking of the branches which would be sure to result in some measure if ladders were used. For wall trees an ordinary light ladder should be used furnished at the top with two iron horns about 1 ft. in length. By this means the ladder will be kept clear of the branches.

In addition to the tools the operator must possess some amount of experience. Pruning does not consist in cutting off a few branches at random, or of cutting about a tree or bush with the same idea as that with which George Washington hacked away at his father's Cherry tree—merely for the sake of having something to do. The operator must work with definite aims in view the first one of course being to get fruit—for without such an end being attained the tree is a failure—and the second symmetry of proportion. These two ideas are not irreconcilable, that is to say, it is possible to have a fruitful tree that is at the same time shapely and well-proportioned, and thus the would-be pruner must calculate whether these ends would be better served by removing wholly or partially any branch or branches, than they would if those branches were left, and he must act accordingly.

What may be termed the object of pruning is to so regulate the course of the sap that it shall be diverted into those parts of the tree in which it will be of most value, either to encourage the formation of fresh wood to take the place of any that may have died away or to assist in the development of fruit buds upon wood that is alre ady there.

All the branches of a tree do not naturally grow with the same strength, but some of them will start away with great vigour, and appropriate nutriment which ought to go to the building up of other branches. If such proceedings were allowed to go on unchecked, we should not only get unshapely trees, but we should find a few rank shoots on the one hand which would be unfruitful by reason of their very grossness of growth, whilst on the other hand there would be weak unhealthy branches, that would be too starved and puny to do anything except eke out a miserable existence.

By regulating the size of the branches the sap becomes evenly distributed over the whole of the tree, and the two extremes of grossness and starvation are avoided.

In addition to this there is light and air to be thought about. Both of these are of vast importance to the fruitfulness of a tree. Most trees make far more wood than is necessary. Consequently it is the place of the pruner to remove any shoots that can be dispensed with, thereby giving those that are left more room, and more light and air, thus increasing their chances of healthy maturity, with a more satisfactory fulfilment of the duties that maturity entails,—viz., fruit bearing.

The foregoing are only a few general remarks upon the principles of pruning. An intelligent practitioner, whether professional or amateur, should make himself acquainted with them first of all. But this is only the elementary stage. Afterwards it is necessary to know how to apply these rules and principles in the cases of the various kinds of fruit trees which find a place in our gardens. Thus a Peach tree will need different treatment from an Apple. Again, the various systems of training which are applied to Apple trees must decide exactly how and and to what extent the knife is to be applied. Consequently, practical acquaintance with these systems is necessary.

We shall from time to time in the columns of "Hints" give a few detailed instructions of how to deal with the commoner kinds of fruit, and trust that they may be of service to those of our readers who want to prune their trees but do not exactly know how.

The Gooseberry.—This is perhaps the commonest of our hardy fruits, and it is the one that has usually to put up with the greatest amount of ill treatment. Some of us have lively recollection of how we were first set to practice pruning on a Gooseberry bush—to the no small disfigurement of the bush, be it said. Many people are inclined to grumble at the task of picking Gooseberries, which, sooth to say, is anything but an easy or a pleasant one, where they have been neglected until they present the appearance of an almost impenetrable thicket of thorns, but a good deal of this difficulty might be obviated if proper attentions were given. There are the two systems of training, the first as bushes, the second as wall trees.

Bushes.—These require a clean stem free from suckers for at least 4 in. above the ground, to admit of the ground beneath being hoed and cleaned occasionally. Any shoots that are observed to be springing from this part, therefore, should be rubbed clean out. In order to obtain plenty of fine fruit regularly each year it is requisite to keep up a supply of strong, healthy, young wood. Old wood does not produce good fruit, and therefore should be consistently removed to make place for that of younger growth. A judicious thinning out of the growths should next be given, and finally those shoots that are to be left should be shortened back far enough to keep the bush within proper limits. It is not advisable to shorten back too far in localities where sparrows and other birds peck out the buds to any extent, otherwise the cultivator will find that between the knife and the birds he has no fruit all. Generally speaking a good shoot may be left at two thirds of its original length, the remaining third being cut neatly off. In the centre of the trees will likely be observed some strong sucker-like growths standing straight up. These should be rubbed clean out, as they will not bear fruit, and will moreover, crowd up the centre of the bush and keep the light from the other branches. The aim of the pruner should be to keep the centre of the bush clear, to obtain a hemispherical outline for the branches, and above all to studiously avoid overcrowding.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Tomatos not Ripening.—There is evidently nothing the matter with the health of your plants, *Joe.* The time of the year is accountable for the slowness with which the fruits ripen. You would hasten the process by cutting off the forwardest fruits and placing them on a shelf in the kitchen, but you would sacrifice a good deal of the flavour by so doing, and, as a rule, winter Tomatos have very little of this to spare. We should not advise you to give stronger doses of chemical manure, for their application would be attended with a good deal of danger.

Violets in Pots.—Do not attempt to force your plants to any extent, or you will not be pleased with the result by any means, *A. B.* Too much heat will cause thin, flimsy foliage, and poor washed-out flowers with scarcely any scent. A temperature of about 45° Fahr. by night, rising to 50° by day might be safely given, and the plants will soon come into bloom. The nutriment in the soil will be quite sufficient for the plants yet. To give liquid manure would be almost sure to cause them to damp off.

White Lilac.—If the plants are placed in a state of semi-darkness just as the flowers are beginning to open you will find that the pink shade will be bleached out of them and they will be a pure white. We have tried the plan with success, *Amateur*, when white flowers have been wanted for any special function. The darkness must not be too intense, or the flowers will damp instead of opening. A twilight will answer the purpose, such as that found in a warm, dimly-lighted cellar.

Standard Apples.—All the pruning your tree will require, *Reader*, is the cutting out of any branches that may be crossing each other, also the removal of any dead or cankered branches. Dress the wounds with gas tar.

Faulty Chinese Primulas.—From what you say, *W., Penge*, you have over-watered your Primulas. This will cause the leaves to turn yellow, and go off in the manner you speak of. Give less water, and withhold all manurial stimulants for a while. Put on a little fire-heat, and give more air in the middle of the day.

Hoya carnosa will not want any water for the next two or three months, *J.J.*

Temperature for Vinery.—As your vines are now at rest they must not be excited by anything. A temperature of about 40° by night will suit them well enough, indeed they will take no harm if the frost is just excluded. Where the vinery is a greenhouse as well, the temperature has to be kept up for the sake of the other plants, but in any case it should not be allowed to rise above 45° by night.

Clay's Fertiliser.—We prefer dissolving this in water to sprinkling it on the surface of the soil in the powder form, *C. D.* When applied in the latter way the delicate roots near the surface are apt to get burnt, and more harm than good is done.

Red Spider on Peaches.—If you wish to escape another visitation of this pest next year, *Arthur Arnold*, you must begin your precaution now. First of all prune your trees, and then wash all the older and rougher wood several times with a strong solution of Gishurst Compound. Work this well into the crevices of the bark by means of a long-haired brush. You will thus be able to start the next season with a clean bill of health, when it will rest with you, by keeping the tree well washed with the syringe, to prevent the spider from ever getting such a hold again.

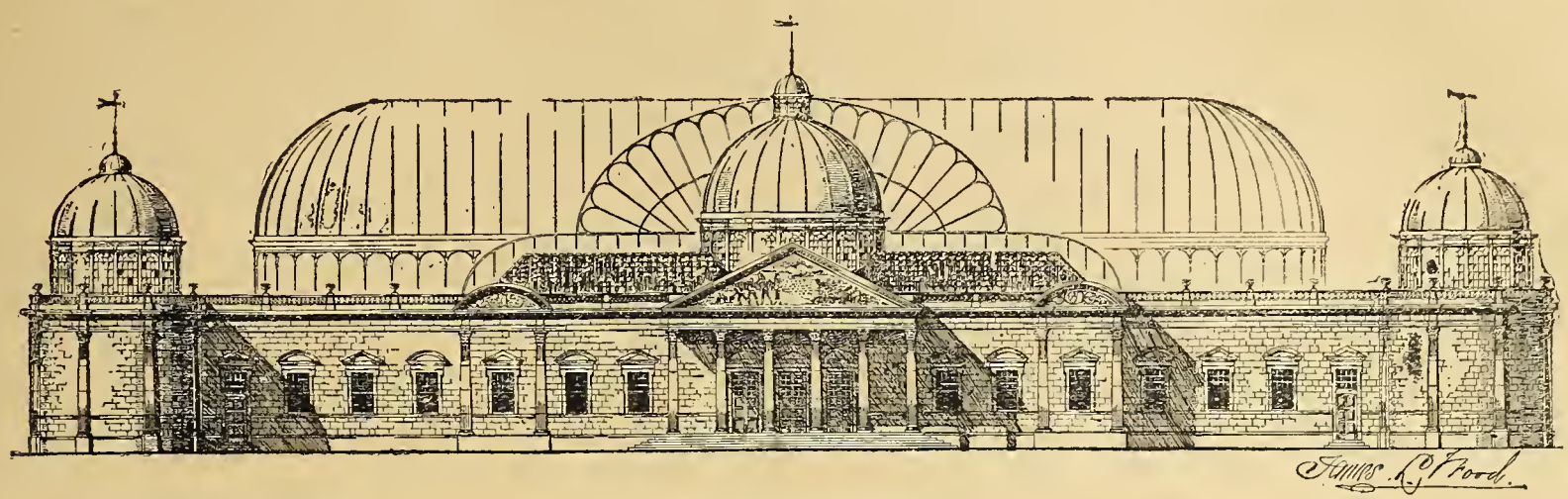
Barking Vines.—Some of your readers may be interested to know that in my vinery I have not "barked" a single cane for the last six years, and I have never been troubled with mealy bug.—*J., Streatham.*

[A place like this where mealy bug comes not, and the Vines are at peace, is a horticultural paradise. Are there any more of them about?—Ed.]

PROPOSED HOME OF HORTICULTURE.

A GIFT IN HONOUR OF QUEEN VICTORIA'S GLORIOUS REIGN.

PART I.—THE PROMOTION AND FORMATION.



HOME OF HORTICULTURE.

1. *The Need.*—The need for a metropolitan horticultural institute has been recognised for years, each succeeding year accentuating the need, until this year we find from all parts of the country letters and suggestions for its early establishment.

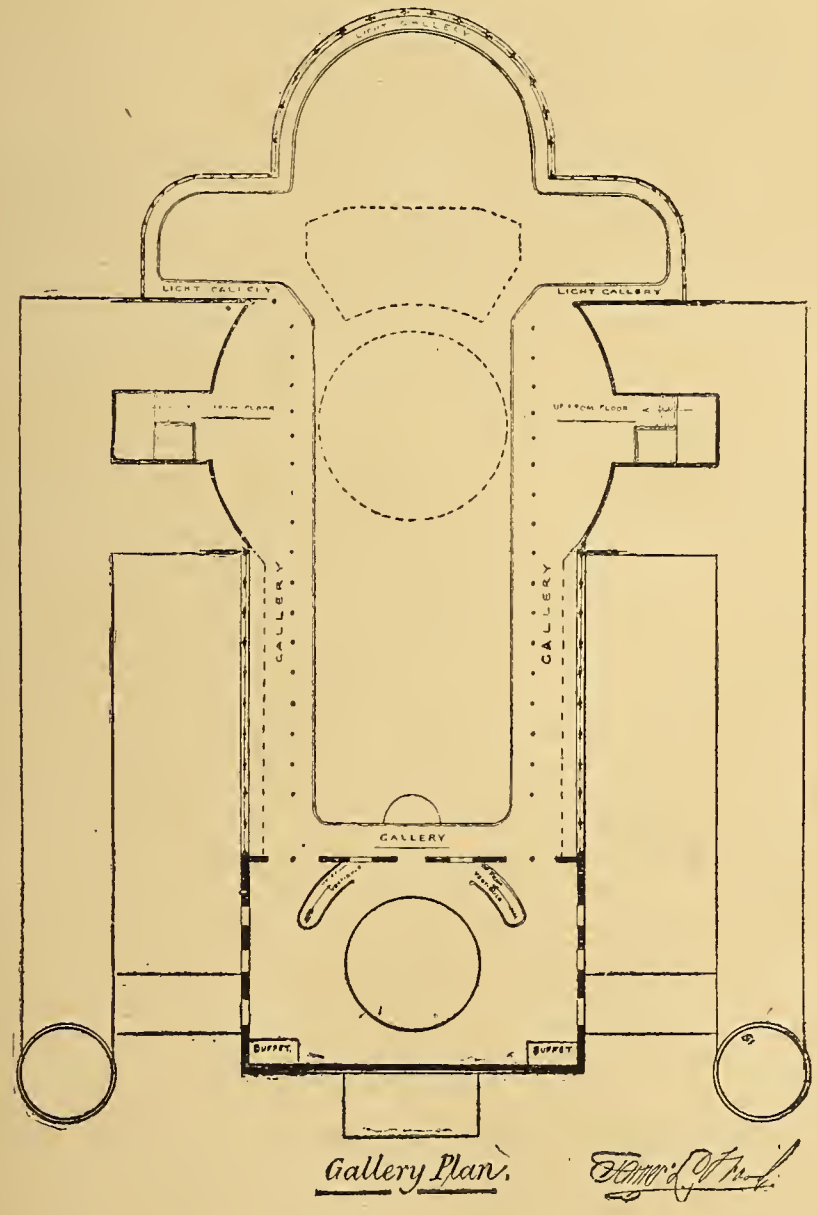
2. *The Opportunity.*—No better monument can be raised to perpetuate the memory of Her Majesty's beneficient reign than the establishment of a "Home of Horticulture," a "Victoria Palace," or "Queen's Home of Horticulture." The present is the time for its inauguration, and all that is required to carry out the scheme is united effort.

3. *The Start.*—The first step appears to be the formation of a body of trustees, to be elected from the Councils of the Royal Horticultural Society and other Societies, whose co-operation is, of course, essential; and it is confidently hoped that a sufficient number of gentlemen of influence may be induced to act as trustees. These gentlemen, and others, should be solicited to give the start, and also to appoint the treasurer, secretary *pro tem.*, and banker.

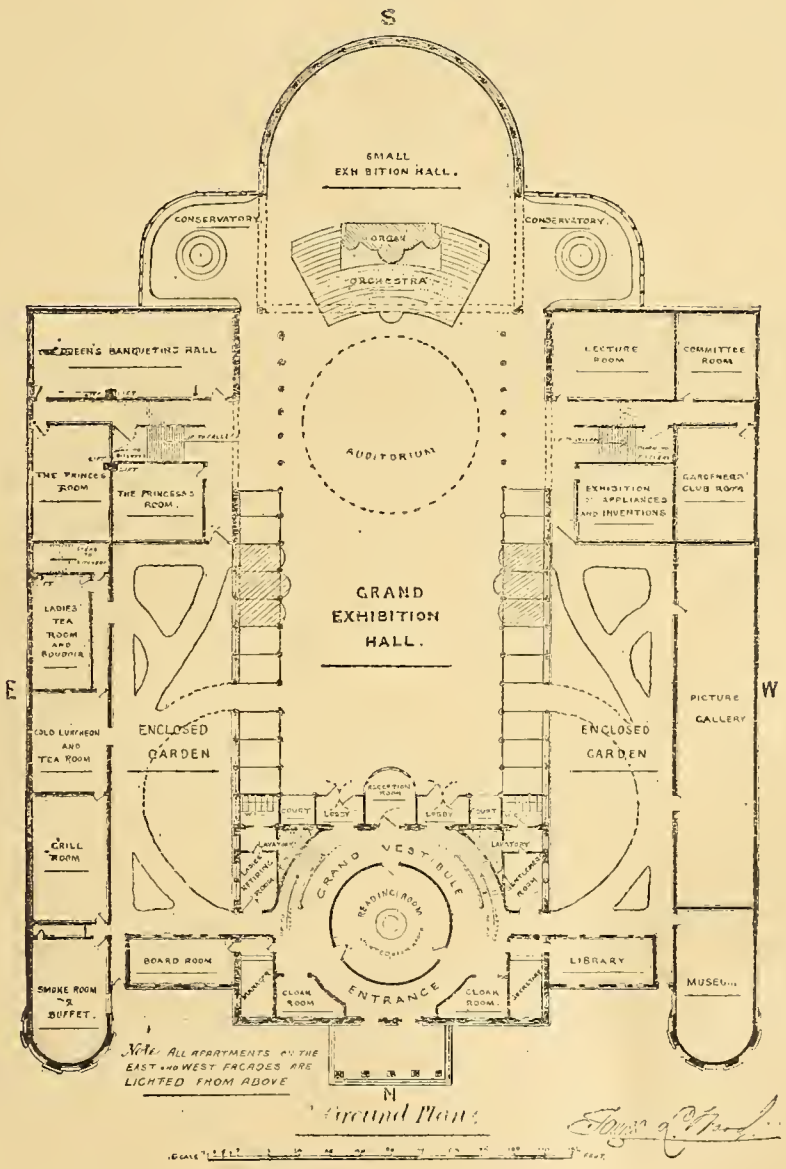
4. *Second Step: Deputation to the Right Hon. the Lord Mayor.*—A deputation from the trustees should wait upon the Right Hon. the Lord Mayor, and lay before his Lordship the needs of horticulture, and request that a meeting be held at the Mansion House to consider the desirability of founding a Metropolitan Home of Horticulture in honour of the sixtieth year of Her Majesty's reign, and to decide upon the most suitable site for it. If possible, H.R.H. the Prince of Wales should be approached respecting this meeting.

5. *Third Step: Rose Festival and Banquet at Mansion House.*—The Rt. Hon. the Lord Mayor should be waited upon at an early date and petitioned to give the first impulse to the movement by holding a Rose festival in the Egyptian Hall, upon the same lines as those so successfully held during the mayoralties of Sir J. Whitaker Ellis and Sir David Evans. If convenient, this would be about June 20th, 1897. The Rose festival to conclude with a banquet in aid of the funds.

6. *Fourth Step: Provincial Rose Festivals.*—That all the Horticultural Societies in Great Britain be communicated with, and urged to take a prominent part in the scheme for the establishment of the Home of Horticulture by holding Rose festivals (Victoria Rose Festivals) about June 20th, or other most convenient date, on behalf of the institution. No more appropriate exhibition can be held on that day than one of Roses (our national emblem), but the details of these exhibitions would be left to the respective committees. These floral festivals might all conclude with a banquet to augment the funds. To the gifts already promised, and special large donations expected (and I would add with the earnest trust that my wish may be acceded to, the invaluable support of the horticultural papers) may there be added the Nation's affectionate tribute in commemoration of our beloved Queen's glorious reign. I hope the horticultural Press will open their columns for subscriptions, however small, with a kindly word from the pen of a ready writer. By their aid in this united effort, I feel confident success will be ours, with a balance to spare to enable us to add to the tribute by a gift to the benevolent societies.



HOME OF HORTICULTURE.



HOME OF HORTICULTURE.

7. *Life Governors.*—Every society remitting £50 from its Rose or other floral festival should be represented by one Life Governor, who should be elected by the members of the contributing society.

8 *Associates.*—Every society remitting £25 from its Floral Festival to be represented by one Associate, who should be elected by the members.

8A. *Financial Statements* to be prepared, audited, and signed by the Trustees, a copy being sent to each contributing society.

9. *Fifth Step.*—Meeting of the Trustees should be held to receive the Secretary's report of the result of the Rose and other floral festivals, and to appoint delegates.

PART II —THE ESTABLISHMENT.

10. *First Step.*—The Secretary to summon a meeting of the General Council, which should be composed of the Treasury Board (Trustees), Life Governors, and, as an ex-officio member, the secretary, to consider the financial position.

11. *Second Step.*—The Secretary would summon a meeting of the Committee of "Ways and Means" to report procedure. The "Ways and Means Committee" should be composed of Associates and Life Governors and Secretary.

12. *Third Step.*—The start having been made by the Rt. Hon. the Lord Mayor, the Royal Horticultural Society, and the 400 horticultural societies, as representing horticulture, a deputation should be appointed to wait upon the Masters of the several Livery Companies of the City to solicit their co-operation, and the appointment of a Life Governor to the General Council from each City Company contributing at least £50.

13. *Fourth Step.*—The General Council should be further strengthened by the admission of head-gardeners at half the usual qualification fee for Life Governors, viz , £25.

14. *Fifth Step.*—The Ways and Means Committee should be strengthened by the admission of head-gardeners at half the usual qualification fee for Associates, viz., £12 10s.

15. *Sixth Step.*—The executive body having been fully constituted, a general meeting should be called by the Secretary to formulate rules, determine procedure, and to appoint a chairman and secretary for the General Council, and also for the Ways and Means Committee. It will be seen that, by these means, we should secure a thoroughly representative constitution, in which all interests would have fair consideration.

PART III.—REVENUE.

16. *First Step.*—The financial statement having been sent to each contributing society or body (Clause 8A) the Secretary shall forward copy of rules as formulated (Clause 15) to each society and body, soliciting the support and co-operation of every individual member upon the following basis:—

17. *Fellows.*—Any lady or gentlemen can be enrolled a Fellow of the Institute upon payment in advance of an annual subscription of Two Guineas. This entitles to free admission to every horticultural meeting held during the year (except the Benevolent Festivals, and such others as may from time to time be found necessary by the Council), with two passes to reserved seats for each, and free access to the library.

18.—*Members.* Any lady or gentleman can become a member of the Institution upon payment in advance of 21s. The membership gives free admission to all horticultural exhibitions during the year with the exceptions above alluded to.

19. *Subscribers.*—Any lady or gentlemen who subscribes 10s. 6d. per annum (in advance) should be furnished with a coupon admitting to fifteen ordinary horticultural exhibitions in the year.

20. *Contributors.*—Any lady or gentleman who contributes 2s. 6d. per annum (in advance) should receive a voucher admitting to three ordinary horticultural exhibitions in the year. Ladies and gentlemen resident fifty miles, and beyond, from London should have the same privileges on reduced terms.

21. *Admission to Public.*—The admission to the public is fixed at 1s. each person every day excepting on special occasions.

22. *Gardeners' Privileges.*—All accredited gardeners should be permitted to participate in any of the above privileges at one half the usual charge for Fellows and Associates, and have also the use of the gardeners' club-room, where refreshments might be supplied to them at a reduced tariff.

22A. *Exhibitions.*—It is contemplated that prizes should preferably be either money or useful articles, together with special awards for meritorious exhibits which have not obtained prizes to encourage cottagers and others. Shows of wild flowers, exhibits representing bee culture, and all similar country industries, to be periodically arranged.

23. *Trade Support.*—The co-operation of the horticultural trade should be solicited, 500 ft. run in the galleries being reserved for their use at a moderate rental; and where attendants are not necessary, the letter-boxes would be cleared daily by the secretary, and all communications be at once forwarded by post to the exhibitors. Collecting boxes would be supplied to the trade on behalf of the Gardeners' Benevolent, and Gardeners' Orphan Funds, such boxes being collected by the secretary seven days before the annual Benevolent Festival.

24. *Stewards (Benevolent).*—The stewards for benevolent festivals would be members of the horticultural trade, and be elected from those whose contribution-boxes yielded the best results.

25. *Stewards (Horticultural)* would be elected by the general council in recognition of special services rendered, preference being given to gardeners.

26. *Refreshments.*—The refreshment department would be let out to some well-known first-class caterer by yearly contract.

27. *Music.*—Musical arrangement would be made with the executive; only those of the highest class would be considered.

28. *Picture Galleries.*—The picture gallery would be rented, and every facility given by the staff for the sale of pictures and statuary at a fixed percentage.

29. *Exhibition of Appliances.*—This department would be under the control of the executive; space being charged for, and assistance given to further the interests of inventors and manufacturers at a fixed percentage.

30. *Horticultural Papers* be solicited to open their columns for donations.

31. *Exhibitions.*—As far as possible there should be a continuous series of exhibitions, high-class concerts, conversaziones, lectures, debates, &c., so as to fully utilise the premises.

32. *Royal Courts.*—The patronage of Her Majesty to be solicited.

32A. *Loan Collections.*—Six courts being reserved upon the ground-floor (shown in section lines upon ground-floor plan) for the reception of a Loan Collection if members of the Royal Family should be pleased to entrust one to the Institute.

33. *City Courts.*—Thirteen or more courts should be reserved upon the ground-floor for the City companies, who would be asked to furnish them with exhibits illustrative of their several trades; or these courts might be let to leading manufacturers, or others—every facility being given to them for furthering their business. These courts, it is estimated, would let at an annual rental of £50 each.

34. *Hospital Courts.*—Certain courts should be appropriated by the City charities at a reduced rental, donation boxes being placed in each.

35. *Charity: Three Days' Festival.*—Apart from its expository uses as an exhibition hall for everything pertaining to horticulture, metropolitan, and other trades and charities, the Institute would be further dedicated to the cause of charity, as periodically, special efforts would be made to augment the funds of the Gardeners' Benevolent and Orphan Societies, a three days' festival being organized every year for this purpose.

36. *Sale of Work; Children's Help.*—The co-operation of everyone would be invited, lady secretaries being appointed to further the work amongst children by interesting them in plants and flowers, and by encouraging them to make articles for the sale of work held at the festival. Anyone sending goods of the value of 2s. 6d. to the festival for this sale of work should be admitted free on each day.

37. *Distribution of Flowers and Fruit after Shows.*—All flowers and fruit sent for exhibition should be distributed by the lady secretaries at the close of each show amongst the metropolitan charities. Exhibitors be specially asked to consent to this as far as possible, in aid of the suffering and poor.

38. *National Festivals.*—On St. Andrew's, St. Patrick's, and St. David's days, respectively, special concerts might be given, and as far as possible exhibitions be held, representative of Scotland, Ireland, and Wales. On the occasion of grand concerts all the courts would be concealed by drapery, red curtains being drawn across the front of each.

Railway arrangements would be made with the railway companies for special trains at special rates, so as to afford facilities for our country friends to visit the metropolis, and at the same time to help the funds of the charities by contributing to the appeals which would be made to them during the three days of the festival.

Having briefly outlined the formation, establishment, and maintenance of the Institute, it now remains to put the project "upon its mettle," and as it is imperative that action should be taken at once —and someone must take the initiative—I propose to wait upon certain representative gentlemen and submit the scheme to them, and in doing so, I am prepared to find that some of my proposals may require to be more or less modified.

The main points I firmly believe are attainable, and I look with great confidence to the results of the Victoria Rose and other floral festivals held simultaneously all over the land as giving expression to the nation's loyalty to our Queen, and its love of horticulture.

Here is an opportunity for everyone, from the cottager to the nobleman, to give expressions of fidelity to our beloved Queen. Such a gift would find a welcome in the heart of the greatest living mother.

That considerable organisation is involved is obvious, but no work of such magnitude was ever accomplished without it—"United we stand, divided we fall." If we sink every other consideration and join hand in hand, the Horticultural Institute will surely be founded.

Horticulture has advanced and prospered during her reign, and how could her children more expressively "rise up and call her blessed" than by establishing a permanent home for horticulture in grateful memory of her glorious reign.

P.S.—I purpose dealing further with the financial aspect of the scheme at an early date, probably in your next issue.

I have not given the basement plan here; it contains kitchens, engine-rooms, store-rooms, and other offices.

Of course the plans may require modification according to site. The general arrangement here shown would be a convenient one for the purpose contemplated.

I certainly can see where improvements might be made in the elevation; the time, however, at my command just now is insufficient for me to give further thought to this at present.—*James L. Wood, Oakleigh Park, Whetstone.*

LATE HAMBURGH GRAPES.

Do these require the high temperature advocated by your correspondent Mr. James Mayne? I trow not, my own experience at the present moment pointing in an opposite direction. To begin with, I have a conservatory facing westward, in which to grow them; the heating apparatus is not sufficient to keep out more than 20° of frost, or maintain a higher temperature without sun than 45°, on moderately mild days. It has frequently been, on frosty nights, nearer 35° than 45°, and the house is simply crowded with a most miscellaneous collection of plants, including Chrysanthemums, Camellias, Azaleas, and Orchids; and I may add the front lights are never open. I just keep the water circulating in the pipes, not with much more than the chill off, and a moderate amount of top air on constantly. His advice respecting looking over the bunches and removing decayed berries, if any, is a practice which should always be well followed up. Happily, in our own case, there has been very little trouble in this direction. I can well understand that a higher temperature than he advocates will cause shrivelling; for although I have maintained all through since the Grapes were ripe a much lower one than he advocates, and although the roots are in an outside border, and as everyone knows we have had an abundance of rain, so that the roots cannot lack moisture, there is just a tendency to shrivelling from over-ripeness. The general finish of the fruit was first-class for colour and bloom. There is a Muscat of Alexandria in the same house; the bunches are moderate in size, berries large, and well finished, and these, if desired, I could keep well up to Christmas; they would, in fact, be improved by this being done. I may add, the foliage of both Hamburgh and Muscat has mostly fallen.—*W. B. G.*

TERCENTENARY OF THE POTATO.

CONFERENCE AND SHOW AT DUBLIN.

FOR some time past the Irish Gardeners' Association had been organising a show and conference on the subject of Potatos, and these arrangements were consummated on Wednesday and Thursday, the 9th and 10th inst., in the Round Room, Rotunda, Dublin. Visitors were not very numerous during the first day, owing no doubt to the inclemency of the weather, but such as did attend were deeply interested in the collections of Potatos, which were very extensive in number of varieties, the object being to make a thoroughly representative exhibition of the Potatos in cultivation. In point of numbers, quantity, and quality, the Irish Gardeners' Association may well be proud of the results, for in the words of its president, Mr. A. O. Watkins, such a representative exhibition has never before been held in Ireland, and probably not in the world. Although Potatos were the leading features of the exhibition, various kinds of machinery used in connection with the industry were well represented, together with chemicals and other substances employed in spraying, as preventives against the Potato disease, and other purposes. Fertilisers and various horticultural requisites also served to swell the show.

The Potatos, however, were the leading feature, and the motive for the exhibition and conference. Improved cultivation and the prevention of the dreaded disease were objects in view.

THE EXHIBITS.

Messrs. Sutton and Sons, the Queen's Seedsmen, Reading, were by far the largest exhibitors. They occupied some 400 square ft. of space, with samples of the noble tuber, including 209 varieties, the most valuable of which were staged in 18 large heaps, each consisting of about three bushels of Potatos, that would have been difficult to beat for table quality, fine appearance, and all round useful qualities. Messrs. Sutton had a considerable amount of space devoted to their own introductions, that is, the varieties put into commerce by them, and which numbered 35. The seedlings now under trial by them, were nearly as numerous, being 32. Besides the above they had something like 136 varieties, more or less extensively cultivated in various parts of the United Kingdom, and in other countries. As showing how representative was their collection, they had six botanical species or distinct forms, which may prove useful in improving existing kinds, but at all events are of considerable scientific interest, though of no commercial value in their present condition. Some of these were Solanum tuberosum (the wild Potato), S. etuberosum, and S. Maglia, of which we have previously heard in connection wtth the experiments conducted at Reading. Besides the large heaps there were 9 dishes and 200 plates of tubers.

The admirable appearance and character of Messrs Sutton's introductions were well displayed. Though not of gigantic size the varieties are such as aim at being of the best table quality, while the beautiful shape of the tubers renders them suitable for exhibition and competitive purposes. What is more to the purpose, the varieties exhibited consisted of sorts useful for forcing and earliest supply for table, whether cultivated in the open or under glass. Sutton's Ringleader is the earliest white-fleshed kidney in cultivation, and of excellent table quality. Sutton's Harbinger and Sutton's A 1 hold a similarly distinguished position for earliness amongst round Potatos. Eclipse is another valuable, forcing, round variety. Besides the above qualities and recommendations, another point is kept in view, namely disease-resisting properties or power. Indeed this is a leading feature of Messrs. Sutton's introductions. Windsor Castle, a second early, comes into this category, and was much admired and commented upon by visitors to the Rotunda during the two days of the exhibition, Supreme, Early Border, Early Market, Woodstock Kidney, Prizetaker, Fiftyfold, Field Ashleaf, and Harlequin (the latter a purple and mottled variety), were other valuable sorts that succeed the very earliest. Mid-season varieties were admirably represented by Reading Ruby, King of Potatos, Perfection, Matchless, Reading Russet, and other well-known sorts. Perfection is notable for its heavy cropping character and superior table quality. Sutton's Satisfaction had the largest tubers, perhaps, of any shown by this firm. It is a main-crop Potato of roundly-oval or pebble shape, with eyes so shallowly set in the rough skin, that it is admitted to be one of the finest exhibition Potatos in cultivation, being handsome in form and in every way attractive. Visitors greatly admired it. Other well-known varieties were Abundance, Magnum Bonum (well-known and widely cultivated in Ireland), Masterpiece, Best of All, Reading Hero, Triumph, and The Sutton Flourball, which is rapidly coming to the front as a heavy-cropping, round, pale red, disease-resisting Potato of excellent table quality, and well adapted for field cultivation. The other varieties shown represented British, American, and Continental favourites. The display weighed nearly two tons of shapely exhibition tubers.

The Irish Gardeners' Association exhibited a representative collection of Potatoes, which attracted a considerable amount of attention, on account of the large size of the tubers in certain instances. Beauty of Hebron was particularly notable in this respect, for the tubers were giants of their kind.

Sir James W. Mackey, Ltd., Upper Sackville Street, Dublin, exhibited a trade collection of 150 varieties of Potatos, new and old. Beauty of Hebron was again prominent here, together with Mackey's Selected Early Dwarf Top, Early Rose, Early Puritan, International Kidney, Main Crop, Magnum Bonum, Duke of Albany, and many other good standard sorts. French, English, Scotch, Irish, Scandinavian, and American varieties added considerably to the interest of their exhibit.

Messrs. Dobbie and Co, Rothesay, Scotland, staged a well selected collection of about 70 varieties in their usually efficient style. Only such as are of commercial value for table and exhibition purposes receive attention from this firm. Champion, Beauty of Hebron, Magnum Bonum, Beauty of Bute, Snowdrop, and International were some of the valuable sorts on their stand.

Messrs. Thomas McKenzie & Son, Great Brunswick Street, Dublin, exhibited a select collection of Potatos, such as experience has proved most useful for cultivation in Ireland, or elsewhere. They also staged garden Peas, Beans, and other seeds, together with Potato sprayers and horticultural sundries.

Messrs. Little and Ballantyne, Carlisle, also represented the commercial side of the question by exhibiting about 100 varieties of Potatos representing the leading sorts in cultivation, both white and coloured, round and kidney. Knowfield Early Round is a variety of their own raising of considerable value for early work, and received marked attention from the visitors. Their stands were visited by Viscount Powerscourt and John Howard Parnell, Esq., M.P., during the first day, and by their Excellencies the Lord Lieutenant and the Countess of Cadogan, the second day.

Messrs. Fidler and Sons, Reading, staged a collection of Potatos that are well known in horticultural circles generally, including Reading Giant and others, seldom absent from trade exhibits. Messrs. J, Hunter and Co., Lower Ormond Quay, Dublin, also staged Potatos in considerable quantity. Messrs. Boileau and Boyd, Bride Street, Dublin, exhibited various preparations and specifics for the prevention of Potato disease. Messrs. W. Tait and Co., Capel Street, Dublin, showed a fine collection of Potatos, together with various horticultural sundries. Mr. A. Falkiner Nuttall, Cullinamore, Sligo, set up a collection of Potatos. Mr. J. Garvey, Murrisk Abbey, Sligo, had a similar exhibit.

Mr. A. Findlay, Markinch, Fifeshire, exhibited a collection of Potatos, raised and put into commerce by him, including Up-to-Date, Jeannie Deans, The Bruce, Lady Frances, Farmer's Glory, Snowdrift, Her Majesty, Conquest, and others which have been brought into considerable prominence during the last few years. The Cork Chemical and Drug Company (formerly Messrs. William Harrington and Son), Cork, exhibited sprayers and various preparations for the prevention of Potato disease, including Potato blight powder, copper sulphate, slaked and unslaked lime. Some of their preventives also act as fertilisers, and Potatos, including The Bruce, Beauty of Hebron, Maincrop, The Saxon, Sutton's Abundance, &c., grown in various parts of Ireland, and subjected to spraying, were shown by the firm to testify to the effect of the treatment on the great size of the tubers. The United Alkali Company, Liverpool, showed alkali, chemicals, and other materials. The Stott Company, Manchester, exhibited a collection of their patent sprayers, nozzles, and other machinery.

Viscount Powerscourt lent a strong helping hand, not only at the conference, but at the exhibition, where he staged two good collections of Potatos. J. S. Gordon, Esq., Cheshire, showed a collection of 50 varieties of Potatos. Col. Jervis White, Heathfield, Wexford, also staged a collection. Miss L. King, Graigne, Mountmelhek ; Col. Murphy, Bansha Castle, Tipperary ; and M. Maguire, Dunleer, all put up collections of Potatos that greatly increased the extent of the exhibition, and added much to its interesting character.

Thus it will be seen that not only the Dublin seed-houses were well represented, but that other parts of Ireland contributed to the display, while England and Scotland made their presence strongly felt.

THE CONFERENCE (WEDNESDAY).

The exhibition opened at 2 p.m., on Wednesday, and soon after the conference commenced in the Round Room, when various addresses were given from the platform. Mr. A. O. Watkins, the president of the Irish Gardeners' Association, offered some preliminary remarks, bearing upon the constitution, aim, and objects of that body, for particulars of which see p. 243. He then proposed that Lord Powerscourt take the chair.

Lord Powerscourt said they had met that day to celebrate the 300th anniversary of the introduction, by Sir Walter Raleigh, Queen Elizabeth's great courtier, of two of the greatest benefits ever conferred upon Europe, the Potato and tobacco, the latter of which might be used but not abused, when it could be considered as an advantage. Tobacco had been grown in Ireland, but the quality was rather inferior. He understood that vine growing had been contemplated in the South of Ireland, and it was worth trying. They had met, however, to deal with the Potato, which had become specially the food of the Irish people ; and he knew no vegetable in general use to compare with it except the Onion, which, he humorously remarked, made an excellent and well-known dish in mixture with the Potato, namely, Irish stew. If they wished to see what Sir Walter was like they could visit the historical portion of the National Gallery in Merrion Square, where his portrait was hung.

The exhibition before them was an excellent and instructive one. The Potato had had many vicissitudes ; and the national calamity of 1847 to 1848, due to the failure of the Potato crop was brought about mainly by a recurrence of bad seasons and ignorant cultivation. The evil effect of a similar visitation could not make itself felt to the same extent now, owing to improved means of communication through the country. With careful cultivation and harvesting the crop as soon as ripe, much of it might be saved that was now lost through leaving the tubers in the ground till required for use. No man, woman, or child is content nowadays unless Potatos formed part of their midday or evening meal. The table of the poor and rich alike was furnished with Potatos in some form or other, and he knew no other vegetable that could be cooked in so many different ways.

As a child, he could remember being forbidden to eat Potatos so that they might be given to the poor. A sort of bread was made of them mixed with flour or Indian corn meal. By scientific cultivation the number of varieties had been greatly increased, and the low price asked for them placed them within the reach of everyone. He had no high estimation for Magnum Bonum, and speaking of that variety reminded him of the schoolboy, who, when asked what *summum bonum* was, replied that it must be a superior variety of Magnum Bonnm.

In their unions, the schoolmasters were generally agriculturists as well, and they taught the young idea how to farm and cultivate the Potato among other things. The State schools were of great value in this respect, making the rising generation more independent and less helpless than it used to be. The knowledge gained there would be helpful to them whether they went back to the farms where they were born or went abroad. He advocated spraying of Potatos as the greatest possible preventive of disease known. Amongst his own Potatos he found that Champion still held the field against all others, though Beauty of Bute, Antrim, and others did well. He was trying Stourbridge Glory which had been highly recommended by the Earl of Dartmouth. A French variety named Batatas verosa had been given him by Lady Cadogan, and proved a good eatable Potato.

He then gave an account furnished him by the schoolmaster of Rathdown Union, who grows ten varieties for the inmates, including such early

varieties ss Early Puritan, Flounder, Red Boy, Kemp, Beauty of Hebron, and Beauty of Bute, which form a succession. The heaviest cropper was Beauty of Hebron which produced about twenty tons to the acre, free from disease, but they grew too large, being between 1 lb. and 2 lb. each. Beauty of Bute he considered the best Potato in cultivation, and Maincrop was only second in importance. Sutton's Abundance, in his opinion, came third on the list. His Lordship concluded his remarks by saying that he considered that Potatos should be dug when ripe.

Mr. F. W. Moore, of the Glasnevin Botanic Garden, expressed the gratitude they all felt to Lord Powerscourt for presiding. With regard to Mr. A. O. Watkin's proposal to start a Gardeners' Benevolent Institution, he considered the idea a good one, and it would be in no way antagonistic to the old institution in England.

Mr. W. Cotter, of Cabra, then read a paper on the "Past, Present, and Future of the Potato." The origin of the Potato was lost in obscurity, but it had certainly been introduced to Europe by Sir Walter Raleigh. He thought that the Champion was partly played out, but there was nothing yet to take its place as the poor man's Potato.

"Insect Enemies of the Potato" was the subject of a paper by Mr. G. H. Carpenter, B. Sc., F.L.S., of the Science and Art Museum. It was illustrated by numerous lantern views, and was much appreciated by the audience.

Professor Thomas Johnson, D. Sc., F.L.S , Royal College of Science and Keeper of the Herbarium, Science and Art Museum, read a paper on the "Potato in Health and Disease." We may here remind our readers that Professor Johnson studied at South Kensington and at Kew, under Dr. D. H. Scott, then of South Kensington, but now Honorary Keeper of the Jodrell Laboratory, Royal Gardens, Kew. Professor Johnson, in dealing with the subject, said that the average weight of Potatos was only 3½ tons per acre in Ireland, but was 3¾ tons per acre in the United Kingdom and 4½ tons in Germany. He dealt also with the economical uses of the Potato besides its use as food. It had been stated that the raising of varieties of Potatos had been quite neglected in Ireland, but he explained the operation which was simple enough, and illustrated his remarks by lantern slide views of the parts of the flower thrown on a screen. He also illustrated the life history of the Potato fungus in the same way. Potato scab had been variously described, and he believed there were several kinds of it, not yet fully investigated. He would call the attention of the conference to Stachys tuberifera which had been finding favour in England, France, and Switzerland as a substitute for the Potato. It had been variously named Crosnes du Japon and Chinese Artichoke. The tuber contained eight times as much nitrogen as those of the Potato, and 16½ parts consisted of a readily digested carbo-hydrate, known as galactan, more digestible than starch, being allied to dextrose or sugar. For this reason the tubers were recommended for invalids in preference to the Potato.

[A figure of Stachys tuberifera is given in THE GARDENING WORLD, Vol. III., p. 117.—ED.]

The lecture was listened to with great attention. This concluded the afternoon portion of the programme.

At 8 p.m. the confereuce was resumed under the presidency of Mr. A. O. Watkins. Arthur W. Sutton, Esq., F.L.S., F.R.H.S. (of Messrs. Sutton & Sons, Reading), then delivered a lecture on "The Potato," admirably illustrated by numerous lantern views, representing various phases of the Potato. There was a large attendance of visitors during the evening, and Mr. Sutton told his audience that interest in the Potato was keener at present than during any former period of its history. Recent researches showed that it was originally brought from the mountainous regions of South America in the neighbourhood of Quito; but that it was brought direct from Virginia in North America to this country by the colonists sent out by Sir Walter Raleigh. The lecturer then sketched the progress that had been effected in the cultivation of the noble tuber, especially in recent times. The average area for the last ten years, annually planted with Potatos in the United Kingdom, was 1,305,835 acres, giving an average return of 5,960,109 tons, or 4·57 tons per acre annually. He also furnished statistics concerning the cultivation and uses of the Potato in other countries. Much information on the methods of preventing the Potato disease was furnished by the lecturer; and here the numerous experiments conducted at Reading, stood him in good stead. The numerous trials of grafting the Potato on various other plants, but particularly on the Tomato, and *vice-versa*, furnished matter for much interesting comment.

Mr. John H. Parnell proposed a vote of thanks to Mr. Sutton for his paper, and this was heartily accorded. The conference closed at a late hour.

THE CONFERENCE (THURSDAY).

Proceedings in connection with the Tercentenary were resumed in the Rotunda on Thursday. The Lord Lieutenant was expected to attend and make a pronouncement of importance in connection with Irish agriculture. This probably, in a measure, accounted for the greatly increased attendance of visitors. His Excellency reached the Rotunda soon after 3 p.m., accompanied by the Countess Cadogan and various other titled personages. The Viceregal party were received by the president of the Irish Gardeners' Association, and other members of the executive. Miss Ada Watkins, daughter of the president, presented the Countess Cadogan with a beautiful bouquet of Orchids. The president welcomed their Excellencies, Lord and Lady Cadogan to the Tercentenary celebration, after which Mr. Shaw, the secretary, read the following address:—

May it please your Excellency,—We, the members of the Irish Gardeners' Association, beg to tender to your Excellency a hearty welcome on this important occasion, not alone in your capacity as the representative of our Most Gracious Sovereign the Queen, but also on account of the keen and generous interest taken by your Excellency and Lady Cadogan in promoting the prosperity of Ireland and the development of her industrial resources. The committee of the Irish Gardeners' Association, who have inaugurated this Tercentenary and exhibition of the Potato, beg to call your Excellency's attention to the lamentable deterioration of the variety known as "Champion," which is almost exclusively cultivated at the present time, and they suggest to your Excellency the advisability of Her Majesty's Government introducing, without delay, experimental stations throughout the country for the purpose of cultivating and comparing the principal round varieties of Potatos of recent introduction, with a view of selecting the most suitable for general use, and thus avert a possible recurrence of a Potato famine. The experiments hitherto carried out in a few districts by the Irish Land Commission and the Agricultural Department of the Commissioners of National Education in Ireland being entirely confined to investigations as to the mode by which the disease reaches the tuber of the Potato, and for the prevention or lessening of the disease upon the crop, we submit are entirely inadequate, inasmuch as the continuous planting of an exhausted variety year after year can only tend to a further deterioration of that variety because of its increased predisposition to disease. The importance of this suggestion will become apparent to your Excellency by the fact that but for the timely intervention of the Government in introducing and distributing the "Champion" some eighteen years ago, Ireland was on the verge of a Potato famine, the result of which would have been as dreadful as that of 1847-8. This association of practical gardeners, supported on this occasion by so many prominent agriculturists, will be asked to record their votes upon the respective merits of the Potatos exhibited at the conference, having regard to their suitability for the soil and climate of Ireland, and such record will be duly forwarded to your Excellency to place before Her Majesty's Government. We hope it may please your Excellency to extend your patronage to our association.

ALFRED O. WATKINS, *President.*
ROBERT M'CRAW, *Vice-President.*
JOHN J. EGAN, *Treasurer.*
JAMES M'DONOUGH.
JOSEPH A. ROCHFORD.
THOMAS SHAW, *Secretary.*

The Lord-Lieutenant made a lengthy speech, in which he said that the address was one of the most practical which had ever been presented him. Although the weather had threatened the Potato crop during last autumn, he thought it had not fallen much below the average after all. The variety of Potato known as the Champion had apparently failed to such an extent that it could not be relied upon for a crop; but he made bold to say that Ireland would not continue to rely on one staple product for her food, but as the cultivation of the soil continued to be improved the attention of the tillers would be directed to other products, so that the people would be freed from dependence on the Potato crop, which must at all times be a cause of anxiety, not only to the Government, but to the tillers themselves. He believed that the agriculturists of Ireland were gradually acquiring a knowledge that would enable them to vary their cultures. He hoped, nevertheless that the Potato would remain one of the staple industries of Ireland.

He reminded his hearers that they could not go on continually growing one variety year after year upon the same soil, but must introduce fresh seed of it from other countries. No class of Potato would grow continually on the same soil without becoming deteriorated. He had been asked whether it were possible by inquiry and experiment to ascertain what variety of Potato was best adapted to replace that which was failing. He looked to the creation of a Board of Agriculture in Ireland which would take all these things under consideration, and to which all classes of the community might appeal for information and assistance. He believed that in all human probability a Board of Agriculture would be created during the next Session of Parliament. He suggested that certain organised bodies should commence experiments in the meantime till a Board of Agriculture could be created and got into working order.

It sometimes occurred to him, when reading of the Potato as suitable for Ireland, to ask whether throughout the whole of Ireland only one soil and one climate existed. His opinion was that there were several soils and several climates, so that there may be more than one variety it is possible or necessary to cultivate. He then entered into a humorous dissertation about the good and bad cooking of Potatos. The promoters of the exhibition might have had a section in which to show how Potatos should be cooked. His idea of a Potato was that it should be a mealy production, appearing at least to be digestible. He had never been able to get his own properly cooked, and the lack of a section to demonstrate this matter was the only criticism he had to pass on the proceedings of the day. Then he concluded by hoping that permanent benefit would accrue to the great Potato industry and the wealth and prosperity of the country.

His lordship was much applauded during and at the close of his speech.

Mr. J. A. Rochford then read a paper prepared by Professor W. J. Malden, Principal, Sussex County Council Agricultural School, Cardington, Bedfordshire. Professor Malden had formerly been Agricultural Superintendent of the Royal Dublin Society. On this occasion his subject was "English and Irish Potato Cultivation and Trade."

Professor M'Weeney, M.A., M.D., Lecturer and Director of the Bacteriological Laboratory, Royal Albert Agricultural Training Institution, Glasnevin, followed with a paper on "Sclerotium, or Diseases of the Potato Plant: their Cause and Prevention." His paper was illustrated by specimens of the sclerotium stage of the disease, and other microscopic preparations shown by means of lantern slides; and practically took the form of a demonstration.

Messrs. Dobbie & Co., Rothesay, Scotland, had undertaken the preparation of a paper on "Twenty-five Years' Experience of Potato Culture in Scotland and the South of England." This was read by Mr. Andrew Mitchell, a member of the firm. The Conference then adjoined till 7.30 p.m.

Mr. A. Findlay, Markinch, Fifeshire, had prepared a paper entitled "Remarks on Raising New Varieties of Potatos," and on the resumption of the proceedings in the evening, this was read by Mr. J. A. Rochford. Mr. Findlay is the well known raiser of such varieties as Up-to-date, Farmer's Glory, The Bruce, and other heavy-cropping and disease resisting sorts, so that his paper dealt with his own acquisitions. He was followed by Mr. M. Maguire, Mullinscross, Dunleer, who read a paper on "Opinions upon the Disease and Cultivation of Potatos in Ireland."

The busy two days' Conference was brought to a close by the distribution of balloting papers to the members present, in order to determine which was the best Potato to take place of the Champion which had greatly degenerated.

GARDENING MISCELLANY.

WINTER-FLOWERING RHODODENDRONS.

These are grand objects when well done. I am alluding to those commonly called greenhouse Rhododendrons, but which succeed best in a mean temperature of about 60°. A great many beautiful hybrids have been put into commerce during the past few years. When a house can be devoted to their culture—as at Whetstone, Birmingham, the residence of G. H. Kenricks, Esq.—they are very attractive. The following are at the present time in flower, and as they vary considerably in colour, they make a grand display:—Favourite, Lord Wolseley, Princess Alexandra, Princess Teck, Amabilis, Lutea Rosea, Taylorii, Princess Royal, Princess Fredericka, Queen Victoria, Maiden's Blush, and R. jasminiflorum—a *good dozen distinct*. These and many others are doing remarkably well under the treatment they receive from Mr. J. V. Macdonald, the gardener.—*Rusticus.*

SOCIETIES.

ROYAL HORTICULTURAL.—*Dec. 15th.*

Orchids were the most prominent feature of the meeting on Tuesday last; for they were both numerous, well-flowered, and effective. They occupied more than half of one long table and a portion of that set apart for new plants. Pelargoniums, Cyclamen, Roses, fine foliage plants, and Apples were also noticeable on the several tables.

A large and tastefully set up group of Orchids was staged by Messrs. J. Veitch & Sons, Chelsea. The Cypripediums were very numerous and well-flowered. There were large pans of C insigne Chantini and C. i. montanum, and pots of C. oenanthum superbum, C. Ianthe, C. Sallieri, C. Euryades, and a group of C. leeanum, in a great variety of colouring. Odontoglossum cirrhosum carried four large panicles of bloom, and there were several others besides Cymbidiums and Oncidiums. (Silver Flora Medal.)

A magnificent and effective group of Orchids consisting chiefly of Calanthes was exhibited by J. T. Bennett Poë, Esq. (gardener, Mr. Downes), Holmwood, Cheshunt. Calanthe Veitchi and C. V. superba were shown in quantity and were notable for the strength of the spikes and the number of blossoms. Others well represented were C. vestita luteo oculata, and C. v. rubro-oculata. Vanda caerulea was grandly coloured, and Zygopetalum Mackayi bore six racemes of bloom on one pot plant, (Silver Flora Medal.)

Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, exhibited a spike of the beautiful Odontoglossum crispum schroderianum, also Laelia anceps amesiana, L. a. chamberlainiana, L. a. protheroeana, L. a. virginalis, and several Cypripediums with flowers of large size.

Messrs. Hugh Low & Co., Upper Clapton, staged a group of Orchids including Laelia anceps, Cattleya bowringiana lilacina, Odontoglossum grande and numerous hybrid Cypripediums.

Messrs. F. Sander & Co, St. Albans, staged a group of Orchids in which well-flowered pieces of Stenorhynchus speciosus were conspicuous. Dendrobium Johnsoniae, Oncidium crispum, Cymbidium winnianum, and Laelia gouldiana were also well flowered. Interesting was the uncommon Dendrobium sanguineolentum with purple-tipped segments recalling an Aerides.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited an extensive group of Orchids, for which he deservedly received a Gold Medal. He also received a Cultural Commendation for a large pan of Maxillaria lepidota profusely flowered. There were fine pieces of Cypripedium Sallieri, C. leeanum, C. l. giganteum and others. The Calanthes, however, were the most conspicuous feature of this collection and by far the most attractive to the general public. The colours of Calanthe Veitchi splendens, C. burfordiensis, C. revertens, and C. Wm. Murray were splendid. Pleasing and interesting were the paler varieties such as C. nivea, C. versicolor, C. jucunda, C. amabilis, C. Victoria Regina, and C. V. lactea, all of which served to set off the dark hue of the first-mentioned varieties.

Amongst new plants Messrs. J. Veitch & Sons exhibited Laeliocattleya Semiramis, L. Rosalind, and Epidendrum wallisic-ciliare all interesting in their way.

Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Berks, exhibited the beautiful white Dendrobium johnsoniae. J. Bradshaw, Esq. (gardener, Mr. H. Whiffen), The Grange, Southgate, staged a varied and beautiful lot of Odontoglossum crispum, spotted in a great variety of ways. Various Cypripediums were exhibited by E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Wilmslow, Cheshire; Major Mason, The Firs, Warwick; S. G. Lutwyche, Esq. (gardener, Mr. T. Paterson), Eden Park, Beckenham; and Thos. Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, Manchester. F. C. Jacomb, Esq. (gardener, Mr. Turner), Cheam Park, Surrey, staged a fine piece of Odontoglossum andersonianum leucochilum. Dr. Hodgkinson (gardener, Mr. J. H. Moore), The Grange, Wilmslow, Cheshire, showed some beautiful varieties of Laelia anceps. T. W. Temple, Esq. (gardener, Mr. Bristow), Layswood, Groombridge, Tunbridge Wells, staged a fine piece of Laelia anceps amesiana.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a very neat group of stove foliage plants, chiefly Dracaenas, in which a few pieces of Cypripediums were included. C. T. B. Haywood, C. Dauthieri, and C. oenanthum superbum were some of the most noteworthy among the latter. The foliage plants were clean and shapely samples throughout. Mention should also be made of two splendid little specimens of Terminalia elegans (Bronze Banksian Medal).

Mr. Farr, gardener to A. Pears, Esq., Spring Grove House, Isleworth, sent a splendid batch of Euphorbia (Poinsettia) pulcherrima. The plants were dwarf samples in 48-sized pots, and bore some fine heads. Not only were the bracts of great width and substance, but they were grandly coloured. The arrangement took the form of a circular group edged by small plants of Araucaria excelsa, Grevillea robusta, Panicum, and Isolepis (Silver Flora Medal).

A very interesting exhibit of berried plants, and one strongly suggestive of the approaching season was made by Messrs. Wm. Cutbush & Son, Highgate, N., of berried plants. Against a background of Kentias appeared a lot of beautifully berried plants of Skimmia japonica, arranged in two flanking groups. In the centre of these two batches were staged some well grown little samples of Citrus sinensis, bearing a profusion of the small orange-yellow fruits (Silver Banksian Medal).

A Silver Flora Medal was awarded to Messrs. Wm. Paul & Son, Waltham Cross, for some grand pot Roses of the new winter blooming variety Enchantress. From the samples submitted this would appear to be a very free form, and an excellent door. The plants in question, although they were large specimens in 8-in. pots were all obtained from grafts made last spring.

Messrs. John Laing & Sons, Forest Hill, S.E., sent a few foliage plants, including Dracaena Doucettii, Livistona rotundifolia, and Casuarina ericoides. In another part of the hall some well-berried plants of Solanum Capsicastrum, and miscellaneous foliage plants sent by the same firm appeared.

A quantity of cut Chrysanthemums was sent by Messrs. Young & Dobinson, Holmesdale Nurseries, Stevenage, for which a Bronze Banksian Medal was awarded.

Messrs. H. Cannell & Sons, Swanley, Kent, made a brave display with cut zonal Pelargoniums, set up in their usual effective fashion in pyramidal sprays, interspersed with Maidenhair Fern. Amongst the numerous fine varieties on view, Princess Alix, John Ruskin, Mrs. P. Routh, Enid, Birthday, Sunbeam, and Duchess of Marlboro' were some of the most praiseworthy. Side by side with the Pelargoniums appeared some excellent double Primulas in six inch pots. The named forms Annie Hillier, Earl of Beaconsfield, King of Purples, and Marchioness of Exeter, in addition to a fine double white form, were in grand condition. The committee awarded a Silver Gilt Banksian Medal for this fine exhibit.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., showed pans of Narcissus monophyllus, and N. Bulbocodium Clusii, Iris alata, and a pot of the seasonable Christmas roses.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, sent a collection of Cyclamen in first-rate order. The strength and vigour of the plants were remarkable, as also the great size and substance of the flowers. (Silver Banksian Medal.)

Mr. Empson, gardener to Mrs. Wingfield, Ampthill House, Ampthill, contributed a group of exceedingly well-grown foliage plants, just suitable, in fact, for table decoration. Crotons formed a large portion of the collection, and were very well coloured. A remarkably well-flowered piece of Laelia anceps was a central and prominent feature of this exhibit. (Silver Banksian Medal).

Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, received a Bronze Banksian Medal for cut Chrysanthemums in which were some good late samples of M. Chénon de Léche, M. Gruyer, and Golden Gate. The pretty and distinct Mrs. Filkins, was also conspicuous here.

Mr. Robert Owen, also sent a few cut Chrysanthemums; likewise Mr. W. J. Godfrey, Exmouth, Devon. Messrs. Crane and Clarke, March, had a small batch of winter flowering Carnations. Messrs. Jas. Veitch & Sons, Chelsea, submitted plants of Rhododendron nobilius, and R. Little Beauty, both of them belonging to the Messrs. Veitch's well-known Javanico-jasminiflorum section. Cut trusses of blooms representing older varieties were also forthcoming from the same firm.

Fruit was well represented, the collection of Apples especially were a great feature.

A comprehensive collection of Apples in first-rate condition came from Lord Wantage, Lockinge Park, Wantage (gardener, Mr. Fyfe). Warner's King, Blenheim Orange, King of the Pippins, Wadhurst Pippin, Lord Grosvenor, and Mere de Ménage were some of the best samples. Bunches of Muscat of Alexandria Grape were forthcoming from the same source as well as an excellent dish of Tomato Dwarf Champion (Silver Banksian Medal).

Upwards of fifty dishes of Apples were sent by Messrs. T. Rivers & Sons, Sawbridgeworth, for which a Silver Knightian Medal was awarded. Cox's Orange Pippin, Golden Reinette, Sandringham, Sutton's Beauty, Buckingham, Nancy Jackson, and Gascoigne's Scarlet were all splendidly coloured samples.

Messrs. John Laing & Sons, Forest Hill, S.E, contributed some excellent dishes of Apples in good preservation. Many of the leading sorts were included (Silver Banksian Medal).

The Veitch prizes for the best flavoured Apple and Pear again called forth a good deal of competition. Col. Brymer, M.P., Ilsington House, Dorchester, showed the most deserving Pear in Winter Nelis. Mr. W. Cotterell, the Gardens, Oxon Heath, Tonbridge, was second with Glou Morceau. Mr. W. King, gardener to J. Colman, Esq, Gatton Park, Reigate, had the best Apple in Cox's Orange Pippin, Col. Brymer, M.P., taking the second place with Blenheim Orange.

Tomato Frogmore selected was exhibited in the form of fruiting sprays by Mr. Owen Thomas, The Royal Gardens, Frogmore. Mr. Farr had samples of Tomato All the Year Round, and Messrs. Young & Dobinson sent a dish of the lately-certificated variety, Young's Eclipse.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Culture of Ranunculus.—*F. L., Salisbury*: We do not consider that the cultivation of the garden Ranunculus (R. asiaticus) would be very successful in pots. The tuberous roots should be planted in the open ground towards the end of February according to state of the weather. You can make arrangements at once, however, by preparing the soil. If the ground is heavy, clayey, or wet, these conditions must be rectified at once. Take out the natural soil of the beds to be planted to a depth of 18 in. or 2 ft. Then loosen up the subsoil and place some brick bats or other rubble in the bottom for drainage. Now make up a compost consisting of two parts of friable loam to one of leaf mould and well-decayed farmyard manure in mixture; add a good quantity of sharp river or other sand, and mix the whole together thoroughly. Fill up the bed or beds till above the level of the surrounding soil, and leave them to settle down by the aid of the winter

rains. About the end of February or the beginning of March take out holes about 1½ in. deep and 6 in. apart each way all over the beds. Then take the roots and press them into the soil singly; put some sand over them, fill up the holes and press the soil down firmly. Rake the beds level. Top-dress the beds with leaf mould in May, if the weather is dry, and give the beds a good watering occasionally in the evenings. The flowers can be prolonged by shading them in hot weather though this is not necessary if you prefer effect at a distance.

Large Holly.—*T. A. S.*: We should not advise you to transplant it straight away, but rather to take out a trench all round the tree about 3 ft. from the stem; this would leave an undisturbed ball of soil about 6 ft. in diameter. Cut back all the strong roots you meet with, doing it with a sharp knife, or cut them with a saw and then trim the cut surfaces. Put some good soil all round the ends of the roots; fill in the trench and let the tree make a year's growth, by which time the fibrous roots will be more numerous. After that we should prefer waiting till April when the tree might be transplanted in showery weather.

Eccremocarpus scaber.—*D. M.*: This climber naturally dies down to the very base when cold weather sets in, so that you need have no fear for it provided the soil in which the roots are situated is naturally fairly dry. You can protect it by placing a quantity of dry leaves over the roots, and then placing a thin layer of soil over the leaves to prevent birds or the wind from scattering the protecting material all over the place. Soil would also look more tidy in winter than loose leaves.

Passion-flower and Ivy.—*B. Rodney*: The flowers would be well shown off by a back ground of Ivy leaves; but we do not think the two plants would thrive well together. True, the Ivy would serve to protect the stems of the Passion-flower in winter, but it would act injuriously on the latter in spring by obstructing the light and preventing the heat of the sun from urging on the young leaves and growth. The roots of the Ivy would also rob those of the Passion-flower of nutriment, so that the latter would be starved, and most likely fail altogether in a few years.

Filling up Gaps in a Hedge.—*J. Herd*: It could be made fairly close in time by bending down some of the stems so as to bridge over the holes; but under such treatment it would never make a beautiful hedge, and should not be tolerated in the vicinity of well-kept grounds. Rather than waste time with it we should advise rooting up the old hedge, trenching the ground and planting afresh either with Beech or Hawthorn. A good double hedge might be made by planting a line of the latter next the roadway and a line of Beech next the vegetable ground. Such a hedge would afford a considerable amount of shelter, as the Beech generally retains its leaves all the winter. A temporary fence of wire or wood might be put up till the hedge grows to the required height.

Pentstemon Seed.—*T. Wilson*: Sow the seeds in heat in February; transplant into boxes 2 in. apart each way and grow on the seedlings in heat for a time. When they make plants about 2 in. high place them in a cooler house to harden them off; give plenty of air, as the temperature rises in spring, till they may be placed in cold frames and finally planted in the open early in May if the weather is suitable. They will flower during next summer.

Names of Plants.—*J. L.*: 1, Erica gracilis: 2, Jasminum nudiflorum; 3, Pteris hastata; 4, Sparmannia africana; 5, Oxalis valdiviensis.—*A. White*: 1, Thuya nutkaensis (Thujopsis borealis is only a synonym); 2, Thuya orientalis; 3, Juniperus communis suecica; 4, Taxus baccata adpressa.—*R. W.*: 1, Oncidium tigrinum; 2, Odontoglossum lindleyanum; 3, Masdevallia ochthodes; 4, Oncidium kramerianum. —*H. J.*: Petasites fragrans.—*W. Pepper*: Cymbidium giganteum.

Communications Received.—Geo. Potts.—Sutton & Sons.—J. G. Pettinger.—Omega. J. M., B.—Mum.—H. Snowden Ward.—Gyp.—James Watt.—A. Hope.—L. J.—A. J.—S. B.—W.—Melton Mowbray.—F. Williamson.—L. L. A.—B. D.—F. M. N.—T. Gregory.—B.—Pete.—Y. A.—Subscriber.

TRADE CATALOGUES RECEIVED.

Sutton & Sons, Reading.—Amateurs' Guide in Horticulture for 1897.

John Downie, 144, Princes Street, Edinburgh.—Illustrated Catalogue of Floral Designs.

John Sharpe & Son, Bardney, Lincoln.—Wholesale Trade Catalogue of Vegetable and Flower Seeds.

LONDON SEED TRADE.

December 15th, 1896.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report, as usual at this time of the year, very little is moving in agricultural seeds. Prices of all Clovers and Grasses are at a very moderate range, and a brisk trade may be expected after the New Year opens.

COVENT GARDEN MARKET

December 16th, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Apples.....per bnshel	2 6	4 0	Grapes, per lb	0 6	1 6
Black Currants ½ sieve			Pine-apples, —St. Michael's each	2 6	6 0
Red " ½ sieve			Plums per ½ sieve.....		
Cherries half sieve...			Strawberries, per lb.		
Nova Scotia Apples per barrel			Tasmanian Apples per case		
Cob Nuts and Filberts, per 100 lbs.	35 0				

Vegetables.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
Artichokes Globe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus, per bundle			Horse Radish, bundle	2 0	4 0
Beans, French, per half sieve	2 6	2 9	Lettuces ...per dozen	1 3	
Beet..... per dozen	2 0	3 0	Mushrooms, p. basket	1 0	1 6
Brussel Sprouts, per half sieve	1 6	1 9	Onions.....per bunch	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunch	0 3	
Carrots ... per bunch	0 3		Radishes... per dozen	1 6	
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket		
Celery.....per bundle	1 0		Small salading, punnet	0 4	
Cucumbers per doz.	1 6	3 0	Spinach per bushel	2 0	2 3
Endive, French, doz.	1 6		Tomatos..... per lb.	0 3	0 4
			Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0	Mimosa, per bnch. ...	1 0	1 6
Asparagus Fern, bun.	1 6	3 0	Orchids, doz. blooms	1 6	12 0
Azalea, doz. sprays...	0 9	1 0	Pelargoniums, 12 bun.	4 0	9 0
Bouvardias, per bun.	0 6	0 9	Pyrethrum doz. bun.	2 0	4 0
Carnations doz. blms.	0 6	2 0	Roses (Indoor), doz.	0 6	1 6
Chrysanthemums, doz. blooms	1 0	6 0	" Tea, white, doz.	1 0	2 0
Chrysanthemums, doz. bnches.	3 0	6 0	" Niels	6 0	9 0
Eucharis ...per doz	3 0	4 0	" Safrano	1 0	2 0
Gardenias ...per doz.	1 6	3 0	" (English),		
Geranium, scarlet, doz. bunches	4 0	9 0	Red Roses, doz.....1	0	1 6
Hyacinths (Roman) doz. sprays	1 0	1 6	Pink Roses, doz.	2 0	3 0
Lilium lancifolium, doz. blooms	1 6	2 6	Smilax, per bunch ...	2 0	4 0
Lilium longiflorum per doz.	5 0	8 0	Tuberoses, doz. blooms	0 4	0 9
Lilac, White (French) per bnch.	4 0	5 0	Primula, double, doz. sprays	0 6	0 9
Lily of the Valley doz. sprays	1 0	2 6	Poinsettia, doz blms.	9 0	15 0
Marguerites, 12 bun.	2 0	4 0	Violets (French) per doz. bnches.	1 6	2 6
Maidenhair Fern, 12 bs.	4 0	6 0	Violets (English) per doz. bnches.	1 6	2 6
			Violets (Parma) per bnch.	3 0	4 0
			Violets Czar, large, per bnch.	2 0	3 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0	Erica Hymalis, per doz.	12 0	15 0
Aspidistra, doz.....	18 0	36 0	Ferns, invar., per doz.	4 0	12 0
" specimen	3 0	5 0	Ferns, small, per 100	4 0	6 0
Chrysanthemums, per doz.	4 0	9 0	Ficus elastica, each	1 0	5 0
" per pot	1 0	2 0	Foliage Plants, var., each	1 0	5 0
Cyclamen, per doz....	9 0	15 0	Lycopodiums, doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0	Marguerite Daisy doz.	9 0	12 0
Dracaena viridis, doz.	9 0	18 0	Myrtles, doz.	6 0	9 0
Euonymus, var. doz.	6 0	18 0	Palms in variety, each	1 0	15 0
Evergreens, invar. doz	6 0	24 0	Palms, Specimen ...	21 0	63 0
Erica, per doz.	9 0	15 0	Poinsettia, per doz....	12 0	18 0
			Solanums, per doz.	12 0	15 0

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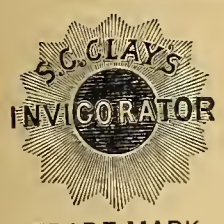

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"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, DECEMBER 26th, 1896.

POPULAR WINTER FLOWERS.—If one were to visit private gardens in autumn and winter with the view of determining what were the most popular flowers, he would soon find that a large number of places would have to be visited in order to draw conclusions as to the most popular flowers for winter work. Individual tastes vary considerably, and proprietors, with plenty of hothouses at command and gardeners to tend them, are in a position to gratify that taste by encouraging the cultivation of a great variety of flowers according to the season and the possibilities of the same. On the contrary, if one were to visit the open markets and the florist's shops of London, it is easy to determine in a short time what are the leading or most popular flowers. The British public is the ultimate factor in determining this; and the market growers and gardeners generally, who supply the trade requirements, are to a great extent bound by the will of the public. New subjects may be placed upon the market by enterprising growers, but unless the public will buy them, it is useless to supply the same.

To put it tersely, it may be said that white, yellow and brown are the three leading colours in winter, in the order of their importance. Even these three would permit of the use of a considerable number of genera and species for market purposes provided they come up to the standard of requirement in other points. White flowers *per se* would not in every case fulfil the requisites. They must carry well and be presentable after reaching the market, and have stems sufficiently rigid to carry the blooms erect or nearly so without artificial support when placed in vases, glasses or other vessels containing water in which they may be placed for dwelling-room or dining-room decoration as the case may be. White flowers that would come into this category are very varied in summer, but less numerous at present. To indicate what we mean, we should mention white Chrysanthemums, Roman Hyacinths, Richardias, Lily of the Valley, Lilac, Azaleas, Lilium longiflorum Harrisii, Eucharis, Roses and others of that class. Yellow-flowers are supplied by means of Chysanthemums, Oncidium varicosum, Duc Van Thol Tulips, Tea Roses and Everlastings, though the dried flowers of the latter should hardly be placed in this category. Brown and bronzy hues may also be supplied in the form of Chrysanthemums, also by Cypripediums, Oncidiums, including the beautiful O. Forbesi and O. crispum. During the winter season, at least, the range of brown flowers is limited. Scarlet may be supplied by Pelargoniums, Carnations and Duc Van Thol Tulips, but the requirements in this case are not great.

AMERICAN VINES AND PHYLLOXERA.—For some years past we have been well aware of the fact, that in countries where Phylloxera vastatrix has been ravaging the vineyards, American Vines have been used as stocks on which to graft European ones, simply because they were found to resist the attacks of the Vine Louse better than the latter. Our contemporary *The Daily Telegraph* has made a discovery relative to the above in the last "Diplomatic and Consular Report on Trade and Finance," sent by Consul Hearn from Cadiz to the Marquis of Salisbury. A vine-grower in the Montilla district procured some American Vines with the purpose of replanting a vineyard which had been ravaged by the Vine Louse, and in order to keep them fresh placed some of them overnight in a pool containing gold fish. On the morrow all the fish were dead. To prove whether the American Vines had brought about this result, the vine-grower put some more gold fish in a pool together with some European Vines; but they were alive and well next day. The European Vines were replaced by American Vines, and next morning the fishes were all dead. Our contemporary thinks this a case of *instantia lampadis*, that is, "instance of the lamp"—as if mother Nature had held up a lamp to show us some previously hidden secret. We hope the discovery may prove to be true; but even then we could only regard it as a scientific explanation of the already discovered fact that the American Vine (Vitis Labrusca) had at least some power of resistance against the attacks of Phylloxera.

Revenue from the Waverley Market, Edinburgh.—At the annual meeting of the Edinburgh market gardeners at 5, St. Andrew Square, Edinburgh, on the 15th inst., it transpired that there was a clear revenue of £2,700 from the Market this year, and that 710 more carts entered during the year, than in the previous season. In letting the Market for occasional purposes, the revenue derived was £2,276 or £600 more than last year.

Mr. William Walters, sub-foreman in the Orchid houses, Kew, has received an appointment with Messrs. F. Sander & Co, St. Albans.

Mr. James Rourke, who came from Glasnevin Botanic Gardens to the Royal Gardens, Kew, in March 1894, has received an appointment in Glasgow Botanic Gardens.

Gardeners' Royal Benevolent Institution. — We intimated in our last issue that Lord Rothschild had fixed Wednesday, 26th May next, for the celebration of the 58th Anniversary Festival of this Institution; and we are now enabled to state that the date given coincides with the first day of the Temple Show.

The Death is Announced, at the age of eighty-four, of the Rev. Charles Fellowes, M.A., rector of Mautby, vicar of Shotesham St. Mary's, and rector of Shotesham All Saints, Norfolk. The deceased was appointed to his livings fifty-eight years ago, and he had been a prominent figure in East Anglian life. He was a magistrate for the county, and filled many positions of public usefulness. His hobby was horticulture, and he was well known to florists and growers all over England.

The Ayrshire Gardeners' Mutual Improvement Association meets on the first Thursday of every month, in the Carrick Street Hall, Ayr, to read papers and conduct discussions on subjects pertaintaining to horticulture. Some of the papers for the ensuing year are "Hardy Climbers," by Mr. T. Bryden, Dennison Nursery; "Forest Trees," by Mr. A. Taylor, Seafield Gardens; "Roses: How to Grow and Show," by Mr. J. Thomson, Airlie Gardens; "The Eucharis and Pancratium," by Mr. A. Henderson, Fullarton Gardens; "Popular Flowering Plants," by Mr. W. M'Connochie, Doonside Gardens; "The Beauty and Order of Garden Scenery," by Mr. J. Good, Auchendrane Gardens; and "Fruit Growing for Profit," by Mr. D. M'Cutcheon, Doonfoot. Prizes are offered for competitions by members.

Concerts at Altrincham.—The annual concerts in aid of the Gardeners' Royal Benevolent Institution and Royal Gardeners' Orphan Fund, given under the auspices of the concert committee of the Altrincham and District Gardeners' Improvement Society, took place on the 1st and 2nd inst. in the Literary Institute, Altrincham. A most attractive programme of vocal and instrument music was provided each evening, and on both occasions the large hall was well filled with an appreciative audience. After paying all expenses the balance left is £62, which the committee propose to divide as follows:—£31 10s. to the Gardeners' Royal Benevolent Institution, and £30 10s. to the Royal Gardeners' Orphan Fund. This is the fifth season of these concerts in Altrincham, and the total amount raised by the committee now reaches £220, a result far beyond our expectations. Last year the amount was £56 10s., and this year we have gone one better. I am sure Mr. Barron and Mr. Ingram, the esteemed secretaries of the respective societies, would gladly welcome similar achievements by gardeners in other districts throughout the United Kingdom.—*Chas. Hewitt (Hon. Sec. and Treasurer).*

Destruction of Larks.—What can the wanton destruction of larks to the point of extermination end in but economic injury? Larks are valuable friends of the farmer, and their destruction will undoubtedly result in a loss to the community. They hang everywhere about the poulterers' shops in festoons and garlands! In this connection, the statement that the British Produce Supply Association have refused to trade in larks will give satisfaction to many people. A correspondent to the *Daily Chronicle*, after paying a visit to the London market, wrote:—"The sight of the little songsters all trussed up in the approved way for cooking seemed to be such an unnecessary act of cruelty that one is bound to raise one's voice in protest. Surely there are sufficient varieties both of game and of wild birds (?) to allow of these little creatures being spared. It is pleasant to be able to state that the British Produce Supply Association have in a way protested against this outrage by stating in their price lists that larks are not to be supplied. This is a step in the right direction; the next should be the total prohibition of the slaughter of these small singers."—*Joseph Collinson, Wolsingham, Co. Durham, December 19th, 1896.*

The local distribution of plants depends largely upon the nature of the soil. Moisture is another factor of great importance in the case.

Cactus Dahlia Miss Webster.—It will only be giving "honour to whom honour is due," if we say that the new white Dahlia, "Miss Webster"—the greatest advance in the white Cactus class yet seen—was raised by Mr. William A. Kent, Newchurch, Sandown, Isle of Wight. It has received many certificates of merit, and an Award of Merit from the R. H. S.; and the whole stock has passed into our hands.—*Dobbie & Co.*

Chrysanthemums at Dunmail.—Archibald M'Kenzie, Esq., at his fine establishment at Dunmail, Cults, is credited with having one of the finest collections of 'Mums north of the Tweed. Mr. W. Morgan, the gardener, carried off first honours at the recent Aberdeen show. Amongst the many fine samples to be seen at Dunmail are four grand blooms of Dorothy Shea, in both the red and yellow shades. Three blooms of Van den Heede are, if anything, even more conspicuous. Florence Davis, Mrs. C. H. Payne, Vivian Morel, and Mrs. W. E. Clark have all done remarkably well.

Death of Mr. Robert Warner.—We regret to announce the death of this eminent gentleman, well known in the annals of horticulture in connection with his writings on Orchids, including *Warner's Select Orchids*, and articles in *Williams' Orchid Album*. His name is commemorated by the valuable, but not over-plentiful, Cattleya Warneri, which flowers during summer. Mr. Robert Warner, F.L.S., was a member of the firm of Messrs. John Warner & Sons, Limited, engineers of Jewin Crescent, Cripplegate, London, E.C. His residence was Widford Lodge, Chelmsford, and formerly at Broomfield, in the same locality. Cattleya Warneri flowered for the first time in this country, at Broomfield, in 1860. Mr. Warner had in fact been a noted grower of Orchids, and an enthusiastic writer about them in his younger days. He died at his residence on Thursday, the 17th inst., at the advanced of 81, and was conveyed to his last resting place on Wednesday, the 23rd inst.

Chester Paxton Society.—The annual general meeting was held in the Grosvenor Museum, Chester, on Saturday, the 12th inst., the president of the society, Mr. N. F. Barnes, Eaton Gardens, occupying the chair. The hon. secretary, Mr. G. P. Miln, in submitting his report for the past year, pointed out that since the last general meeting twenty-six new members have been added to the society as well as an additional number of subscribers. The finances of the society were also reported to be in a satisfactory condition, a substantial balance being carried forward to next year's account. The chairman and other gentlemen afterwards commented upon the flourishing condition of the society, and it was eventually agreed to enlarge the committee, the following being duly elected:—Messrs. John Taylor, J. D. Siddall, Yeats, Weaver, Brain, Wynne, Mosford, Edge, Wynne-Ffoulkes, Stubbs, Hitchcock, Pierce, Flack, Forsyth, Gray, Breen, Jackson, and Whitaker. Mr. Barnes was re-elected president; Messrs. Thomas Weaver and R. Wakefield, vice-presidents; and G P. Miln as hon. secretary.

Proposed Photographic Guild.—We call the attention of our readers, who are amateur photographers, to the attempt to form a photograpic guild to provide the advantages of a society for isolated photographic workers all over the world. At present no admission fee will be charged, but there will be an annual subscription of five shillngs, payable in advance. Some of the advantages are that every member shall be supplied with a badge of membership as a means of identification and introduction; his name will be published in the quarterly list to be issued to all members; to form a list of professional photographers who may be prepared to supply prints for re-production in newspapers, books, &c., to arrange a list of hotels willing to accept a uniform tariff; to secure reduced railway rates for members travelling and carrying their badge and apparatus: to provide suitable, but not expensive, offices as a guild hall, with reading-room, library, dark rooms, &c., in London; to provide a circulating library of reference books on photography, especially of those that are difficult to procure, rare or expensive; to obtain permissions to photograph in private domains, &c. The temporary offices of the proposed guild are at 6, Farringdon Avenue, London, E.C.

Christmas Window Decorations.—An original idea of window decoration has been executed by the well-known florist and seedsman, Mr. John E. Knight, of Dudley Street, Wolverhampton, at the establishment of a local clothier. The whole window has been utilised, and presents the appearance of a forest scene in September. A charming arrangement has been made of Palms, Ferns, Fir trees, bark, and a variety of plants; and a fox and couple of badgers add to the realism of what constitutes a very pretty and novel picture, bearing striking testimony to the artistic ingenuity of the arranger.

Messrs. William and Edward Sherwood.—Last Saturday evening, Mr. N. N. Sherwood gave a dinner in the Royal Venetian Chamber, the Holborn Restaurant, London, to celebrate the introduction of his sons, Messrs. William and Edward Sherwood, to the firm of Messrs. Hurst and Son, Houndsditch, London. More than 100 men of the staff of the firm were present, besides a number of friends and visitors, who filled the large chamber above mentioned. Old and trusted servants and managers of departments were present in strong force, including Mr. John Key, Mr. Titt (manager of the shop), Mr. Hodgson (superintendent in the warehouses), Mr. T. N. Cox (manager of another department), Mr. V. F. Cummings (warehouse clerk), Mr. Hugh Aiton (the well-known traveller for the firm), Mr. D. Fairley, Mr. J. E. Dixon, Mr. E. Griffiths, Mr. Crichton, Mr. A. Cox, Mr. R. C. Tucker, Mr. T. A. Baldwin, Mr. R. Cameron Tanner, Mr. A. Spencer, Mr. J. N. Sampson, and Mr. T. A. Washington. Many of the above have been in the service of the firm for periods varying between 20 and 32 years. All sat down to an excellently got up and well-served menu, under the presidency of Mr. N. N. Sherwood. After the usual loyal toasts were proposed by the chairman, "The Health of Mr. William and Mr. Edward Sherwood" was proposed by Mr. Harry J. Veitch, who said that the young gentlemen in question were called upon to inherit a great name by their connection with the firm of Hurst and Son, a name that was known all over the world. He spoke at some length, giving the young men much advice and encouragement, and concluded by wishing them long life, health, and prosperity, and numerous friends. Mr. William Sherwood suitably replied, and his brother, Mr. Edward Sherwood, then responded, thanking all present for their good wishes expressed through Mr. H. J. Veitch, and hoping that his father's friends would also be his brother's and his. "The Visitors" was proposed by Mr. T. N. Cox. "The Press" was next proposed by Mr. George J. Ingram, and the toast was responded to by Mr. G. Gordon. Mr. Hugh Aiton next proposed "The Chairman and Success to the Firm of Hurst and Son," and spoke at some length, and with feeling, concerning the cordiality that existed between the principal of the great firm of Hurst and Son and the employees, inserting some humorous statements now and again, for which he was applauded by his fellow-workers. In speaking of Mr. N N. Sherwood Mr. Aiton said that he not only held the purse strings, but the hearts of his men as well. Mr. N. N. Sherwood replied, and said that he intended always to deal with his staff as he had done in the past, maintaining the present good relationships between employer and employed, and hoped that his sons after him would do likewise. He also hoped that he and his staff would pull through as they had done during the past 34 years of his service with the firm. He thanked them for the hearty way they had received his sons. "The Employees" was proposed by the chairman in a way that showed the excellent relationships existing between the chief and his staff. Mr. Hodgson and Mr. Titt, two members of the staff of long standing, responded. Mr Edward Sherwood proposed "The Ladies," including wives and sweethearts, to the great delight of the employees. There were several other speakers, the visitors including Mr. James Herbert Veitch, of Messrs. Veitch and Sons, Chelsea, The toast list and programme was a long one, consisting of songs, solos, and recitations, the musical talent, vocal and instrumental, being mostly supplied by members of the staff, including Messrs. D. Fairley, J. E. Dixon, Griffiths, Crichton, T. N. Cox, V. F. Cummings, A. Cox, R.C. Tucker, J. A. Baldwin, R. Cameron Tanner, T. A. Washington, and A. Spencer, the latter of whom gave a recitation. A long and very enjoyable evening was finished up by the singing of "Auld lang syne."

SUTTON'S STAR PRIMULA.

THE general tendency at the present day in connection with the raising of new varieties of Chinese Primulas, is to foster the production of dwarf and compact plants with flowers of massive size. This is well in its way, but it must not be overlooked that such varieties are produced at the expense of the natural gracefulness of the original. For conservatory decoration, elegance, and gracefulness are productive of light and charming effects that mere size and massiveness are incapable of accomplishing. In Sutton's Star Primula we get a slender habited, rather tall plant, producing a profusion of flowers, about ¾ in. in diameter, in tiers or whorls one above the other, forming a pyramidal mass of blossom, whose general appearance strikes the eye of the beholder as peculiarly graceful and quite distinct from anything in general cultivation. Under good cultural treatment, the plants attain a height of 18 in. to 2 ft., and a proportionate width. Already more than one cultivator has learnt how to grow this new race of plants to great perfection as recorded in a previous issue of THE GARDENING WORLD, p. 229. The flowers are white, flaked to a slight extent with crimson, and their starry forms are well displayed, owing to their relatively small size, the slender character and great length of the supporting stems. The leaves are of the ordinary type. The variety under notice bears the same relation to the ordinary Primula sinensis as the single to the double Dahlia. We hope to see varieties of various colours produced presently. For this opportunity of placing a reproduction of Sutton's Star Primula before our readers, we are indebted to Messrs. Sutton & Sons, Reading.

SUTTON'S STAR PRIMULA.

A GOOD COS LETTUCE.

ALTHOUGH there are many sorts of Lettuces before the public it is very doubtful if there has ever been a Cos variety that can surpass a good stock of the true Old Bath Black Seeder.

It is very difficult to obtain a good true stock as compared with what prevailed twenty-five years ago. For several years I have been trying to get a good strain, and have not succeeded till last year. In the autumn of '95 I was looking through the nurseries at Downham Market, Norfolk, and saw a grand strain. I at once ordered some seed and sowed it for standing the winter. When the spring came round I was rewarded with some of the best Lettuces I ever tasted. At the present time, December 12th, we have a grand batch growing on a raised border facing south, just fit for tying up; these will have hand-

lights placed over them, tying them as needed covered to keep out frost. In this way we hope have good Lettuces through the winter.

I am old-fashioned enough to think there are no other Lettuces as good in flavour as this sort. Be this as it may, I am certain there is no variety that stands the winter like it. I am aware it wants to be tied up, but this is no objection to winter Lettuces—*J. C., Chard.*

THE FUTURE OF THE BIRMINGHAM SHOW.

BIRMINGHAM has so long been identified with a high degree of excellence in its flower shows, particularly with regard to the annual Chrysanthemum festival in the Town Hall, that usually there has been room for only one regret, and that is, that more space has not been at the disposal of the committee. With a greater area better justice might be done to the very beautiful displays of grouping and table decorative work; besides which, the large numbers who visit these shows might with comfort see the exhibits. With only a narrow balcony space in which to arrange heavy entries of cut blooms, by far the larger portion of the visiting public probably go away without seeing half the beauty of the show. The use of a basement hall is also a most undesirable feature, both for exhibitors and public.

It is with interest, therefore, we learn that a movement is afoot for the acquirement of the Bingley Hall on the occasion of the next show. Here there would be a grand opportunity of arranging the exhibition on a proper basis; and we strongly recommend all well-wishers of the Birmingham and Midland Counties Chrysanthemum Society to use their influence in order to effect the departure thus indicated in the society's shows. Everyone knows the suitability of the Waverley Market in Edinburgh as a site for flower shows, and Bingley Hall would form a formidable rival in England to that famous show.

SUTTON'S AMATEURS' GUIDE.

THE new edition of this horticultural guide for 1897, issued by Messrs. Sutton & Sons, Reading, not only maintains its former high standard in the matter of comprehensiveness and finish, but we are perfectly convinced that it excels all its predecessors. In this view we have already been corroborated and supported from an independent source, notwithstanding the issue of the "Guide" only last week. The photographic illustrations are decidedly superior to those of last year, excellent as they were. We scarcely know whether to admire most the illustrations of vegetables or flowers; but we consider that the photographic representations of vegetables have been brought more on a par with those of the flowers on this occasion.

Solid and massive products of the kitchen garden are more difficult to reproduce with any degree of satisfaction than the lighter and more graceful productions of the flower garden. We therefore call attention to such instances as the photographic representations of Tomato Sutton's Best of All, Sutton's Improved Queen Onion, Sutton's Mushroom Spawn, Brussels Sprouts, Sutton's A1 Kale, Sutton's Blood Red Beet, Sutton's Earliest of All, and Excelsior Climbing French Beans, Sutton's A1 Runner Beans, various garden Peas, and a view of a portion of their Gold Medal exhibit at the last Temple Show, as triumphs of the art of photography. It is almost invidious to single out one view more than another, for every one of them is certainly excellent. Sutton's New Year Savoy (p. 38) looks almost real, so admirably is every wrinkle of the leaves brought out.

The representations of Potatos are again of great excellence. Indeed, the noble tuber is the subject of special care and attention at Reading, as the numerous trials annually testify. Carefully and beautifully executed illustrations are those of Sutton's Ninety-fold, Ringleader, Epicure, Ne Plus Ultra, Supreme, Windsor Castle, Reliance, Triumph, and The Sutton Flourball, Potatos all of the firm's own introductions. It is difficult to see where further improvement could be effected, short of the natural colours, in photographic representations of such solid bodies as Potato tubers.

Amongst the floral illustrations a large plantation of China Asters comes out remarkably well, showing the boundaries of different varieties by the gradation of tones in black and white. In almost every case the meshes of the screen used by the artist to produce these pictures, have been extremely fine. The beds of Begonias as grown in the open are perfect pictures. The massive doubles grown under glass also come out remarkably clear, as do the Calceolarias, Marguerite Carnations, Cyclamens, Gloxinias, Pansies, Chinese Primulas, Saintpaulia, bedding and other Stocks, Cactus Dahlias, and many others of Messrs. Sutton's specialities. The crowning picture of all the flowers is the full page illustration of Gloxinia flowers, which are remarkably lifelike. Here also are some excellent woodcuts; and that the letterpress and general execution of the "Guide" are equal to the hundreds of illustrations, goes without saying.

ORCHID NOTES & GLEANINGS.

By THE EDITOR.

Dendrobium nobile album Feddal Var, *Nov. var.*—I am in receipt of some flowers of two varieties of Dendrobium nobile from Mr. Jas. Thomson, The Gardens, Feddal Braco, Perthshire. The plants were bought out of a lot imported as Dendrobium nobile album. Now the latter was originally described in *Le Moniteur* and *L'Orchidophile*, two French papers, according to which the sepals and petals were pure white, and the lip yellowish-white, with the usual crimson-purple blotch in the throat. Now the variety under notice differs in having a light rose blotch in the throat, with a tint of red on the sides, and in this respect it is evidently sufficiently distinct from a garden point of view to receive a distinct name. The flowers are small, but pretty. The plant, on the contrary, is robust. The other variety sent had dark purple sepals and petals, recalling D. nobile wallichianum to some extent.—*J. Fraser.*

DUNDEE CHRYSANTHEMUM SHOW.

I WOULD like to correct a mistake Mr. McDonald made in his criticism on the report of the Dundee Chrysanthemum Show (see p. 202). He says that in the open class for pot plants "there has been no competition for two years, and only two three years ago." Now the facts are that in 1894 there were three competitors—namely, Messrs. Kennedy, Collie, and Keillor; in 1895 two, Kennedy and Keillor; and 1896 Kennedy—a gradually diminishing number, and bearing out Mr. Machar's contention that the competitors have been frightened off the field. If Mr. McDonald has not been "fibbing" he must have been contracting "just a wee bit." Apropos of the specimen plants shown at Dundee, I noticed on p. 211 that Mr. Rushton, who was one of the judges at Dundee, had also been judging at Ayr, and he is reported to have said "that he did not think there was anything in Scotland to equal the *first prize* exhibit. One of the plants of the exhibit stood 8 ft. high and the other three plants came closely behind it. Now a specimen plant could hardly have a greater defect than to be of the enormous height of 8 ft. I would recommend to the cultivators about Ayr, for their next year's show, Mme. C. Audiguier on the authority of Mr. Molyneux (p. 217), who said it would grow 14 ft. high. It would be a great advance on this year's show. The aim of both raisers and cultivators has been to reduce its ungainly height since ever the Chrysanthemum became a popular flower; and an exhibit of the kind to be lauded by the judge, showed that he did not appreciate the constant effort of raisers and cultivators in this direction. What constitutes a perfect specimen plant of the Chrysanthemum would be a good subject for some of the numerous correspondents of THE GARDENING WORLD, to discuss or define.—*Mum, December 15th.*

THE ORCHID HOUSES.

LYCASTES.—For autumn and winter flowering this genus is a most valuable one. The individual flowers certainly are not so elegant as some kinds of Orchids, but well-grown specimens, with a couple of dozen flowers open at once, make grand objects.

Their culture is very simple and easy, so that amateurs just forming a collection would do well to include them in a first selection, as in addition to their being easy to grow, they do not require a very high temperature. The heat of the intermediate division will grow them well; indeed, some people advise cool treatment for them.

The compost should consist of two parts peat and one of leaf mould, not too much decayed, which must be chopped up and thoroughly mixed together, with a little silver sand thrown in to make it porous. The plants require an abundance of water when growing, and at no time of the year must they be allowed to get dust dry; in consequence of this requirement the pots must be well drained.

There are several species, of which C. Skinneri is the best and the most variable, there being numerous varieties, some very dark, others delicate pink, and, of course, the peerless L. S. alba. Others there are that must not be despised, for if they are not quite so attractive they are quaint and free flowering. These include L Deppei, L. cruenta, L. aromatica, L. lanipes, etc. Then we have L. Harrisoniae, generally found under the name of Maxillaria Harrisoniae or Bifrenaria Harrisoniae. This species we find does best when a little more heat is afforded it, indeed, some of the best specimens we have seen have been grown in a stove temperature where they have been a good deal exposed to the sun.

ODONTOGLOSSUM CRISPUM.—Plants that were potted in September will now have nearly made up their pseudo-bulbs, and are pushing spikes and roots simultaneously, so that every attention must be paid to them in respect to watering, or the spikes will not come strong. At no time during the season, perhaps, do they require more water at the roots than at the present time, for in addition to the extra strain on them when carrying large spikes there are the drying influences of the hot-water pipes to deal with. Of course a good deal depends on the kind of structure you have to grow them in and the amount of piping; at any rate those immediately over the pipes will require careful attention, or undue shrivelling will ensue.

DAMPING DOWN.—This should be done during the middle of the day when the pipes are not too warm, or the steam from them if made wet when hot will cause the open flowers to spot.—*C.*

VEGETABLE CALENDAR.

PEAS.—Owing to the saturated state of the ground, the season has not been a favourable one for sowing the earliest crop of Peas outside. This may not be a disadvantage if some of the earliest kinds are sown in pots and boxes at the present time, as these, if grown steadily, and carefully handled at planting time, generally surpass in earliness and productiveness crops sown outside in November. Large 60-size pots are the most convenient for sowing in, and also for transplanting the crop when the Peas are sufficiently advanced. Next to pots, long narrow boxes, with movable bottoms, are very handy at planting time and take up less room than pots, during the time they remain under glass. Good sound friable loam is the best soil for sowing in, and the pots or boxes should be placed in a temperature of 45° to 55° until germination takes place, when they should be placed near the glass in a cold house or frame where abundant ventilation can be given, but the temperature should not be allowed to fall below the freezing point.

BEANS.—The forcing of dwarf Beans during the short days of late autumn is generally uphill work, but with the turn of the New Year regular successional crops may be obtained, where sufficient heat is at command. Ne Plus Ultra is a favourite for forcing, but it is a tender Bean and very subject to red spider. Sir J. Paxton is a good forcing kind, and remains in bearing longer than Ne Plus Ultra; but the best of all is Canadian Wonder. The dwarf stocks of this are the best for sowing at this season, as it is of a hardier constitution, and will thrive in several degrees lower temperature thun other kinds. It is best sown singly in small 60's and potted on into 32's and 24's, one plant in a pot. Firm potting is essential to this kind to keep it dwarf and branching. It is seldom attacked with red spider, and keeps in bearing three months, if given an occasional dose of nitrate of soda. Careful watering is necessary after sowing at this early season, otherwise the seed will decay. A temperature of 60° to 70° should be maintained to get satisfactory results.

SALADINGS.—With the approach of severe weather

all Endive should be lifted and placed in frames or other structures in readiness for blanching when required. Radishes may be sown in warm frames, or in boxes 6 in. deep. These can be placed in any warm house and will soon give a crop fit for pulling. Only the Turnip-rooted kinds should be grown in boxes. A regular supply of Mustard and Cress should be kept up from now onwards. Shallow boxes are best for growing this, and these can be placed in any forcing house. In sowing this the seed should be pressed into the surface of the soil, but not covered. —*J. R.*

FRUIT UNDER GLASS.

Early Peach House.—Both the Peach and the Nectarine bloom naturally out of doors at an early part of the year, when temperatures, as a rule, are low. Under glass we find that neither of them will tolerate forcing in the same way as the Vine and the Fig, and the greatest care is necessary in the earliest stages. For the present, therefore, the temperature may be kept about the same as that recommended in the last calendar, viz., 45° Fahr., as a maximum by night in mild weather, and a 5° rise by artificial means during the day, with a further increase of 5° if the day is sunny. Continue the syringings regularly twice a day, going over the trees in all directions so as to make sure that all the wood and the buds are well moistened. This proceeding may be kept up until the flower buds commence to open, when a dryer atmosphere will be required to facilitate the ready dispersal of the pollen.

In many gardens the earliest house is started at the end of December or the commencement of the new year. Preparations should, therefore, be made for getting this in readiness for starting at that time, the same system as that adopted with the house started at the commencement of December being followed.

Pot Trees.—These are scarcely so much in favour with gardeners as they really deserve to be. Half a dozen of pot trees do not take up a deal of room—indeed they may usually be placed in a position that would otherwise be left unoccupied. There is no doubt as to their usefulness, however, particularly for early work. It is very easy to pop a tree carrying, say a dozen nice fruits, into a little heat, and thus get the fruit in in time for any special function. Of course it is possible to hurry a whole houseful thus, but to do so would not always pay. The resources of the early Peach house may be materially supplemented by this means. Again it is becoming fashionable in certain quarters to send the fruit to table upon the trees, and in some establishments pot plants of Plums, as well as Nectarines and Peaches, are grown to supply this fashionable whim.

The trees should be pruned, top-dressed with some rich mellow loam, and placed in the early Peach house, where they will get the syringe with the permanently planted out trees.

Cherries.—These, as a rule, do not bulk very largely in the forcing arrangements for the season, but the finer dessert varieties certainly pay for under-glass culture. Treated as cordons they usually do well, and fruit regularly, and the fruit certainly compares very favourably for quality with that grown out of doors. If stopping was properly attended to during the past season the pruning necessary will be of the lightest possible nature, and will simply consist in completing the spurring back to the cluster of flower buds at the bases of the shoots by cutting off any ragged ends. Any rough or dead spurs should be cut clean out at the same time.

Cherries need to be treated in the earlier stages in much the same way as Peaches. They dislike hard forcing, or much fire-heat, which causes the buds to drop. Syringing should be attended to daily. The one great thing to avoid when forcing Cherries is a draught, for they are exceedingly impatient of this. Take care, moreover, not to force too hard, and the rest is plain sailing. A temperature of not higher than 45° by night, rising to 55° if the day is bright will be quite high enough to start with.

Pot Vines that were started about the middle of November will now be needing a temperature of 60° by night, with at least a 5° rise by day. To keep this up more fire heat will have to be given than formerly, and the floors and walls will have to be damped down rather more frequently to keep the atmosphere moist and kindly. If any of the rods have been bent down to ensure their breaking equally they should be returned to their places as soon as the buds are an inch or so in length. Syringing may cease as soon as the canes show rough leaf. The giving of air will be a matter of some difficulty, as when there is much difference between the inside and the outside temperatures a very small crack of air will produce a draught which must be avoided at all cost. The bottom ventilators must be called into service, for these can be opened a little without danger, as the fresh air becomes warmed in its passage over the pipes, and the evils of draughts are thus obviated.

Figs.—For the earliest crop pot plants are the most serviceable. A forcing pit possessing a brick bed is the most handy place. This bed should be filled with fermenting material in which to plunge the pots up to the rims. A bottom heat of 65° or 70° may thus be easily obtained, and this is just what the Figs like. The atmospheric temperature may commence with 50° as a minimum by night, with a rise of 10° by day. This may be easily kept up when the fermenting material is fresh without the use of much fire heat. Keep the syringe well to work among the trees morning and afternoon. Clear water will be all that will be required for a while, as the top-dressing of good loam which should have been given those trees that were not potted, will be quite sufficient for some time yet. The Fig is somewhat given to rank growth, usually at the expense of its fruiting qualities, and therefore manurial stimulants must only be given with discretion to such trees as really need assistance to mature their crops. *A.S.G.*

PLANTS RECENTLY CERTIFICATED.

The undermentioned awards were made by the Royal Horticultural Society, on the 15th inst.

Orchid Committee.

Laeliocattleya Rosalind. *Nov. hyb. bigen.*—The parents of this bigeneric hybrid were Laelia Dominii crossed with Cattleya Trianaei, the latter being the pollen bearer. Now, Laelia Dominii was described by the late Professor Reichenbach as a hybrid between Cattleya dowiana and probably Laelia elegans, so that three parents are concerned in the production of the plant under notice. The flowers are of great size, with blush-white sepals and broadly ovate, white petals heavily overlaid with a bluish-lilac, which is darkest on the back and shines through with a peculiar hue. The large lip has a deep purple lamina, and the interior of the tube is heavily lined with orange and purple, the lines being very conspicuous just at the base of the lamina. The outer face of the tube is purple, lined with white. The large flowers are very distinct, bold and striking amongst this class. First-class Certificate. Messrs. J. Veitch & Sons, Chelsea.

Laelia pumila praestans alba Ashworth's var. *Nov. Var.*—The flowers of this choice variety have the sepals and broadly ovate petals well folded back in the usual characteristic way. They are wholly pure white with exception of a broad bright yellow band in the interior of the tube almost covering its whole surface. First-class Certificate. E. Ashworth, Esq. (gr. Mr. H. Holbrook), Harefield Hall, Wilmslow, Cheshire.

Maxillaria lepidota.—The flowers of this species are of medium size for the genus and golden-yellow, with long, brown tails to the sepals. It is very attractive in its way, when a large and profusely flowered plant is seen like that shown by Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking. Cultural Commendation and Botanical Certificate.

Bulbophyllum auricomum.—There were four arching spikes, each about 9 in. long on the plant shown by Sir Trevor Lawrence, Bart. The flowers are small, white with an orange lip, and strongly resemble those of a Platyclinis. Botanical Certificate.

Platyclinis uncata.—The flowers of this pretty and graceful species are larger than those of P. filiformis, greenish-yellow, and arranged in two ranks, on drooping and elegant racemes. Botanical Certificate. Sir Trevor Lawrence, Bart.

Brassavola venosa.—This species is of the usual dwarf habit, with cylindrical leaves. The sepals and petals are linear and creamy-white. The lip has a long claw folded over the column and spotted with purple in the interior and at the throat, while the heart-shaped lamina is pure white. Botanical Certificate. Sir Trevor Lawrence, Bart.

Floral Committee.

Rhododendron Nobilius.—The flowers of this magnificent variety are of great size, massive in appearance, and borne in large trusses. They are of a rich golden-yellow with red anthers. The variety was obtained by crossing R. Teysmanni with the pollen of R. javanicum. Without doubt this is the finest of the hybrid greenhouse Rhododendrons of this colour, belonging to the Javanico-jasminiflorum type. Award of Merit. Messrs. J. Veitch & Sons.

Rhododendron Little Beauty.—The flowers of this new type are of a rich glossy scarlet, and though small are relatively large for its race. The variety was derived from R. Monarch, crossed with the pollen of R. malayanum, which gives the flower and the plant its most prominent characteristics. The leaves are elliptic, deep green above, dotted with white scales, and with rusty spots beneath. It is the finest variety of this new race yet produced. Award of Merit. Messrs. J. Veitch & Sons.

Carnation Wm Robinson.—This is a tree variety with medium-sized flowers of a fiery scarlet. The petals are moderate in size, fairly numerous and slightly toothed at the margins. Award of Merit. Messrs. Crane and Clark, March.

Carnation Julian.—The flowers of this tree Carnation are of large size and of a rich maroon-crimson, with broad, slightly toothed petals. The leaves are broad, glaucous, plentifully produced and vigorous. Award of Merit. Mr. James Douglas, Edenside, Great Bookham, Surrey.

Gleanings from the World of Science.

Natural Selection and the Origin of Species.—At a meeting of the Linnean Society of London, on December 3rd, the Rev. George Henslow, M.A., F.L.S., gave the substance of a paper entitled "Does Natural Selection play any part in the origin of Species among Plants?"

After defining a species from the Systematists' point of view, the author showed, by examples, that many specific characters in plants might be useful, indifferent, useless or injurious; and that they were the direct result of a responsive action especially to the physical environment. The *origination* of varietal characters, he thought, should be considered as quite distinct from "the survival of the fittest" and "the struggle for life" which determine the *distribution* of species in time and space. The individual differences of plants were held to be (as a rule) inadequate to produce variations of any systematic value, unless the plant migrated, and dimensions *per se* could have no "destructive" capacities whatever. Darwin's and Wallace's conditions for natural selection, viz. large populations and infertility between parents and offspring, had, he considered, no connection with the origination of variations, while the latter did not exist. On the contrary, species with large populations were (as a rule) invariable, while others might vary greatly, but only when in different soils, &c. Instead of "changed conditions of life" happening to any plant without migration, it was the latter which brought them about; instead of a struggle being required with the parent stock or other plants' it was the avoidance of the deteriorating effects of struggling which was most beneficial, and new varieties arise best when there was no struggle at all.

The relative persistence or non-retention of specific characters was discussed, and it was shown that the permanency and heredity of acquired characters required time; five years being perhaps the average under cultivation. Permanency was only a relative term, all plants being liable to change again—hence arose improved varieties of long-fixed races of cultivated plants.

He considered Darwinism to be based on a series of *a priori* arguments or deductions which had not as yet been verified, nor appeared to be capable of verification. On the other hand, new characters under changed conditions of life were to be seen everywhere, both in nature, under cultivation, and to be induced by experiment; so that self-adaptation was proved inductively to be the true "origin of species." This was Mr. Herbert Spencer's view in 1852, when no thought of "natural selection" as a "means" had been suggested.

After criticism by the Chairman, a discussion followed, in which the following gentlemen took part:—Mr. A. W. Bennett, Dr. D. H. Scott, Prof. Mivart, Mr. A. O. Walker, Prof. J. B. Farmer, Mr. J. T. Cunningham (late of the Marine Biological Association, Plymouth), Mr. H. Groves, Mr. A. B. Rendle, Mr. N. E. Brown, and Dr. Haviland.

HINTS FOR AMATEURS.

Gooseberries on Walls.—Although wall space is usually of considerable value, and is set apart for the accommodation of the more valuable fruits, Gooseberries, not infrequently, are placed in an odd corner or so upon walls having a northern or eastern aspect. In such a position Gooseberries prove of great service, as the fruit will hang for a considerable time without deteriorating much in flavour, and after the bushes have for long been stripped of their burden. Even where they do not find permanent quarters in such a place they are excellent for planting in the gaps between young trees. The space which has to he allowed for young Plums or Cherries at planting time. hut which will not be occupied by them for several years, is thus taken advantage of in the meantime, and turned to good account. When the Plums or Cherries need the room the Gooseberries can be pulled out without making very much of a sacrifice.

The fan method of training is the most convenient, and gives the most satisfactory results, as it enables young wood to be easily laid in to replace the old. The system of pruning is simple enough, and need not puzzle an amateur for very long. As in the case of the bush trees it is to the young wood that we must look for the finest fruit. Each year, therefore, some of the old must be taken out to make room for that of the current season's growth. These shoots should he neatly tied or nailed in along their whole length, if there is room for them, if not, they must be shortened back according to the space at command. Any lateral growths should be spurred back to within about 1 in. of their bases.

Another system of training that finds favour with some is what may be termed the "gridiron" style. Three shoots, usually, are selected from a young tree and trained up perpendicularly. The side growths or laterals are spurred back so as to limit the production of fruit to the spurs, which are ahout 1 in. in length. The young shoots in this case have to he pinched in summer, when they tend to form buds at the base of the shoot. If this were not seen to and the whole of the pruning left until winter, the crop would be very light, and not to be depended on. Trees that have been properly attended to for stopping in the summer, will now need to he gone over, and the spurs neatly trimmed. The leaders, in a young tree, may be left as long as 9 in., or even 3 in. longer if the wood is stout and well-ripened although this is an extreme length. In cases where the trees have nearly filled their allotted space a closer cut back must be given. Trees of this kind are very handy for planting between other established trees, as they do not require very much space in a horizontal direction, and by planting them pretty close together a vacant piece of wall may soon be covered.

Another excellent plan of growing Gooseberries is to train them to a fence composed of stout wires strained along between iron uprights. Such a fence may be anything from 3 ft. to 5 ft. in height. Here the fan-shaped trees are the most suitable. They may be treated to a similar dose of the knife to that given to the fan trees on the walls.

The special advantages attaching to this method of cultivation are, first of all, improved facilities for giving protection to the trees, either from birds, both in winter and the fruiting season, as well as from frosts should occasion require; also the greater ease with which the fruit may be gathered. Those of our amateur readers who prefer their fruit when they can pick it themselves directly from the tree will appreciate this latter condition. In cases that have come under our notice it has been amusing to see how trees of this kind are especially favoured with the attentions of the ladies of the household, both small and big. The former, particularly, are not long in finding out the trees from which the fruit can be gathered with the least trouble, although youth is apt to be somewhat indiscriminating with regard to quality, anything that is fruit, and can be eaten, no matter how sour, being usually suficient to tempt.

Bush Cordons.—For small gardens where space is limited, this kind of tree is a boon. They are easily managed and produce very heavy crops of fruit. In the nurseries of Messrs. James Veitch & Sons, at Slough, vast quantities of trees are trained thus, and with conspicuous success, as is amply evidenced by the fruiting branches of such bushes which have been exhibited from time to time by this firm. Some of the trees are trained cup-shaped with five leading branches. Others have but three or four of these leaders, but in all cases the quantity of fruit produced in proportion to the room occupied, is wonderful. Such subjects have the same advantage over the ordinary bushes as that possessed by the fan-trained trees, viz. that the fruit can be easily gathered. The fruit is produced upon the spurs along the whole length of the main branches. In addition to the summer stopping of the lateral shoots which was advised when dealing with the "gridiron" trees, the spurs must he cut neatly over, shortening them back to within 1 in. of their origin. The topmost growths of the main branches are to be cut back to within 2 in. or 3 in. according to the strength of the wood, and the size of the tree.

Propagating Gooseberries is an operation that requires very little experience. In many rural districts it is a common thing for cottagers to raise what trees they require—indeed they never think of buying them. Gooseberries may be easily propagated from cuttings. The prunings from bush trees will furnish any amount of suitable material. The cuttings must be composed of sound, well-ripened wood, and should be from 10 in. to 1 ft. in length. If they are cut off close to the older branch from which they originated so much the hetter. The most important part ahout the making of the cuttings is the picking out of the eyes or buds for at least 6 in. of the whole length. This is necessary in order to obtain the clear stem for at least 4 in. above ground to which we have previously referred.

The cuttings will root pretty freely if inserted at any time during the autumn, winter, or early spring Early in the autumn is, however, the best time, as it allows the cut at the base of the cutting to become callused over before the spring.

A horder heneath the shelter of a wall should be chosen, and here the cuttings may he planted. The most expeditious way to do this is to cut trenches about 4 in. or 5 in. in depth at a distance of not less than 1 ft. apart. In these the cuttings may be placed, allowing from 6 in. to 8 in. between each. Afterwards the soil may he returned, and firmly pressed around the base of each cutting by treading. These attentions given, the future plants may be left to take care of themselves, as they are as hardy as their parents.

CHRYSANTHEMUMS.

Lovers of Chrysanthemums will need to be busily engaged now in making the first of their preparations for the ensuing season, *i.e.* the getting in of the cuttings. In order to be a successful exhihitor it is highly important that this part of the programme should be well executed. The cuttings have to be got in sometime during the present month, in order to give them a good long season of growth; indeed some cultivators make a point of putting in their cuttings as soon after the end of November as possible.

The best cuttings are those which are thrown up like suckers from the roots. When the supply of these falls short recourse must be had to the shoots coming from the stem—"stem cuttings" as they are technically called by gardeners.

A good plan is to insert one cutting only in a small thumb pot, although where room is precious four or five may be put round close to the edge of a small sixty. Light sandy soil should be used, and a layer of sand placed on the top after the pot has been filled nearly full of the compost. After the cuttings have been carefully dibbled in they should be watered once and left a while to dry before shutting them up.

If strong healthy plants are desired the cutttings must not be weakened and spoilt with fire heat. If nothing else offers put them in a cold frame upon an ash hottom and cover them with a hell glass. If a small handlight is availahle, like those used for Cauliflowers, this may be stood on the stage in the greenhouse, and about 4 in. of sifted ashes put in it. In the ashes the cutting pots may be plunged to the rims.

But little water will be required after the initial watering. The frame should be kept close until the cuttings are observed to be picking up, but not too close, or the atmosphere will become close and stuffy. It is an excellent plan to lift off the top of the handlight every morning for two or three minutes. This is better than leaving air on at first. The light must be put on again, however, before the cuttings flag seriously or the experience will be harmful instead of beneficial.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Pruning Peach Trees.—You do not say whether your trees are young or old, *Constant Reader*, nor anything as to what condition they are in, whether the wood is weak or strong, thin or crowded. Such details would have assisted us in giving you precise directions as how to proceed. We assume your trees are of the usual fan shape. As the Peach produces most of its fruits upon wood, made during the previous year, it is necessary to cut out the wood that has fruited, except where it is required to carry the younger wood, and thus extend the spread of the tree. If the tree is in good order, and has been looked after for disbudding in the early part of the year, there will not be much more thinning required. It now remains to shorten the shoots that are to bear the next year's crop of fruit, in order that they like their predecessors, may produce succession shoots close to their bases. The length that should be cut off them will depend entirely upon their vigour. In all cases they must be cut back to a wood bud, *i.e.*, a bud that produces leaves and wood, and not flowers. Such buds may be distinguished from the flower buds by their being thinner and more pointed. Where three buds are observed to be together in one cluster, the middle one is generally a wood bud.

With regard to putting on the heat, that will depend upon when you want your fruit. If you want it early, say towards the end of June, you may start them at the end of this month. A night temperature of 40° to 45°, with a 5° or 10° rise by day will be quite high enough at first.

Pruning Vines.—Yes *Constant Reader*, the young branches or laterals must be cut back (spurred) to within an inch of the base. Each spur will then throw out several shoots, one from each bud, of which the strongest one, or two if required, near the base should be left, and the others rubbed out. You may prune at once.

Cuttings of Pelargoniums.—If you want to work up a large stock by bedding out time, you had better put your plants into a gentle heat at once, *C.* After they have been in that condition for a week or ten days, you may take the tops off, and put them in as cuttings, provided they are long enough. If not, let them wait until they are.

Cinerarias.—Yes, you may give the Cinerarias weak liquid manure now, *T. Gregory*. The curling of the leaf might be caused by the plant being near the pipes, and as you say there are no signs of insects or mildew, that is probably the reason. Do without fire-heat when there is no frost, and never exceed a temperature of 45° by night.

Tomatos.—The 10-in. pots will be quite large enough for the Tomatos, especially for winter work, *Y. A.* You may plunge them in a bed of soil if you like. The roots would certainly come through the bottom of the pots and run in the bed if the plants were vigorous.

Figs out of doors.—You must wait until the winter is over before you prune your Figs, *Subscriber*, or a spell of very sharp weather would sadly damage them. The hard winter of 1894 95, killed a lot of Figs that were unprotected nearly to the ground.

Passiflora Constance Elliott would do well on a back wall in your greenhouse, *Pete*. If you want the plant to grow to any size, you must make a bed for it and plant it out.

Planting Vines.—I am planting a vinery, and would like to know at what distance apart the vines should be planted, *F. Williamson*.

We should advise a distance of 3 ft. 6 in., or 4 ft. Some growers for market plant as closely as 2 ft 6in., but such vineries are not expected to last very long.

Wood Ashes.—As a dressing for an Onion bed you will find the wood ashes invaluable, *L. L. A.* You may or may not mix them with soot. When preparing the bed choose a dry day, sprinkle them evenly over the surface of the plot, and fork well in. This may be done a few days before sowing, *not* now.

Odontoglossums.—The less fire-heat you give your plants the better, *G., York*. With such mild weather as we have been having of late you will not require any. Covering up the house should be practiced each night when it is feared that the thermometer may drop too low. A temperature of about 45°, or a little under, may be easily kept through the night while the weather is mild, without any fire-heat, and this will suit your Odontoglossums capitally.

Basket Ferns for a Cool House.—You will find the following Ferns suitable for hanging baskets for a cool house, *J. S. J.*:—Hypolepis repens, Asplenium flaccidum, A. fabianum, and Adiantum Capillus-Veneris. A. C.-V. cornubiense is a lovely form, but it is somewhat delicate, and will not put up with very rough treatment. Woodwardia radicans would do with you if you have the room to give it, which we greatly doubt, for its fronds have a considerable spread, and need a large house to contain them.

Vine Outdoors.—You may prune your Vine any time between this and the spring. It will be as well to leave it now until the winter is over, say about the beginning of March.

SEASONABLE FLOWERS AT CHELSEA.

Orchids.

The members of this popular and extensive family bloom practically all the year round. Some of the groups flower at a certain period with unfailing regularity, but others keep up a display in almost every month or week of the year. We passed through the nursery of Messrs. J. Veitch & Sons, Chelsea, the other week and noted a great variety of subjects in bloom, and in the first instance would speak of Orchids we noted in the various houses.

Entering at the cool end of the complicated range of houses, a quantity of Masdevallia tovarensis flowering from the old and young sheaths met our view. They were large pieces and bore numerous pure white flowers. The cool Odontoglossum house contained a large batch of O. crispum, recently imported and flowering for the first time. Some beautiful varieties are in bloom and many others may be expected. One with round and nearly uniform rose flowers is very pretty, and recalls O. c. fastuosum. O. cirrhosum bore large panicles of its beautifully-blotched flowers. There were also pretty forms of O. andersonianum and O. wilckeanum; and the spikes of various species are now being pushed up.

The warm Cypripedium house is always interesting, inasmuch as it is never without a display of Cypripediums, and various other heat-loving Orchids as well. Substantially built new stages have recently been put into this house. Here were groups of C. insigne Chantini heavily blotched, and C. leeanum in a great variety of colours. The richness of C. oenanthum superbum appeals to the lover of Orchids at all seasons as one of the richest-coloured varieties in cultivation. Another beautiful dwarf hybrid is C. Niobe, the flowers of which recall the parents, C. spicerianum and C. fairieanum. C. Euryades (Boxalli × leeanum) is notable for the black blotches on the greenish-yellow upper sepal. A strong contrast is afforded by the soft rosy-white and spotted flowers of C. T. B. Haywood. Well known are the beautiful flowers of C. arthurianum. The flowers of C. Ianthe are of huge size and of a bronzy rich brown, tinted with rose towards the edges. The upper sepal of C. Zeno is of a dark shining brown, almost black in one case, but there are various forms of this hybrid differing considerably from one another. Some of the Selenipedium group are flowering, and others in great variety are represented by large and healthy plants that will soon recommence flowering.

We had the pleasure of noting Coelogyne Veitchi (see accompanying illustration) when it bloomed in this country for the first time. Soon after that (27th August, 1895) it received an Award of Merit from the Royal Horticultural Society, and we described it in The Gardening World, Vol. XII., p. 26. Through the courtesy of Messrs. J. Veitch & Sons we are now able to place a reproduction of it before our readers. The pendant and graceful racemes of pure white flowers vary from 1 ft. to 2½ ft. in length. The flowers also come largest on the pseudo-bulbs developed at Chelsea. At present the species is very rare, and the few plants in cultivation are suspended from the roof of the Cypripedium house, where they seem quite happy, the young growths recently made being very good.

The collection of Phalaenopsis is rich in rare kinds, besides strong and healthy pieces of the better known species and forms, such as P. amabilis, P. schilleriana, P. stuartiana, P. sanderiana, and P. grandiflora. Amongst the rarer kinds we noted P. F. L. Ames, P. ludde-violacea, P. Vesta, P. Mariae (very rare), the dark violet P. violacea schroderiana, and the rare P. v. bowringiana. The variation amongst the leaves of P. Esmeralda is something remarkable, for one would take the plants to represent a number of species. Most of the above are either in flower or making in that direction, and C. eburneum, C. lowianum, and C. giganteum. Vanda caerulea is also doing well here.

The Orchid rockery is always interesting owing to to the number of flowering specimens there. At present it is enlivened with fine pieces of Cymbidium winnianum, C. Mastersii, and C. cyperifolium like a small C. traceyanum. There are large and showy panicles of Oncidium tigrinum and O. varicosum, together with Zygopetalum Mackayi, bearing six long racemes, and a smaller plant of a richly-coloured variety. The best of the Sobralias are aggregated here in considerable numbers. The Cypripediums are represented by such fine things as C. insigne montanum, C. cardinale, and C. porphyreum, having richly-coloured flowers.

Coelogyne Veitchi.

if the London fog spares the blooms there will be a fine display.

Suspended from the roof is a fine piece of Angraecum sanderianum, bearing four flower spikes. A rare species is A. chailluanum, with curiously-formed white flowers and long spurs. The Calanthes now in season are represented by C. Bella, very strong and bearing racemes of rosy flowers shaded with white; also by C. Veitchi, in fine form, and other varieties. Suspended over an open tank in another house are strong plants of Dendrobium wardianum, well set with buds on long pendant stems. Hybrids are also suspended in large numbers. One division of the range contains a large number of species and hybrids of Cymbidium in healthy condition, including C. eburneo-lowianum, C. traceyanum,

The large Cattleya house contains a vast assemblage of plants, but of course the most of them are not in season. Those in bloom include Laelia anceps, L. autumnalis alba, Cattleya dowiana aurea (of which some grand flowers may still be seen), and C. bicolor. A quantity of C. Schrederae is in sheath for the first time; C. citrina has made good growth; and Laelia purpurata is in sheath. In another house close by, Miltonia vexillaria is still flowering, as are Laelia acuminata, Sophronites grandiflora, etc. Others making preparation to bloom are Coelogyne cristata, C. c. alba, C. c. lemoniana, and Laelia monophylla in fine condition.

The rosy flowers of Dendrobium glomeratum, with a scarlet lip, are always flowering and attractive. The hawthorn-scented D. fytchianum is both pretty

and rare. The soft greenish-yellow flowers of Cypripedium boissierianum are also very handsome in their way. Miltonias are represented by M. bleuiana aurea, M. vexillaria Leopoldi, M. v. alba, and M. Phalaenopsis, making preparations to bloom. A beautiful hybrid is Epidendrum wallisio-ciliare. The collection at Chelsea is remarkably rich in Laeliocattleyas, including L. Rosalind, L. Pallas, and others in bloom. Very choice also is Cattleya intermedia alba.

GREENHOUSE RHODODENDRONS.

It seems to us superfluous to speak of seasonable flowers in connection with the splendid collection of hybrids and others coming under the above designation at Chelsea, for we have never been able to find them out of season, whatever the period of the year may be when we inspect them. The fact that they do furnish a good supply of their beautiful and ever welcome flowers at Christmas is, however, gratifying. The undermentioned were all in bloom on the occasion of our visit :—

JAVANICO-JASMINIFLORUM SECTION.—The origin of this class is indicated by the name given to the section, and we may state that in their present condition they have the largest flowers of any. Improvements continue to be made, and no one is more decided than the rich golden-yellow Nobilius which received an Award of Merit on the 15th inst. For description, see under "Plants Recently Certificated," in another column. Aphrodite is a soft blush-pink variety, almost white in summer, chaste and pretty. Ceres is another golden-yellow variety, with large flowers and rosy stamens. Jasminiflorum carminatum has a long rosy tube and a carmine lamina to the flower, becoming more intense as it develops. Very pretty is the ivory-white Imogene, with a faint flush of rose. The flowers of Duchess of Fife are of a soft blush, with a yellow centre, which tones the whole bloom. It is new and received an Award of Merit recently. Freely produced are the large, soft rosy flowers of Amabile. The flowers of Purity are large and white, with a pale lemon throat. Another grand new hybrid is Ariel with huge, yellow flowers and a pale yellow throat. The well-known Taylori has large rose flowers produced in huge trusses, and should be in every collection. Maiden's Blush comes into the same category for usefulness, and has blush flowers with a pale yellow throat. The large buff-yellow flowers of Princess Fredericka are also handsome. Princess Alexandra is a good standard variety with blush-white flowers.

BALSAMAEFLORUM OR DOUBLE SECTION.—The flowers of this race last in good condition three times as long as the single ones, and they are flowering now as they do at all seasons. The flowers of Balsamaeflorum roseum are rose shaded with scarlet, and have a long yellowish tube; they forcibly remind one of those of an Oleander. The variety is the freest flowering of any. B. carneum has a shorter tube with more spreading segments to the flower of a flesh colour. B. album resembles a Gardenia, both in colour and the form of the large flowers. The blooms of B. aureum are also large and of a clear rich yellow, and made up of a few broad segments. B. Rajah makes the fifth in this series, which from an evolutionary point of view is one of the most remarkable in the whole history of Rhododendrons. All are the produce of one pod of seed.

MULTICOLOR SECTION.—The flowers of varieties belonging to this group are generally small but of intense colours. They have originated from Rhododendron multicolor crossed with some of the large flowering sorts above mentioned. A remarkable exception to the rest is Mrs. Heal, which is dwarf in habit and floriferous, with large flowers of the purest white. In fact it is the purest white of all the hybrids. The glowing crimson-scarlet flowers of Ruby are rich and telling. Neptune is a softer scarlet, with larger, more expanded flowers. Latona is of dwarf habit, with pale primrose, bell-shaped flowers. There are other distinct and beautiful varieties in this section to come, but they are not yet in commerce.

MALAYANUM SECTION.—This new race is being evolved from Rhododendron malayanum crossed with the varieties of the Javan type. Little Beauty received an Award of Merit on the 15th inst., and a full description of it is given under "Plants Recently Certificated." The flowers are of a shining scarlet. The race is characterised by having its leaves dotted with white scales above and rusty ones beneath. Eos has rosy-pink flowers, and is larger both in leaf and flower than R. malayanum.

Rhododendron Numa is a remarkable hybrid which does not belong to any of the above sections. It has a complicated parentage, having been raised from R. (Azalea) indicum Stella crossed with R. Lord Wolseley, one of the Javanico-jasminiflorum type. It has bell-shaped, orange-red flowers, with a short tube, and is very interesting.

SPECIES USED IN HYBRIDISING.—A considerable number of the originals are flowering at the present time. R. malayanum is the hardiest of all, as it succeeds admirably in a greenhouse temperature. It has small rosy flowers, with a tube about ½ in. long. The leaves are lanceolate-elliptic, dotted with white above and rusty scales beneath. R. multicolor has soft primrose-yellow flowers of fair size, and gave rise to that grand variety Mrs. Heal. R. multicolor Curtisii has rich crimson-scarlet flowers, and gave rise to Ruby. R. jasminiflorum has white flowers resembling those of a Jasmine, and the long slender tube is a feature of the species. The leaves are small and oval. R. javanicum is the strongest grower of any, and has large oblong-elliptic leaves and orange flowers spotted with red. It flowers all the year round.

CHRYSANTHEMUM GROUPING.

COMMENCING with the autumn months the excitement of competition in the cult and exhibition of the 'mum runs riot in the blood of the devotees of the Autumn Queen, and the tension gradually increases in severity until it reaches its climax somewhere about the middle of November, after which the fever heat commences to abate, and gardeners begin to return to their own old prosaic selves again; and amidst the general reaction of listlessness that follows in a degree corresponding to the depth of the excitement, the sounds of conflict gradually fade into the mists of the past. Then comes the period of reason, and sane once more, we are able to dispassionately consider whether we have made any advance upon previous years, whether any special system of culture which we may favour will have to be amended in order to keep pace with the times, and the requirements of the modern exhibition, and also as to whether we have made any advances in the artistic arrangement of our plants and flowers.

There is no doubt that the November show of the National Chrysanthemum Society demonstrated most unmistakably that in order to win a prize in a competition for a group a man must not only be a good grower to obtain high-class material wherewith to work, but he must also know how to dispose that material to the best advantage—he must be more than a bit of an artist.

A. P. on p. 229 in a recent issue of THE GARDENING WORLD gives us a concise account of his views upon the subject of "Chrysanthemum grouping," and we should conceive that he would have a very strong following. He asks "what beauty is there in a mass of plants crowded together in a few square feet, each bloom touching its fellow?" and although he does not give the answer in so many words, he is evidently of our opinion, that there is very little. He goes on further to ask "what pleasure does the sight of such a group give?" Here we should fancy that the word "pain" would better express the emotion than "pleasure"—pain to see so much fine material rendered ineffective—pain to see such mute evidence of the lack of artistic taste.

Now we would not bring a railing accusation against the gardening faculty, but we opine there is too little attention paid by gardeners generally to the effective grouping of plants, Chrysanthemums included, not only at exhibitions but at home in the conservatory and the mansion. This fact becomes patent when we consider that, to judge from the plant houses that we too often see, their managers' idea of effect is an arrangement in which as much material as possible is included, either for the sake of variety, brilliancy, or both. Now these two points are both important adjuncts to a well set-up group, but they are not the only two. To destroy the individuality of a plant by crushing it against its neighbour is to rob it of half its beauty. A carpet bed is both varied and brilliant in colouring, but it is scarcely a model for the construction of a group of Chrysanthemums, for in it the individuality of the plants has been sadly mutilated to the point of annihilation.

The groups staged at the Jubilee celebrations of the N.C.S., were splendid proof of what could be done by the judicious utilisation of foliage plants, not merely as a foreground or a background to, but in close association with the flowering element throughout. The Chrysanthemums are undeniably the gainers by the departure. If framers of schedules, instead of announcing classes for groups of Chrysanthemums to occupy so many square feet, would add the words "to be arranged with foliage plants," they would not only allow room for the greater display of artistic taste on the part of the exhibitor, but they would add in no small degree to the success of their show.

Of course it may be argued that groups of Chrysanthemums are intended to be tests of the quality of the plants and the blooms, and general brilliancy of effect first; but as *A. P.* well points out, they might still be so, even if the plants were so arranged as not to be crowding upon and spoiling each other.

Some perhaps will contend that it is impossible to hide all the pots without some crowding, but it is scarcely fair to lay all the blame of causing this undue crushing on the desire to hide the pots. Better, far better, would it be that a few of the pots should peep out here and there than that to hide one small fault we should commit a grave one—besides if the right kind of stuff is to hand, by the exercise of a little ingenuity the pots may be easily covered from view without having recourse to crowding.—*A.S,G.*

I PERUSED with interest the remarks on the above by "A. P." (p. 229); and shortly after I had done so, I turned to one of your contemporaries to scan the 'Mum news down. Then I came across a note on "Chrysanthemum Showing" copied from *The Field*. After I had read it, I came to the conclusion that the writer preferred sport rather than the subject he had tackled, and would have had pleasanter recollections of a day in the woods with dog and gun, instead of wasting the time at the Aquarium Show, as he confesses to have "painful memories" of his visit on the occasion of the Jubilee Celebration, and "that the flowers were set out like coloured Cauliflowers, nearly as large as some of those grown at Naples, or as pretty as if cut out of Carrots and Turnips." The taste of exhibitors is deemed "shocking"; and the groups so favourably spoken of by "A. P." are referred to as "all as formal as haycocks, and almost absolutely like each other, all the lovely colours of the plants dotted about neutralising each other, nothing being held together, nothing simple, nothing broad or artistic." What a compliment to the circular style of grouping! The writer then goes on to praise "a few tufts of the common little cottage kinds grown in the open air without a particle of protection, and after the great tempests and rains of an unusually severe autumn bearing fresh and pretty flowers, proving that there are ways of growing Chrysanthemums so that one can enjoy them, and even find them beautiful things in a garden picture."

Now, I must admit that I like to see 'Mums growing in borders, but how often do we get favourable seasons for them to shine forth in all their glory. I well remember over twenty years ago, some old stools planted out and growing in the herbaceous borders that edged the principal walks of a kitchen garden in Sussex, not many miles from the south coast. They looked bright when in bloom, but their season of triumph was often cut short; the elements were against them; wind, rain, and a summary visit from Jack Frost very soon made them present a woebegone appearance. Some of the varieties I remember were Drin Drin, Rose Trevenna, Bijou d'Horticulture, Cedo Nulli, and a very pretty pompon called Mignonette. They certainly would have looked better in a "garden picture" than weathering the storms, even those small flowered compact sorts, and I can well imagine what the "lions" of the exhibition boards of the present day would look like; there it would be absolute foolishness to degrade them.

But to return to the subject on which I started, and meant to continue, were it not for the adverse criticism above alluded to, of what I should consider was of its kind "the finest sight in Europe." Your correspondent "A. P." would like to see the old style of grouping abolished. Some years ago I greatly admired the miscellaneous groups that were put up at the Kingston show, also the 'Mum groups. They both exemplified the art of the cultivator and decorator, though in different styles, and it gave both a chance. The exhibitor that went in for the 'Mum

group, and was ab[illegible] to hold his own, would probably have stood no chance in the miscellaneous group, simply because he had not got the convenience to grow the variety of plants that he would require. Therefore I would suggest that the society, which can afford to offer the prizes, should "run" both styles. A good group of 'Mums may be "broad," even if it is not artistic from the decorator's point of view.—*George Potts, December 14th.*

LATE HAMBURGHS.

Your correspondent, W. B. G. thinks the temperature given by me in a previous issue which was 45° when the majority of foliage had fallen, is too high, and says the house where his Grapes are hanging is often below 40°. W. B. G. must be writing from a much drier county than Devon I presume, for it is quite certain in this moist climate where I write from, I could not keep any kind of Grape, and have them presentable even at this date if I had the house full of plants as he has and with such a low temperature. My late vinery is a lean-to about 13½ ft. high at the back, and 5½ ft. at the front with a 4-in. flow and return pipe along the front, and can be kept at 45° without the least hard firing. I have kept Lady Downes plump and in first-class condition up to the middle of April, and the last bunch then looked as though it would have kept another two months. With the full knowledge that this date is late to have good Hamburghs, I am inclined to think your correspondent's low temperature has not a little to do with the shrivelling he speaks of. Ere this appears in print all my Grapes (Alicante and Lady Downes) that I have left will be cut, bottled and placed in a room that seldom falls below 40°, and that only when 12° or more of frost are registered, where, as I have said, they keep well into April.—*J. Mayne, Bicton, Devon.*

CHRYSANTHEMUM CULTURE FOR EXHIBITION.

Another season is all but over, and preparations are being made for another struggle, and real struggling it is getting to be in many cases. A little while ago I promised to give a few notes on the above subject. On consideration I think the proper time is the present, as thereby one gets the beginning and the end.

From the cutting to the flower I propose to divide my subject into the following heads:—first varieties good for exhibition (this subject must come first as being the key to all success afterwards); second cuttings, good and bad; third treatment whilst in a young state; fourth, material for final potting, also how to pot; fifth, the difference betwixt stopping or pinching and plants that are not to be stopped; sixth, what the crown buds, second crowns, and terminal buds; seventh, how to take or secure the buds, also how to keep them.

Varieties.—I will give my readers a list of the varieties in a stand of eighteen Japanese, shown by the Earl of Harrington, at Leeds (gardener, Mr. Goodacre): Amiral Avellan, Miss R. Schroeter, Mrs. C. H. Payne, Mrs. W. H. Lees, Duke of York, Madame Carnot, Edith Tabor, Rose Wynne, Jules Chrétien Mutual Friend, J. Seward, Etoile de Lyon, Mrs. H. Weeks, and Phoebus. In some of the above there were two of one kind making the eighteen. On a showboard this is by far the finest lot I have ever seen in every way. Colour, size, depth and breadth and finish were all excellent. There was, moreover, not the slightest coarseness. The two blooms of Madame Carnot will long be remembered by those who visited Leeds Town Hall. One of these blooms was awarded the premier prize for the best bloom in the show.

The following is a list of varieties that are up-to-date, and most of which have shown us their faces during the last season.

Viviand Morel	Demay Sallandier
Col. Chase	M. Panckoucke
Col. Wm. B. Smith	Wilfred Marshall
Mutual Friend	Mrs. W. H. Lees
Rose Wynne	Madame Cambon
Wm. Seward	Madle Thérèse Rey
John Shrimpton	Chénon de Léché
Good Gracious	President Borrel
Etoile de Lyon	Major Bonaffon
Florence Davis	Baronne de Buffières
Violetta	Alice Seward
Puritan	Eva Knowles
Beauty of Exmouth	Eda Prass
Duke of York	Edith Tabor
Avalanche	W. Tricker
Boule d'Or	W. W. Coles
Sunflower	Golden Gate
International	H. Jacotot Fils
Interocean	H. L. Sunderbruch
G. C. Schwabe	John Seward
Souvenir de Petite, Ami	G. W. Childs
Commandant Blusset	Kentish White
Louise	Lady E. Saunders
Phoebus	Lord Brooke
W. H. Lincoln	Niveus
Mdlle. Marie Hoste	Oceana
Madame Carnot	Silver King

This is a list of good varieties, not the newest, but all well tried and to be found in any good catalogue for next season.

Cuttings, Good and Bad.—The best cuttings come from under the soil. The worst are taken sometimes, but of necessity, from the stems and called stem cuttings. A length of 2 in. is quite sufficient for any cutting. Single pots are preferable; if these are not used then not more than five cuttings should be inserted round the side of a sixty-pot. A tight case if it can be found forms the most suitable accommodation, but it is by no means a thing that cannot be dispensed with; only when exposed in a great space the cuttings require a little more water. Above all keep them cool and away from the frost.

The coming season is my first with Edwin Molyneux, Chrysanthemum, so I can say nothing about it, but by conversation I find it is apt to die right out, because it cannot be done well. One good man said he had put ten fine cuttings in, and tried them ten different ways with the same result. Cannot Mr. Molyneux be induced to speak, perhaps to save the life of his namesake. The above is not one instance by a lot.—*J. G. Pettinger, Strawberry Dale Nursery, Harrogate.*

(*To be Continued.*)

HOME OF HORTICULTURE.

Will you allow me to add to my former letters upon the above subject a few further remarks upon finance. It is most desirable to create and foster interest in every department of the horticultural community, the trade, the employers of labour, the gardeners, the amateurs and the cottagers.

As I have already stated, the Rose and other floral festivals held about the middle of June (as near to the 20th as convenient) would in my judgment be a most appropriate celebration in which all could take part. The trade, I would suggest, who derive their income from the gardening body, might take the initiative and subscribe, say, £1,000, to be distributed in prizes to those societies who would be represented by a Life Governor or an Associate. If their co-operation can be obtained for carrying out my scheme, I shall be pleased to offer £100 towards this fund, and believe another four hundred would be forthcoming from four other firms. Surely amongst all our large and wealthy trade community, ten other sums of £50 each can be relied upon, thus making £1,000.

The assistance of gardeners might be solicited through the post, collecting cards being sent to them, prizes being offered for the largest amounts so collected. Collectors might also ballot for a certain number of their fellow-collectors to be elected as associates without payment, thus ensuring a thoroughly representative council; also all collectors of over £2 to be entitled to a free membership (first year) with all its privileges.

A cordial response from noblemen and gentlemen interested in horticulture, amateurs and cottagers, would, it is confidently anticipated, result from a special appeal by the Horticultural Press, particularly if the papers would receive donations, and acknowledge them in their columns.

I offer these suggestions entirely because no one else appears to come forward with a definite scheme; the forthcoming event is too important to pass unnoticed. Celebrations and festivities of all kinds will be held all over the kingdom. Shall horticulture be silent?

Will the Royal Horticultural Society consider these suggestions? They are not made with the idea of forming a rival institution, but establishing a Home in which all interests should be united; and the Royal Horticultural Society would naturally be the head of it. Will they therefore take the lead?—*James L. Wood, Oakleigh Park, Whetstone.*

CHRISTMAS FLOWERS AT COVENT GARDEN.

Christmas! what a wealth of meaning is bound up in the word, and what far-reaching consequences does its observance entail! Scarcely is there an avocation, indeed, but what is affected by it, either directly or indirectly, although in no direction does it exercise a more potential influence for good than upon the gardener and the market grower. These represent a colossal organisation, the energies of which are devoted, not only to supplying a vast amount of wholesome and nutritious food in the shapes of fruit and vegetables to the public at large, but also the furnishing of the wherewithal for the adornment of our dwelling houses, and our public halls, as well as our persons. Covent Garden is the heart of this organisation, and it is to this heart that all the wealth of material flows for redistribution.

A walk round the market just before the Yule-tide festival is most instructive, for the products of the skill of the modern gardener are many and varied.

Naturally, the characteristic decorations of the season are very much *en evidence*. Shops, booths, and stands are all in festive garb, and outside of the building cartloads more, of Holly, etc., are to be seen. Holly-berries are unusually plentiful this year, a prophecy exactly in accordance with the wishes of the coal-dealer, according to rural ideas. The ordinary red berries are the chief favourites, for although the yellow ones were represented, it was only in comparatively small quantities. Mistletoe is likewise carrying heavy crops of berries this season, and judging from the quantities there are of it upon the market, and the brisk way in which it changes hands, there is no sign of its popularity waning. How strange it is that this relic of barbarism should still be cherished by us after the symbolism and the religious rites with which it was associated by our Druid forefathers have become a dead letter. The Anglo-Saxon is conservative, however, and sticks to his Mistletoe. Long light sprays of Ivy, the leaves of which exhibit a charming shade of bronze green are capital decorative material, and bundles of them are to be seen at every corner. Rather a new dodge in the way of festoons are the threads of Holly leaves interspersed at intervals with the berries, threaded singly like beads.

Flowers are in great abundance, and we were pleased to see that although their waxen travesties were still on view, there seems to be a slight falling off in the favour with which the dyed and otherwise denaturalised articles are regarded. Agrostis nebulosa is a common subject for the ill-mannered attentions of the dyer. Other abortions are the bright scarlet dried and dyed "Cape Flowers," for which some use is evidently found. Chrysanthemums are lasting out bravely, the late L. Canning being one of the best white varieties at this advanced season. Violets are grateful, not only for their colour, but for their perfume. Bunches of the Czar, were marked up in the windows of several shops at 2d. each, not a bad price by any means. The south of France is a heavy contributor of Violets, both single and double, for our autumn and early winter days are two foggy for them to be produced here, and hence the foreigner has to be called upon. Forced flowers of all kinds are to be had in great profusion. Roman Hyacinths, White Azaleas, Camellias, Paper-white Narcissi, Cyclamen, Lilies of the Valley, and the noble spathes of Richardia africana show no lack in this respect. For wreaths, button-holes, and other floral designs, Eucharis amazonica has no equal, and its wax-like blooms find a ready sale. Such Bouvardias as Alfred Neuner, Vreelandi, and Priory Beauty render valuable service just now. A valuable contribution comes from the south of France in the exquisite blooms of Rose Catherine Mermet, which is such a favourite throughout the summer in our gardens at home.

Orchids are few, the principal being Cypripedium insigne, Odontoglossum Alexandrae, Oncidium Forbesii, and O. varicosum, the last two being some of the best Oncidiums for market work. Long strings of the popular Smilax (Myrsiphyllum asparagoides) furnish decorative greenery of the utmost value, and the quantities of it sold are something immense. Asparagus plumosus nanus, and A. tenuissimus are in great demand owing to the way in which they last when in a cut state. We noticed a lot of cut fronds of the hardy Lomaria spicant which were doubtless intended for similar uses. The

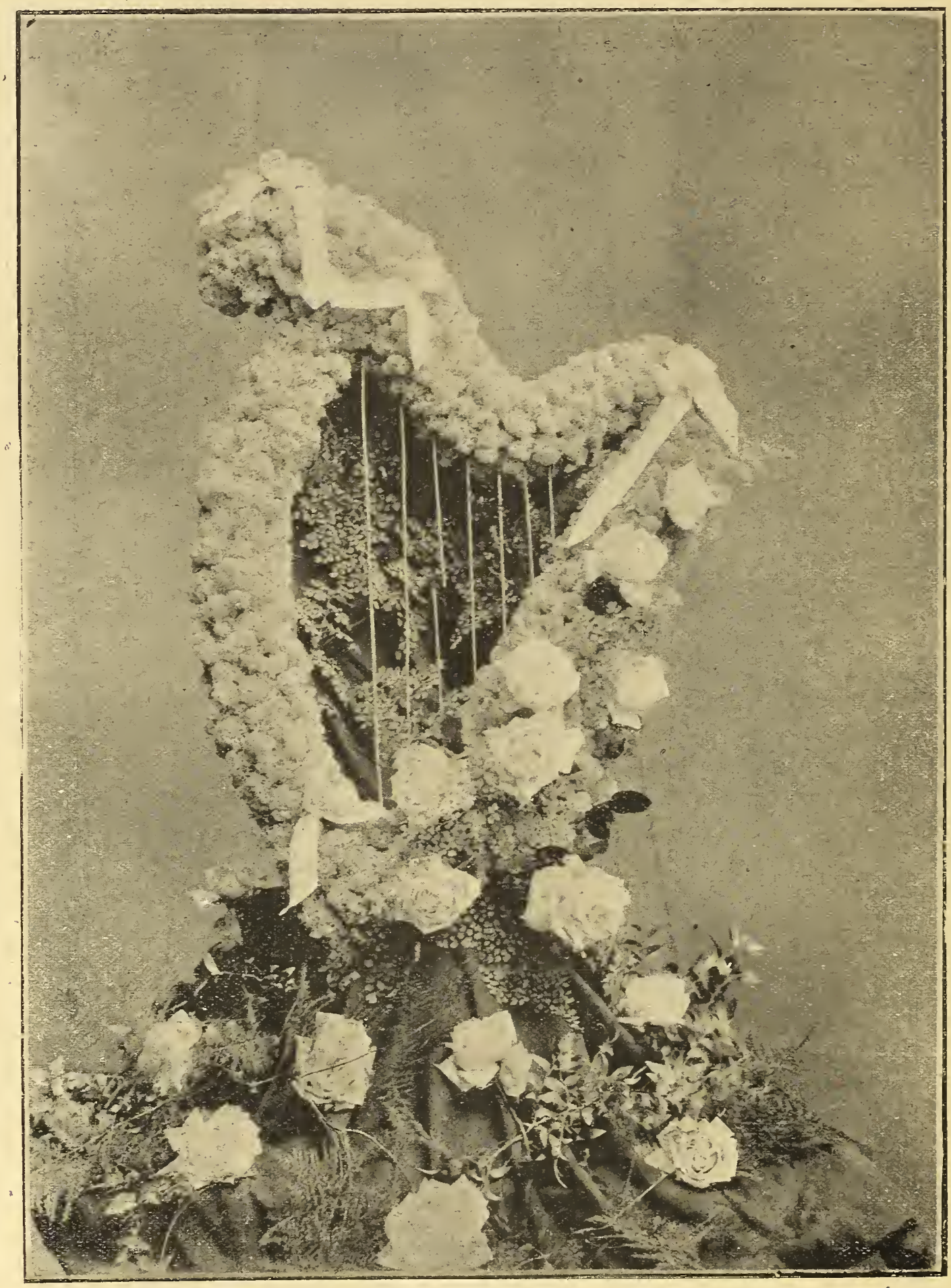
richly coloured foliage of Mahonia Aquifolium is very effective, and is vastly appreciated.

Pot plants are a most heterogeneous collection. Spruce Firs of varying sizes in pots, the branches of which are destined to sparkle with the numerous accoutrements that go to make up a Christmas tree are evidently an important line. It is a far cry from these to pots of Duc Van Thol Tulips, and yet they are present in their thousands. Yellow, scarlet, rose, and white varieties were represented, some of them charmingly associated with Ferns, others by themselves in all the glory of their precocious blooms, presenting a striking contrast to the snow and sleet, which was pouring down outside. Evergreens of various kinds, including Aucuba japonica, and Euonymus japonica and its variegated form do well in pots, and there is a brisk demand for them at this season.

Fruits in wondrous variety are to be had. Bananas, Oranges, and Pineapples from sunnier climes than ours help to supplement our home-grown fruits. Nuts of all sorts, are, of course, a necessity at the Christmas season. Pears are few, although some excellent samples of Glou Morceau and Easter Beurré were to be seen. English Apples were represented by such varieties as King of Tompkin's County, Blenheim Orange, Newtown Pippin, and Ribston Pippin. Small and not very highly coloured fruits of the two last-named varieties were marked up at 1½d. each—not at all a bad price. Surely if proper attention was paid to storing and grading, and the markets were closely watched, British fruit-growing has a future before it. Gros Colman Grape is in great demand, and seems to outsell the other late varieties. Some baskets full of superb bunches with large well-coloured berries caught our notice. A comparatively few years ago it would have been impossible to have got such fruit for love or money in the market—now it is only the money that is required.

FLORAL DESIGNS.

In modern times much attention is given to the making of floral designs and devices with various flowers and plants, perishable or but slowly perishable. The accompanying illustration, which has been furnished us by Mr. John Downie, 144, Princes Street, Edinburgh, shows a harp which has been decorated with a kind of reindeer moss or lichen, known in commerce as Siberian Silver Moss. This material is capable of lasting practically indefinitely, and requires only to be kept clean to remain useful. Brightness is imparted by Roses, which may be renewed from time to time as occasion may require. Fresh greenery is supplied by means of Maidenhair Fern, Asparagus plumosus, A. medeoloides (Smilax), &c., at the wish of the decorator. Such a design or device is capable of being made very effective at the hands of a skilful operator, who has taste, and takes interest in his work. The harp in question can be



Harp of Siberian Silver Moss.

adorned with a few fresh flowers—an item of considerable importance at this season of the year when flowers are relatively scarce and expensive. An illustrated list of "Floral Designs," issued by Mr. Downie, shows a number of highly ornate designs made in flowers of various kinds, and for different purposes, as made by him.

INTERESTING PLANTS IN THE BOTANICAL GARDENS, BIRMINGHAM.

VISITORS to Birmingham interested in horticulture should not fail to visit these gardens; and should they be fortunate in meeting the courteous and enthusiastic curator, Mr. Latham, and conversing with him, it will convince them at once of his love for the profession. There is, at all seasons of the year, something interesting to be seen in the houses. At the present time, many good winter-flowering Orchids attract one's notice. Many good Cattleyas, such as C. labiata and others may be noticed; also many Cypripediums, grand forms of the C. insigne type and its many varieties. Dendrobium Phalaenopsis, Coelogyne barbata, and a grand specimen of Cymbidium giganteum, with over a dozen fine spikes of flowers, are amongst the many.

In the Palm house a plant that attracts the attention of the public is a grand specimen of Cycas revoluta, with an enormous crop of high-coloured fruit. Another plant grown under warm treatment is the *much* neglected, but most useful winter-flowering plant, viz., Callicarpa purpurea, grown in pots, attaining the height of 10 ft. to 12 ft. Some of the roots are over 6 ft. long, and branches produce as many as twenty clusters of violet-coloured berries, which are exceedingly showy. The habit of the plants is most graceful. It is generally classed with the greenhouse plants but succeeds best in an intermediate temperature. For winter decoration this is a valuable plant, and can easily be propagated by cuttings or from seed.

Lapageria rosea and L. alba are well down here. The plants are loosely trained upon the roof of the house; and hundreds of their beautiful flowers are produced during the season. It may also be interesting to state that many dozens of fruits have been produced at various times, and Mr. Latham has raised many seedlings. These are only a few of the many features noticed by *Rusticus*, as he had the pleasure of a hurried view round the houses with his old and esteemed friend, the curator.

EXHIBITORS OF VEGETABLES.

NORTH *versus* SOUTH.

As one nears the fifties and can look back on from thirty to thirty-five years' experience, one can see many changes in horticulture during that time. I well remember when I began my gardening career, that our northern friends had a big name as vegetable cultivators and exhibitors, as compared with the southern growers. Probably they deserved it, as I think most members of the craft will agree that some thirty to forty years ago vegetable culture was not practised so well in the south as it ought to have been. But when such men came to the front as Messrs. Miles, Pragnel, Gilbert, etc., then the south began to look up.

If my memory serves me correctly, about the time these gentlemen were in the fore rank, there were some prizes offered in London for exhibits, North *versus* South, showing there were some doubts as to who were the best cultivators.

Again the southern gardeners had the reputation for not teaching the young men (when they were under training), the culture of vegetables in the same way as the northern masters, owing to their not being put into the kitchen garden first, and from there into the houses. No doubt this is the very best way to make a thoroughly good gardener; and many of our best men have learnt some of their most valuable lessons from the market gardens.

I am afraid there is still a tendency to put young men in the wrong place to commence their training in many gardens, seeing that a man wants to be something more than a glasshouse gardener to-day to satisfy many employers. I am under the impression the stimulus given to exhibitors of vegetables is a means of lifting up the standard of vegetable culture as much as anything, and removing from young men's minds the idea that anyone can grow vegetables and serve the kitchen. I have found these two of the most important parts of my calling.

When looking over the reports of many large shows, and that of the National Chrysanthemum Society's late show, I was impressed with the idea that northern growers are not maintaining their ground, when one comes to see how many prizes go to southern growers. Northern cultivators have prided themselves in obtaining big Leeks, but it is strange that the first prize should have gone to a Hampshire grower at the Aquarium recently. This is the more so, as there was such a large number of exhibits. The same grower showed a collection of vegetables, and one report said of it that the judges could not find a fault in the collection, thus showing that good vegetables can be grown in the south and by southern natives.

It would be interesting to learn if those prominent growers in the south ever had their training in vegetable culture in the *North*, because if they obtained it otherwise it goes to show that the south is improving and giving their young men the best of training. I would strongly advise all young men to use every effort to obtain the best knowledge of open air gardening, as this is of the utmost importance in after life.—*J. C. Chard.*

EARWIG AND CHRYSANTHEMUMS.

THESE pests have been particularly troublesome in our immediate neighbourhood, one neighbour assuring me that from this cause alone he has had the worst lot of 'mums he ever grew. Not far from us they actually invaded dwelling houses by the thousand, and in our own case they were in strong evidence among our vegetable crops in close proximity to our Chrysanthemums, about 100 plants of which for the want of a better site were placed upon a disused part of the kitchen garden. We think that we are within strict limits of the truth in saying, that although we kept a pretty good out look, we failed in catching more than two dozen among the 'mums during the entire season. The only possible cause we can assign for this happy state of affairs is owing to a departure from orthodox lines in our practice, and, having followed which for two seasons, it seems to point to its being the cause of our immunity from these pests so far as 'mums are concerned. Keep all litter as far away from your 'mums as possible, seems good advice; use your short grass mowings as a mulch between your plants, appears to be good practice when measured by results. This is a result we by no means anticipated; but having to work upon a soil of a sticky, clayey nature, and in the absence of a supply of more suitable material, we were led to use the mowings in order to prevent the soil sticking to our boots, and thus carrying it on to the gravel. There may possibly be some other explanation to account for our escape from these marauders, and possibly, had our experience been confined to one season, we would not have thought it worth while to make a note of it. —*W. B. G.*

A FLORAL DEMONSTRATION.

UNDER this title the Rev. Geo. Henslow lectured on some popular plants to the Fellows of the Royal Horticultural Society on November 24th, C. E. Shea, Esq., taking the chair. The reverend gentleman took a number of plants that had found a place in that day's show.

Mr. Holloway, (gardener to E Hyde, Esq, Castle Bar, Ealing), had exhibited specimens of the original plants of Primula sinensis. To these Mr. Henslow referred, saying that for a long time, and until a few years ago the exact ancestor of our five races of Chinese Primulas was unknown. Mr. Holloway had also exhibited a supposed cross between P. sinensis and P. obconica, and the scientific committee were about to examine the supposed hybrid, and see whether it was really an intermediate form between the two species. There had been some talk lately about P. obconica producing eczema in persons who handled it incautiously. It has been proved that about one person in twenty was subject to irritation from this source. The scales of Hyacinth bulbs would also cause eczema, but in this case it was the minute crystals of oxalate of lime (raphides) that were responsible for the irritation. In this case, therefore, the irritation was produced mechanically.

Passing on to the consideration of the Gloxinia the lecturer said that the old forms used to be drooping, instead of being erect, as now. Referring to irregular flowers becoming regular, through the agency of the florist, Mr. Henslow adduced some familiar examples in the Pansy and the Pelargonium. For sixty or seventy years the florists had been trying to make these round in outline. Irregular flowers had become so through insect agency. Sometimes the lower petal increased greatly in size, as in the Pansy, again the lower petal might be dwarfed as in Veronica, where we find three large petals, the fourth being very small. This was carried still further in the Horse Chesnut, where we get four large spreading petals whilst the fifth is entirely wanting.

It had been proved over and over again that protoplasm was very irritable, and would respond readily to an external impulse. He reminded his audience of the fact that if a young branch had a weight attached to it, the stimulus thus set up would result in the thickening and strengthening of the tissues until the branch would be able to bear a much greater weight than at first, in much the same way as the arm of a gymnast thickened and strengthened under muscular exercise

The Javanico-jasminiflorum section of hybrid Rhododendrons sent up by Messrs. J. Veitch & Sons, of Chelsea, afforded the reverend gentleman more subject matter. These beautiful plants had been obtained from five or six species imported originally from Java and Borneo. After an infinite amount of labour a race of doubles had been procured. Now no one could exactly say what produced doubling. The florist could not make a flower double. He had to wait patiently till Nature vouchsafed some sign, that she was willing to produce it and then by careful selection and cross breeding he could obtain the desired end. The distribution of colour in flowers was also a matter upon which they were quite at sea. Sometimes when one parent bore a white flower and the other an orange, the white would, as it were, wash out the orange, and a pink would be the result, as in Rhododendron Princess Royal.

Chrysanthemums had made most marvellous strides of late years. The first comers were first grown in this country in the Physic Garden at Chelsea, about the middle of last century. C. indicum flore pleno, introduced early in the present century, was the parent of all the pompon varieties.

The Cyclamen and its tendency to bury its seed-pods in the soil by means of the curling downward of the flower stalk was discussed at length. It was believed that this was done for the sake of the increased nutriment that the seeds would obtain, larger and finer seeds being the natural result.

Cephalotus follicularis was described by Mr. Henslow as being the only pitcher plant common to Australia. In this case the pitchers were formed out of a metamorphosed leaf, thus differing from Nepenthes in which the conversion of the water glands brought about the pitchers.

The Jerusalem Artichoke came the last on the list of the subjects for demonstration. This was a case where the tuber has passed into a rhizome. The Artichoke was a native of the North-Eastern States of North America.

A hearty vote of thanks to the lecturer was proposed from the chair, and being received with unanimous favour, the proceedings terminated.

GARDENING MISCELLANY.

LUCULIA GRATISSIMA.

THE greenhouse at Kew contains a healthy young specimen of this beautiful cool house flowering plant in full glory of bloom. This Luculia would be sure of a welcome no matter what the particular time of the year was when it opened its blossoms, but how much more welcome are its beauty and fragrance in December. The Kew plant is growing in a corner of a prepared border in the centre of the house, where, despite the fact that it is some distance from the glass, it appears to be thoroughly enjoying itself. The plant is bearing several large panicles of the rosy pink flowers which literally fill the house with their fragrance.

A CURIOUS COLLAPSE.

REGULAR visitors to Kew, who have traced the progress of the double Cocoa-nut palm (Lodoicea sechellarum) up from the baby stages into what was apparently the first flush of youthful vigour, will be astonished and disappointed to hear that the larger

and finer of the two plants has collapsed in a remarkable fashion in the short space of three days from the time when the first signs of distress on the part of the plant were apparent. Upon examination it turned out that the roots were attacked by a fungus which was responsible for all the mischief. Naturally some fears are entertained for the safety of the remaining plant which is growing in a pot standing a few inches deep in the water in the tank of the Victoria House. Should this one also succumb to the insidious destroyer, Kew will be the poorer by two specimens of a most interesting and curious plant.

CYPRIPEDIUM INSIGNE.

No matter whether this old favourite is considered to be surpassed in beauty by some of the other species, and the numerous hybrids now upon the market, there is very little doubt that for usefulness to the ordinary gardener it still holds a foremost place—a position, moreover, from which it is scarcely probable that it will soon be ousted. It is grown in numbers at Kew, and one might go a long way before discovering a more meritorious batch than that in flower there at the time of writing. The plants are arranged on the central stage of the cool Orchid house, facing the door, so that visitors coming into the T range by that entrance lose nothing of the effect. Not only are the plants clean, and the foliage vigorous, substantial, and of good colour, but the flowers are numerous, and well above the average size, the colour, moreover, being excellent.

BIGNONIA VENUSTA.

This pretty climber is not nearly so frequently met with as its merits would entitle it to be. Probably the fact of its being rather a shy flowerer is mainly responsible for this. Like most of the Bignonias it requires plenty of sunlight to ripen the wood sufficiently, and unless this state of things obtains it is very little use expecting it to flower. The summer of 1896 has been very much to its liking, with the large amount of bright sunlight and tropical heat. A fine specimen of it is now flowering with Mr. Wythes in one of the wings of the large conservatory at Syon House. The flowers are rather small, bright orange-crimson in colour, and produced in many flowered terminal corymbs, which, when allowed to hang pendant from the roof, are exceedingly handsome. Indeed it would be hard to find a brighter touch of colour in the months of late autumn and early winter, and if the plants could only be induced to abandon the bad habit of shyness, and flower pretty regularly each year, it could scarcely fail to become a favourite. It is a native of Brazil.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Names of Plants.—*W. W.*: 1, Salvia splendens; 2, Adiantum decorum; 3, Aspidium (Cyrtomium) falcatum; 4, Dactylis glomerata elegantissima; 5, Chlorophytum elatum variegatum; 6, Campanula garganica.—*W. S.*: 1, Lotus jacobaeus; 2, Zaluzianskia (Nycterinia) selaginoides; 3, Sempervivum tortuosum variegatum; 4, Davallia elegans incisa; 5, Agapanthus umbellatus variegatus.—*J. H.*: 1, Erica gracilis; 2, Erica hyemalis; 3, Libonia floribunda; 4, Pteris quadriaurita argyrea.—*T. M.*: 1, Oncidium crispum; 2, Oncidium cheirophorum.

Book on Carnation.—*Omega*: The best cheap book on the subject is "The Carnation: its History, Properties, and Management," by the late E. S. Dodwell. Whatever is said there may be relied upon, being the work of an expert. Its price is somewhat dearer than you state, being 1s. 7d. post free.

Staining Flowers.—*Homo*: Various preparations are used for the purpose of staining flowers and similar objects. Methyl-green, Methyl-violet, Fuchsin, &c. are used but we believe your best plan would be to get some of the aniline dyes which have now been obtained of various colours, including aniline blue, green, black, purple, or mauve, red, magenta, violet, yellow, and orange. A little of any of these should be diluted in water and the cut flowers placed with their stalks in the liquid, so that the dyes may be absorbed into their tissues and so reach the flowers, staining them with whatever colour may be used.

Herbaceous Flowers for Cutting.—*James Turner*: In the front row you may plant Campanula turbinata, C. carpatica and its varieties, C. Van Houttei, Centaurea montana and its white and red varieties, Papaver nudicaule in variety, Armeria cephalotes, Dianthus hybridus Napoleon III., Erysimum ochroleucum, Cheiranthus Marshalli, Geum coccineum plenum, Helenium pumilum, Christmas and Lenten Roses, English and German Irises, Platycodon grandiflorum, Hesperis matronalis alba fl. pl., Lychnis Viscaria splendens, Forget-me-nots, and others of that class. In the second line plant Gypsophila paniculata, Achillea Ptarmica The Pearl, Pentstemon barbatus Torreyi, early or summer Phloxes, Eryngium giganteum, E. alpinum, Pyrethrums, single and double, Campanula persicifolia alba grandiflora, Aquilegias of various sorts, Alstroemeria aurantiaca, Rudbeckia speciosa, Hemerocallis flava, H. fulva, Coreopsis lanceolata, Chrysanthemum maximum, Doronicum plantagineum excelsum, &c. In the third line put autumn Phloxes, double Paeonies, Anemone japonica alba, Galega officinalis alba, Helianthus rigidus, H. r. Miss Mellish, H. multiflorus fl. pl., Iris sibirica, Hyacinthus candicans, Veronica longifolia subsessilis, Asters, &c. In the back line plant Delphiniums, tall Sunflowers, Lythrum Salicaria, Lychnis chalcedonica fl. pl., Everlasting Peas, and various others too numerous to mention on this occasion. Say what kinds you find most useful and we will give varieties, &c.

Arrangement of a Herbaceous Border.—*James Turner*: A border 9 ft. wide should be wide enough for four rows of plants running the long way of the ground. The back row should be 18 in. from the edge of the border; the next about 3 ft. in front of the first; the third about 2½ ft. from the previous one; and the front row 6 in. from the walk, thus leaving 18 in. between it and the row next behind it. Each row should alternate with the other to give variety, avoid formality and give the plants the full advantage of exposure to light. The dwarf plants in the front row may be allowed to form wider patches than those in the back row so as to occupy the ground. Patches of spring flowering bulbs may be planted in the rows between the other subjects so as to afford a supply for cutting in April, May and June. These bulbs may consist of white and yellow trumpet Daffodils, single and double Poet's Narcissus, Hyacinths, if you like them, Fritillaries, Gladiolus Colvillei The Bride, G. gandavensis in variety, &c.

Temperature of Greenhouse.—*Omega*: The lowest night temperature at which a greenhouse should be kept in winter, depends entirely upon the contents of the house. Such things as Pelargoniums, Indian Azaleas, Fuchsias, &c., may be kept in a healthy condition, provided the frost is merely kept out. The temperature may be down at 32° in the morning occasionally, without any harm accruing. On the contrary if you wish to keep Chinese Primulas, Cinerarias, Cyclamens, and similar plants in a growing and flowering condition, the temperature should be kept somewhere between 45° and 50°, not much above nor below those figures. State the nature of the plants in the greenhouse and we can speak more definitely.

Communications Received.—A. Hope.—W. B. G.—J. Peebles.—Rusticus.—J. Hole.—Gyp.—Wm. Keen.—Florum Amator.—A. Grigor.—J. M., B.—P. Weathers.—H. Bailey.—Wm. Handel Cannon.—J. M.—S. H.—J. L.—A. J.—W. M.—R. L.—W. Ames.—Ricardo.—B. T. S.—Y. M.—Smith.—X. Y. A. B.—May.—F. Elson.—C. C.—Chr. Lorenz.

TRADE CATALOGUES RECEIVED.

James Carter & Co., High Holborn, London.—Carters' Tested Garden Seeds, 1897.

Dobbie & Co., Rothesay, Scotland, and Orpington, Kent.—Dobbie's Catalogue and Competitors' Guide, Spring, 1897.

Kelway & Son, Langport, Somerset.—Kelway's Manual of Seeds, Plants and Bulbs for 1897.

Chr. Lorenz, Erfurt, Germany.—Lorenz's Illustrated Catalogue for Owners of Gardens, Amateur and Professional.

B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, London, N.—Descriptive List of Flower, Vegetable and Agricultural Seeds, Horticultural Sundries, &c.

Dicksons (Limited) Chester.—Select Vegetable and Flower Seeds, Seed Potatos, Garden Tools, &c.

J. R. Pearson & Sons, Chilwell Nurseries, Notts.—Descriptive List of Garden Seeds, Garden Sundries, &c.: also Chrysanthemum Catalogue, 1896.

John Peed & Sons, Roupell Park Nurseries, West Norwood, London, S.E.—Peed's Seed Catalogue for 1897.

Little & Ballantyne, Carlisle.—Garden Seeds. 1897.

COVENT GARDEN MARKET

December 23rd, 1896.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red ,, ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100lbs.	35 0	
Grapes, per lb	0 6	1 6
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples, per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes...per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	3 0
Azalea, doz. sprays...	0 9	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	0 6	2 0
Chrysanthemums, doz. blooms	1 0	6 0
Chrysanthemums, doz. bnches.	3 0	6 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	4 0	9 0
Hyacinths (Roman) doz. sprays	1 0	1 6
Lilium lancifolium, doz. blooms	1 6	2 6
Lilium longiflorum per doz.	5 0	8 0
Lilac, White (French) per bnch.	4 0	5 0
Lily of the Valley doz. sprays	1 0	2 6
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	6 0
Mimosa, per bnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	4 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (indoor), doz.	0 6	1 6
,, Tea, white, doz.	1 0	2 0
,, Niels	6 0	9 0
,, Safrano	1 0	2 0
,, (English),		
Red Roses, doz.	1 0	1 6
Pink Roses, doz.	2 0	3 0
Smilax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms ...	0 4	0 9
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz blms.	9 0	15 0
Violets (French) per doz. bnches.	1 6	2 6
Violets (English) per doz. bnches.	1 6	2 6
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per bnch.	2 0	3 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
,, specimen	3 0	5 0
Chrysanthemums, per doz.	4 0	9 0
,, per pot	1 0	2 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, per doz.	9 0	15 0
Erica Hymalis, per doz.	12 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	12 0	18 0
Solanums, per doz.	12 0	15 0

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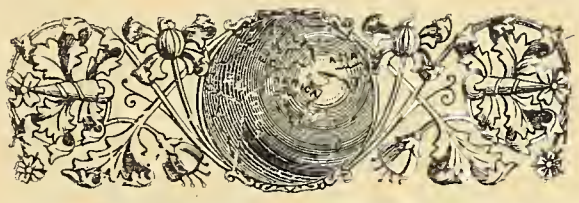

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, JANUARY 2nd, 1897.

HARDY CONIFEROUS TREES.*—This is the title of the most recent book from the pen of Mr. A. D. Webster, who has devoted a considerable amount of time during many years to the study of trees and shrubs, both from an ornamental standpoint, and that of forestry. The book is intended as a cheap and handy guide to hardy Conifers such as are cultivated in this country. Technicalities have been avoided wherever possible in order to make the description as simple as the nature of the case would permit and be understood by readers generally. Likewise to facilitate reference, the arrangement is alphabetical throughout the book as far as the first chapter is concerned, and which

*HARDY CONIFEROUS TREES: Being a Concise Description of Each Species and Variety, with the most Recently Approved Nomenclature, Lists of Synomyms, and Best Methods of Cultivation. By A. D. Webster, author of "Practical Forestry," "Hardy Ornamental Flowering Trees and Shrubs"; "British Orchids." London: Hutchinson & Co., 34, Paternoster Row, E.C. 1896. Price 3s. 6d.

is the longest, running to 134 pages. The book runs to 196 pages altogether, including the index, and nine short chapters on various subjects. Notwithstanding the alphabetical arrangement of the chapter containing the descriptions of the various species and varieties of Conifers noted, we consider that the index would have been greatly improved by being paged for reference to such headings as Conifers and soils, enemies of Conifers, diseases of Conifers, hares, voles, black game, wire-worms, &c., injurious to Conifers. The headings of the chapters are of less importance than the side-headings, which take longer time to find. We would prefer the arrangement of the "contents" at the beginning of the book; but even there the respective pages are not indicated. This deficiency is less noticeable, however, when one becomes acquainted with the general arrangement.

Mr. Webster's method of dealing with a species of Conifer is to give the names as accepted by modern botanists, together with the authority for the specific name. This is followed by the English name, where any such exists; then follow the synonyms in italics, though we note some omissions, even of names still to be met with in gardens. The general aspect of the tree, descriptions of its various parts, and its uses are next dealt with. In the case of well-known kinds, hints are given concerning the soil and situations in which the tree usually gives the greatest amount of satisfaction to the planter and owner.

In some cases the descriptions appended to the species might have been considerably shortened by relegating the information about the quality and uses of the timber to Chapter VII, which deals with the "Quality of British-grown Coniferous Trees." The classification of the *Genera Plantarum* is not adopted in all cases; but that is a matter which excites but little surprise in us, seeing how often both the names and classification of Conifers have been changed every now and again, for many years past. Indeed we should now be surprised to find unanimity amongst any considerable section of botanists or authors of books. The botanical names in some cases become almost unintelligible to ordinary readers, while the English ones become the mainstay by which to recognise the trees under notice.

In connection with Araucaria imbricata, the author made an interesting observation at Cudham Hall, in Kent, the property of the Earl of Derby, where he noted large numbers of both male and female cones produced upon the same tree. The species is peculiar amongst Conifers, inasmuch as the flowers are usually, though not always, dioecious.

Conifers are propagated by seeds, cuttings, grafting and layering, the importance of these operations being indicated by the order of the arrangement of these four methods. Layering has few or no advantages to offer, and could easily be left out of consideration. The author describes the method of grafting, but says that unless carried out on sound principles he would not recommend it. Generally speaking we consider this quite true, although we believe some of it is occasionally effected yet. Less recently however, many blunders were made and much mischief caused later on by injudicious grafting. We shall only refer to a fine avenue of the Deodar Cedar at Kew. The trees had been grafted on the common or European Larch as a stock; but after thriving fairly well till they reached a height of 20 ft. to 30 ft., they began to lose vigour, to dwindle and decay prematurely, so that instead of proving ornamental and imposing as they should have done at that age, they had to be cut down. The evergreen nature of the Cedar proved too much for the roots of the Larch, which is deciduous and goes naturally to rest in autumn. When grafted Conifers are kept in a fairly close frame till a union is effected, we consider grafting clay and wax are entirely unnecessary to the success of the operation, as the graft cannot get unduly dry, when properly tied up with cotton or raffia, owing to the preservation of moisture by the frame itself. The third chapter is devoted to Conifers and soils, in which we note that the author says the Larch grows better nowhere, nor is freer from diseases than when planted in peaty soil. If this is true, then ought the tree to be extensively planted in the peaty soils of Ireland. Probably, however, he would draw the line at the kind of peat, known as bog peat. Nevertheless, he goes on to say that the Douglas Fir, the Pitch Pine, Red Wood of California and a few other trees, are at home on deep peat bog.

In speaking of Conifers for various positions, the author says that Araucaria imbricata and Sequoia gigantea have sadly belied the hopes of the planter. Those trees are somewhat fastidious as to position, and uncertain in their behaviour, but in noting avenues of them, he has evidently overlooked the imposing avenue of Araucaria imbricata at Bicton, Devon. In some soils and situations, however, the above trees make magnificent specimens. In the formation of avenues of any one particular tree we should avoid Conifers generally; for those that would be reliable for the purpose when grown up, must necessarily be of some common or uninteresting type, perfectly hardy and not liable to be broken down by snowstorms, such as are of occasional or even frequent occurrence in Britain. Surely Pinus insignis should have been included in the list of species suitable for the seaside. By far the best specimens we have seen were growing in maritime localities. On the other hand Ginkgo biloba has deservedly been mentioned amongst those for smoky districts. It is a beautiful tree, does well in London and the suburbs, but is far too rare anywhere in Britain. In speaking of Conifers for economic planting due attention has been given to all those kinds which have been brought into prominence recently at the Conifer Conference, held at Chiswick, and elsewhere, the discussions concerning which have been largely fostered by the failure of the Larch. We are somewhat surprised, however, by the writer's remarks anent the value of the wood of the Scotch Pine, both in Britian and Ireland, where it is so inferior in quality "as hardly to fetch the price of second-rate firewood." In the midst of a purely agricultural district we have noted even the upper portion and the stronger branches of the tree being highly appreciated for the purpose of fencing, while the trunk was sent to a distance for more important purposes. Our native trees will be more valued when foreign wood becomes scarcer. The author has made numerous experiments with the view of testing the value of various exotic trees grown in this country, from a commercial or timber point of view. The value of Pinus Laricio is now pretty well recognised, but we were unprepared for his statements concerning the value and durability of the wood of Cedrus Libani. Some boards cut from a tree about 100 years old were made into a sheep-washing trough about 18 years ago, and even though sunk in the ground and alternately subjected to damp and drought for that period of time, the boarding, when removed, was perfectly sound though dark in colour. Evidently we have much to learn yet concerning timber which may be grown in this country.

Sweet Peas still multiply, about 25 new sorts, at least, being put on the seed market this year. Novelties for 1897 are greatly reduced in price.

Seeds of Musa Ensete do not keep good for a great length of time. If put into a stove or pit with a good bottom heat, they should germinate in the course of three weeks.

Wild Flowers for December.—The following is a list of wild flowers open for the week ending December 12th, 1896, at Ambleside:—Primrose, Wild Strawberry, barren Strawberry, red Dead-Nettle, Angelica, Ragwort, Pansy, Shepherd's Purse, Chickweed, Mouse-ear Chickweed, Broad-leaved Mouse-ear Chickweed, Field Speedwell, Common Speedwell, Bitter Cress, Pepperwort, Mercury, Pink Campion, Holly, Ivy, Annual Meadowgrass, Ivy-leaved Toad-flax, Daisy, Lesser Cat's Ear, Groundsel, Currant, and American Currant—26 in all.

Messrs. James Veitoh & Sons.—We learn that, for family reasons, Messrs. James Veitch & Sons, of the Royal Exotic Nursery, Chelsea, have decided on converting their business into a private limited company under the name of JAMES VEITCH & SONS, LIMITED. None of the capital of the company will be issned to the public, and the conversion will not affect the general conduct of the business which will be carried on as heretofore under the direct superintendence and management of Mr. Harry J. Veitch, and his two nephews, Mr. James H. Veitch and Mr. John G. Veitch, who will act as directors of the company.

Presentation to Mr. Wallace Mackay.—The employees of Messrs. R. Veitch and Son, Exeter were entertained at a supper at the Castle Hotel, Exeter, by Mr. Wallace Mackay on December 19th. The feast was to celebrate their host's completion of 25 years' service with Messrs. Veitch. The opportunity was taken to present Mr. Mackay with an illuminated address, executed by Mr. F. Tozer, on the part of his fellow employees. A handsome silver cigar case and vesta-box accompanied the address. The presentation was made on behalf of his colleagues by Mr. Webber. Mr. Veitch sent a handsome silver salver and a cheque for £25, by way of recognition of the valuable services rendered by Mr. Mackay to his firm. A letter accompanied these practical manifestations, of good will, couched in sympathetic terms and expressing a hope that the cordial relationships that had existed between them would continue. Amongst the company were Mr. A. Hope, Mr. Meyer, and Mr. H. Baker. Songs and speeches occupied the remainder of a very pleasant evening.

International Exhibition at Ghent.—The Royal Agricultural and Botanical Society of Ghent intends to open its fourteenth quinquennial and international exhibition in the Casino, Ghent, in the month of April, 1898. Amateurs and nurserymen throughout the whole world are invited to take part in that exhibition. Only the collections or exhibits belonging to several exhibitors, as well as the collective lots of horticultural societies are excluded from the exhibition. The society wishing to reply to a desire manifested by a large number of exhibitors, gives most importance to cultivated plants, specimen plants, and has reserved mumerous prizes for well-flowered examples belonging to the following genera:—Allamanda, Abutilon, Azalea indica, Andromeda, Boronia, Camellia, Choisya, Chorizema, Citrus sinensis (in fruit) Clerodendron, Clivia, Cochliostema, Correa, Cytisus, Daphne, Diosma, Epacris, Erica, Eriostemon, Euphorbia, Darwinia, Grevillea, Hebeclinium, Lapageria, Lasiandra, Libonia, Medinilla magnifica, Metrosideros, Mimosa, Mitraria, Pimelia, Polygala, Rhododendron, Roses, Sparmannia africana, Stephanotis, Strelitzia, Wistaria, &c. Special prizes will be offered for each of the above. The prizes will consist of works of art, gold medals, framed silver gilt medals, silver gilt medals, large and small silver medals, &c. The awards will be adjudged by an international jury chosen from amongst horticulturists of repute. The distribution of the prizes for the respective exhibits will be indicated in a detailed programme, which will appear before May 1st, 1897. The classes in which prizes will be offered in 1898 are extremely numerous and divided into twenty-eight sections. Intending exhibitors must apply before March 20th, 1898, to M. Fierens, secretary of the Royal Agricultural and Botanical Society, Casino, Ghent.

Mercurialis perennis—It is a rare occurrence to find the Dog's Mercury in bloom at this time of the year. At Ambleside, however, both barren and fertile blossoms may be found in a sheltered corner in a wood from October till May.

A plentiful crop.—Hops were only half a crop in Kent last September; but hops are plentiful in London all the year round; and hopping is a pleasant pastime, though a badly paying one to many people when they happen to hop on their neighbours' best corn.—*Snaggs.*

"Cottage Gardening."—The half yearly volume of of this weekly periodical issued by Messrs. Cassell & Company, Limited, contains a good coloured illustration of Cytisus scoparius andreanus, the brown winged Broom, and another of Azalea carminata splendens. The text concerns itself with seasonable articles on poultry, bees, allotments, food, house, window, and town gardens, suitable for amateurs.

Bruce Potatos for late Planting.—From Ireland comes an account of an excellent crop of this well-known variety having been obtained from tubers planted on June 15th. Still a month later, on July 15th, some more ground was planted with the same variety. The plants grew well but did not yield so heavy a crop as the June planted ones, neither were the tubers so large. It is stated, moreover, that in neither of these crops was a diseased Potato to be seen. The author of the account goes on to say that if instead of planting The Bruce, one of the dwarf early sorts had been planted on July 15th, it would have given a much better crop.

Dundee Chrysanthemum Society.—The seventh annual meeting of this society was recently held in Lamb's Hotel, Dundee, Mr. W. S. Melville, presiding. When the balance sheet was presented it was found that the income for the year had been £65 7s., whilst the expenses had totalled £72 1s. 1d. This left a deficit of £6 14s. 1d., and the funds at the bank had been drawn on to this amount. The chairman said that everyone would admit the excellence of the show, but they had been placed at a disadvantage in having their exhibition this year before the Edinburgh one. For their neighbourhood there was no doubt that they were far too early. They had now to consider whether they were going to hold their show on a larger scale so that it might be more worthy of the society. The election of officers for the ensuing year was next proceeded with. On the motion of the chairman, Lord Provost M'Grady, was requested to continue to occupy the post of hon. president. Mr. W. S. Melville was unanimously chosen president; Mr. Laird, secretary; and Mr. Croll, treasurer. The following gentlemen were appointed to serve on the committee:—Messrs. J. Beisant, J. W. Laird, J. Machar, J. Slater, A. Smith, D. Keillor, A. Cameron, R. Cairns, A. Crichton, —Döhnert, R. H. Low, and James Davidson.

Sevenoaks Gardeners' Mutual Improvement Society.—At the meeting held on December 15th, at which Mr. J. Rivers presided, Mr. F. W. E. Shrivell, F.L.S., gave a lecture on "The Use of Chemical Manures in Horticulture." A description of the work carried on at the experimental station at Hadlow, together with a short digest of the results was given. The lecturer laid great stress upon the value of suitable chemicals when applied to various Brassicas. Thus, twenty-five loads of London dung per acre produced a crop of 12 tons 6 cwt. of Savoys; but when 4 cwt. of nitrate of soda, 4 cwt. of superphosphate of lime, and 5 cwt. of kainit per acre were given, as much as 18 tons 2 cwt. per acre of Savoys were obtained, at a cost of about £3. Small dressings of nitrate of soda and superphosphate of lime upon Tripoli Onions also brought forth remarkable results. Brussels Sprouts benefited greatly by the application of the same manures, the price of the increase in the crop being in every case much above the cost of the manures. The lecture was illustrated throughout by numerous photographs. The application of various manures to Potatos, Carrots, and cereals, was also detailed. A lively discussion followed, in which many prominent members of the society took part. At the close Mr. Shrivell promised, in answer to a special request, to give another lecture at an early date.

English Barley damaged by wet and unfit for the brewer or distiller, is being dried artifially and sold as cattle food.

An Indian potentate has recently had electrical plant fitted up for lighting purposes, to enable him to gather crops by night.

Yaller and Red Cabbages.—An old man from back of the hills, somewhat near-sighted, and not well posted on modern flower cultivation, attended the Chrysanthemum show last night. Pointing to a bunch of big blooms he said to one of the committee: "Kin I get some seed from them air? We do not grow any yaller and red Cabbages up our way. If I could jes plant some seed and git em growin' 'fore my ole woman knowed anything erbout it, gosh, what a 'sprise 'twould be to her."—*Baltimore World.*

"The Studio," an illustrated magazine of fine and applied art, gives in the October number, several photographic reproductions of Japanese flower arrangements. We admire the art as executed by this magazine, and the various contrivances for displaying the plants and flowers; but we do not admire the scraggy looking specimens of plant growing, which constitute one of the most characteristic features of Japanese gardening. The cultivation of stunted and contorted trees, and shrubs of great age may be an art, but it is a very peculiar one. The vases, pots, baskets or other vessels in which the plants and flowers are placed are often excellent examples of art and workmanship.

Eve tempting Adam.—Mr. M'Nab, orginally from the "land of the mountain and the flood," now one of the most famous fruit growers in America, paid a visit to the art exhibition at Philadelphia, and was seen by one of his friends to be inspecting a picture of "Eve tempting Adam," and shaking his finger in scorn at it. His friend went up to him and said, "You do not like the picture, Mr. M'Nab?" "No," said the latter, "the painter must have been a shallow-brained fellow." "But," said his friend, "the painter has produced some of the finest of modern French creations." Said M'Nab, "the Apple he has put into Eve's hand did not exist till about 25 years ago."

Potato Growing.—The second lecture of the session was delivered to the Glasgow and West of Scotland Agricultural Society, on December 2nd, by Mr. William Kerr, Hondston, Girvan, who dealt with the "Growing of early Potatos." He had no hesitation in saying that the best spot in the British Isles for early Potatos was the district along the west coast of Scotland, between Ballantrae, and Culzean Castle. There was no doubt that the best foundation for a crop of Potatos was a liberal dressing of farmyard manure. The best mixture for a good crop was fifteen to twenty tons per acre of dung, and ten or twelve cwt. of artificial manure. Mr. Kerr said that farmers were blamed for growing soft varieties, but they were really in the hands of the merchants, and had to grow what varieties they could get the highest price for.

Wonders and Romances of Insect Life.—This was the title of a recent lecture given by Mr. Fred Enoch at the London Institution. All the insects upon which he discoursed were, he said, common occupants of London gardens. "Green fly" was the first in the list. This when present in any number was most destructive to Sycamore trees. Consequently such insects as the "wasp fly" the grub of which would destroy as many as 125 of the "green fly" in an hour rendered great service to gardeners. Mr. Enock described at length the appearance and construction of the "wasp fly." The Black Currant mite was so destructive that it had attracted the attention of the Board of Agriculture. The only way to get rid of this troublesome mite, however, was to pick off all the infected buds and burn them. He here remarked that in entomological matters the people of the United States were a hundred years ahead of us, for when the Orange groves were threatened with devastation by some insect, an expert was sent to Australia to bring back a parasite which speedily cleared the trees of the pest. The decorative galls upon Willow trees next received attention, the insects causing these excrescences being described very minutely by the lecturer. The lecture was illustrated throughout by means of lantern slides prepared from drawings made and photographs taken by Mr. Enock.

Mr. T. Pledger.—We understand that Mr. T. Pledger is shortly about to resign his appointment as gardener and bailiff to the Rev. E. W. Northey, Woodcote, Epsom. After twenty-two years' service there he has taken over a dairy and poultry farm that has for some years been successfully carried on by his father, who is now retiring from business. We wish Mr. T. Pledger every success in his undertaking.

Worcester Gardeners' Benevolent Institution.—Mr. R. C. Smith-Carrington presided at the first annual meeting of this branch held at the Guildhall on December 21st. The balance-sheet showed the totality of receipts to be £175 9s. 6d., with an expenditure of £172 5s. In presenting their report the committee expressed their indebtedness to those who had subscribed to the funds, and also to Earl Beauchamp for throwing open his grounds to them. A letter was read from the head office notifying the committee's appreciation of the value of the services rendered by Mr. J. H. White, the hon. secretary and treasurer of the Worcester branch. The election of officers followed, Earl Beauchamp being asked to continue as president, and Mr. J. H. White as secretary. The Mayor of Worcester (Mr. Dyson Perrins) was chosen chairman of the Executive Committee.

Improving on Nature—The latest direction in which the energy of our Gallic friends has asserted itself is distinctly interesting. It consists in giving perfumes to flowers to which nature has denied them, or to which only unpleasant ones have been vouchsafed. The African Marigold has anything but a pleasing odour naturally, but may be given one artificially. It is said that this is effected by steeping the seeds of successive generations in solutions of various scents according to the wish of the operator. Thus, sunflowers may be made to smell like a Rose, and Marigolds like violets. It is averred that even large trees when in bloom may have their blossoms scented to fancy, by boring a hole in the trunk, and pouring in a solution of the desired odour. This remarkable industry is pursued to a considerable extent in Paris.

Queen's Commemoration.—A committee has been formed by four societies, which are interested in the preservation and acquisition of open spaces and places of historic interest or natural beauty. These societies are the Commons Preservation Society; the Metropolitan Public Gardens Association; the Kyrle Society; and the National Trust for Places of Historic Interest or Natural Beauty. There is a universal feeling in favour of doing something towards commemorating the reign of Queen Victoria, as being the longest in English history. The committee, formed by the above societies, has an idea that a locality which is taking common action for the purpose, may fitly provide for itself a plot of ground, or place of natural beauty or historic interest, to be dedicated to the common use and enjoyment of its people. This may be called a "Queen Victoria" Garden, Park, Playground, Memorial, Field, or whatever name indicates its destined use. In the Metropolis, and in all populous and growing towns, the inadequate supply of open space is generally recognised. In view of the rapidly increasing urban populations, few towns are sufficiently provided in this respect. In many rural districts some of the landowners are liberal in allowing the use of their ground for special purposes; but these arrangements are liable to suffer owing to changes of ownership, &c. It is desirable, therefore, that the people should have open spaces which they can enjoy in their own right. Places dedicated to public recreation afford the largest social range of enjoyment to people of all classes. National memorials of this kind are of the greatest possible advantage, because they may be bequeathed to future generations, and can neither pauperise the people nor injure their self-independence, while it is a boon that they cannot procure for themselves. Open spaces also require less management than permanent institutions, and they are hardly capable of diversion from their object, through lapse of time and changes. Details have to be considered separately for each locality. The Joint Committee will be glad to give any advice or assistance in their power to any Local Authority, or to any landowner or other person who may be disposed to act upon the above suggestions; and should anyone, not in a position to contribute in kind after the manner suggested, nevertheless be anxious to further the

realisation of the committee's idea, the committee will be happy to receive donations to be applied as the donor may wish, either for a specified purpose, or at the discretion of the committee, where help is needed. A detailed letter has been issued by the Joint Committee. The hon. secretaries are Basil Holmes, Esq., care of The Earl of Meath, 83, Lancaster Gate, London, W., and Lawrence W. Chubb, Esq., 1, Great College Street, London, S.W., to whom communications may be addressed.

MESSRS. CARTERS' CATALOGUE.

There is no doubt that photography is effecting a revolution in plant illustrations and everything else pertaining to the garden. Messrs. J. Carter & Co., High Holborn, London, have not been slow in availing themselves of the greatly improved conditions of photography which have been effected within the last few years, and there can be little doubt but that horticulture generally will profit by it.

Coloured illustrations still enjoy a measure of popularity in several of the most sumptuously executed catalogues. In the instance under notice a full page plate representing Chinese Primulas is very well executed, and an improvement upon previous coloured illustrations of the kind, but at present this method cannot very largely compete with photography, whatever it may do in the future. The frontispiece of the catalogue consists of a vignette of Her Majesty the Queen, effected in colours and ornamented with representations of the national emblems, the Rose, Thistle, and Shamrock, together with Olive leaves and shoots. A letter referring to this illustration is also bordered with coloured designs. Photography is mostly responsible for the rest of the numerous illustrations.

Amongst those well worthy of mention are various garden Peas, early, mid-season, and late, mostly of Messrs. Carter's introductions, and including several novelties. Open pods show from seven to nine seeds, according to the variety. Broad Beans are also well represented; but surely Carter's Leviathan, according to the old style of classification, should be named a Long Pod Bean, since an open pod shows seven seeds. Various Runner Beans, Cabbages, Cauliflowers, Cucumbers, Onions, Potatos, and other vegetables have been well displayed by the photographic process. Vegetable Marrows and Melons look wonderfully natural, their markings and netting showing as plainly, apparently, as they could be represented in black and white.

Floral illustrations are also numerous, but they do not always come up to the general excellence of the vegetable ones. Cinerarias, however, form an exception, and the same may be said of Pansies, a view on a seed farm showing Carter's Perfection Mignonette, cultivated Marsh Mallows, and several of the smaller illustrations. A considerable number of the pictures of flowers consist of wood block representations, which are generally very clearly brought out. Several novelties, both amongst vegetables and flowers, are offered amongst the standard varieties already in commerce.

PEOPLE WE HAVE MET.

We have much pleasure in being able to present our readers with a portrait of Mr. P. Weathers, whose appointment to the curatorship of the Manchester Botanical Gardens, we recorded on p. 243. By virtue of his first appointment to Kew, he was one of our contemporaries; but as he was too young then for the post he was supplanted for a time by his brother, Mr. John Weathers, but was re-instated to the position about 1885. He commenced his career in the nursery department and continued at Kew till 1889. He was brought into contact with a great variety of plants at Kew, independently of the trees and shrubs in his own particular department, and had the advantage of the several courses of lectures delivered by different professors for the benefit of Kew students.

From Kew he went to Messrs. F. Sander & Co., St. Albans, in whose establishment he made an acquaintance with Orchids, to which he has given considerable attention since then. He then joined Messrs. W. L. Lewis & Co., Southgate, in whose establishment he took charge of the Orchids. His next appointed was with Messrs. Linden, L'Horticulture Internationale, Brussels, for whom he acted as traveller and representative in this country. More recently he started an Orchid Exchange at the Silverhall Nursery, Isleworth, on his own account, and had established a fair custom when he succeeded to the present appointment against a considerable amount of competition.

He proceeds to take charge of the Manchester Botanic Gardens at the present time, and we wish him every success in his new and responsible

Mr. P. Weathers.

position. No doubt many new and difficult problems will now and again confront our young friend, but a fairly wide experience, and a will to surmount them will stand him in good stead.

ORCHID NOTES & GLEANINGS.

By The Editor.

Cypripedium insigne Cannonae, *Nov. var.*—A flower of a beautiful new variety of Cypripedium insigne has been sent me by William Handel Cannon, Esq., Avenue Lodge, Merton Park, Surrey, who has secured it from the nursery of Mr. J. Seeger, Bandon Hill, Croydon. The flower was a large one measuring within a fraction of 5 in. across the petals. The variety belongs to the same group of choice and handsome introductions as C. i. Sanderae from which it is abundantly distinct from a horticultural point of view. The dorsal sepal is oval-obovate, and yellow with strongly defined venation. Along the stronger and central veins are a few elevated knobs of a pale brown hue, all the rest of the sepal being soft yellow. The petals are of a brighter yellow, spotted with brown at the base for one-third of their length, and having a brush of purple hairs at the base. The lip is large, triangular in outline, of good substance, and with the exception of a faint brown marking at the very tip, of a rich, unclouded, and unspotted yellow, The staminode is also bright yellow with an orange knob in the centre, and partly covered with a purple pubescence. The variety will take rank as one of the choicest of this group of one of the most popular of Cypripediums.—*J. Fraser.*

Cypripedium Henry Graves. *Nov. hyb.*—This may be described as a secondary hybrid, inasmuch as one of the parents was itself a hybrid. The seed bearer was C. lawrenceanum and the pollen parent C. marshallianum. The latter was the product of C. concolor, crossed with C. venustum. The resulting hybrid (Henry Graves) shows the influence of all three parents. The ground colour is that of C, concolor, the shape that of C. lawrenceanum, and the overlying colour, the venation, and the shape of the leaf all take after C. venustum. The dorsal sepal is white, overlaid with rose and spotted with crimson. The petals show a similar arrangement, and the lip is yellow, suffused with brown. It was raised by Mr. H. Chapman in the establishment of R. I. Measures, Esq, Cambridge Lodge, Camberwell, where Cypripediums constitute one of the specialities of this valuable and extensive collection.

Cypripedium Chapmani, *Nov. hyb.*—The seed parent of this beautiful hybrid was C. Curtisii, and the pollen bearer C. bellatulum. The upper sepal is white, and densely spotted with violet purple along the veins. The petals are broadly oblong, revolute at the tips, and densely spotted with violet-purple. The lip is laterally compressed to a slight extent, and of a deep violet-purple, except at the apex, which is paler; and this organ may be regarded as the most striking feature in the whole series of hybrids in which C. bellatulum has played a part, on account of its rich colour. This gives C. Chapmani a decidedly distinct appearance amongst its compeers. The staminode is also violet-purple. The foliage resembles that of the female parent (C. Curtisii) while the colour has been imparted by C. bellatulum; the green ground of C. Curtisii has been entirely replaced by the white ground of C. bellatulum. The hybrid is decidedly intermediate in character between the two parents as far as form is concerned; but its beauty from a horticultural point of view is mostly due to the pollen bearer, a fact worthy of being kept in view by hybridists. That under notice was raised by Mr. Henry Chapman, gardener to R. I. Measures, Esq., Cambridge Lodge, Flodden Road, Camberwell.

PRUNING GOOSEBERRIES.

"Rex" in his "Hints for Amateurs" in your issue of the 19th December, gives some excellent advice regarding pruning, and his remarks on the whole are thoroughly practical. I must, with all due deference to "Rex," however, take exception to his method of dealing with the Gooseberry. Like "Rex" I have still a lively recollection of my first practice on the Gooseberry with the knife, and the lessons I then received from a master hand in the art.

Form, I admit, is a most important point to keep in view, but not the most important; abundance of fruit of good size, I think, of more importance to amateurs, aye, and professionals too. This I hold will not be obtained by shortening the young growths. We will presume the bushes are of a good size, if with a clean stem of several inches so much the better for most sorts. The Sulphur var., I find "heels" off very readily if on a single stem, and such shoots are not easily replaced when no growths are springing up from the base, and well furnished with growths. Proceed first to thin out all *old* growths that have done duty for two or more years; then, if still too thick (6in. at least should be allowed) thin out the weakest of the young shoots, and any shoots springing from the base not required. Leave the rest intact, and on no account shorten the young shoots, except a rush of several shoots are wanted in their place the following season, as it is well known that a shoot shortened—say half to one-third its length—produces a large number of shoots the following season. Now, if the shoot is left full length—the stronger the shoot the better—the result will be a perfect rope of Gooseberries bearing to the very point of the shoot.

Let "Rex" or any other who does not already follow the practice, try the above system for one year and I am certain that the result will be such as will warrant their continuing the system. Of course in the case of young bushes, hard cutting must be practised till they are large enough. I have taken charge of healthy bushes pruned on the hard "cropped" principle, and just simply thinned them and regulated any stragglers. The result was a crop of such weight that the bushes had to be propped up.—*Brightspade.*

LILIUM AURATUM.

Amongst all Liliums this magnificent species is unquestionably one of the grandest. The chaste and elegant flowers of the popular Bermuda Lily are universally admired by all, and equally high in public favour stand the fragrant blooms of this magnificent species from the land of the "Jap." The people have noticed the diversity of colour in the flowers, but in their conversation they convey the impression that it has never occurred to them that those distinct forms can be procured separately. They are catalogued and described by our up-to-date seedsmen; for instance, L. auratum pictum is described as a variety with massive pure white flowers, prettily tipped with red. L. auratum platyphyllum has immense flowers of great substance; petals broad,

with yellow band, slightly spotted. L. auratum rubro-vittatum is a distinct variety; flowers white, spotted with crimson, and having a deep crimson band down the centre of the petal. A few more varieties with a similar description are to be found in the same list, thus showing that the greatest care must be exercised in the selection of the bulbs which these enterprising firms supply to the public.

Regarding the culture of the Lilium, much could be written that would be interesting to the general public, but little could be said that would be in any way new to experienced practical men. Nevertheless, the subject is a popular one, and on it much could be written that would prove interesting to the numerous readers of this periodical. Liliums are admirably adapted for pot culture, and some splendid plants that will produce massive fragrant blooms in the conservatory can be had with comparatively little or no trouble. A compost consisting of fibrous loam, peat, and sharp sand suits them admirably, and as with all other pot plants, perfect drainage is, of course, absolutely essential to their successful culture. The bulbs being hardy they are also well suited for growing out-of-doors, and are very effective when grown in groups in the herbaceous borders or the shrubberies. Those who contemplate planting a few bulbs for a display of blooms next summer should proceed with the operation immediately, as by this time of the year, the bulbs are better in the ground than in the warehouse. Plant them triangularly about 4 in. or 6 in. apart, and the same number deep; and, of course, on these islands where the thermometer occasionally touches zero, a covering with litter need not be omitted.—*J. Peebles, Monifieth.*

SEAKALE.

This vegetable will readily force now and will prove most acceptable in the dining room. I cut our first dish on December 1st, and it took just a month to be fit in a temperature of 60°, but now 55° will be more suitable as the crowns come away sooner and better as the season advances. Of course the crowns must be kept quite dark and if placed in a drying position, such as near the hot water pipes, it must be kept moistened with the syringe or rose-can each day with warm water.

The best place to bring Seakale, also Rhubarb on after Christmas is to erect a rough shed-like place, about 12 ft. long, 8 ft. wide. and 4 ft. 6 in. high, with 12 in. posts, 5 in. square, four on either side and four in the centre. The boards or planks, should be kept about 1½ in. apart. The shed should have a small door on the south side to get in and out; the other three sides and top should have about 3 ft. in width of leaves—Oak and Beech if possible—placed around and over them. The material should be well trodden as the work proceeds. I keep adding to this as the leaves are brought in. Some leaf soil should be placed in this little hut, if I may so call it, to put around the roots.

In this position delicious Kale and Rhubarb, as crisp as it is possible to get them, can be grown. A can of water should be kept there to damp the crowns if at all likely to get dry. I lift all my Seakale roots about this date and lay them in thickly together out-of-doors, where I can easily cover them up with litter, in case of severe weather, so that we may be able to replenish the forcing pit each week with fifty roots. I grow 1,500, the variety being Lily White, by far the best. By this post, Mr. Editor, I am sending you a dish from cuttings planted last March, and which has taken three weeks to be fit to cut, after being introduced into heat of about 60°.—*J. M., B.*

[The samples arrived at our office in the best possible condition—clean, perfectly blanched, of excellent size, not unduly elongated in any way, but succulent and crisp. In colour the leaf-stalks were pale yellow, and the blade of the leaves small and bright clear yellow without a tint of green or purple, thus showing the variety to be true to the name Lily White.—Ed.]

STRABERRIES,

Well, zur, I wish to have a word with ye about Straberries, seeing has me and the old doman is fond of them. You see, zur, has I was brought up in the country, and like all nippers was always a kind of interested in them. I don't know, zur, has ever I ate more than a peck of the things afore brakfast, but won't swear how much less. Wall, zur, has you sees all us old one's are a sort of what they call us—let see—old fossils, and don't know zactly all about them here things; only I knows has my old dad grew Queen's. My word, zur, I wern't allowed to feed off them ere beds; but, zur, if you believe it or not, I've poked about shows and markets a goodish bit, and never seed better than that old, what you may call them used to grow. Fact, zur, I sed know somewhat about it, for fifty years and has far back has that I've seen them plump the scale at 3 oz. Sartent, zur, by all racent acounts that's a light wate, and not what we ought to be content wid nowadays, when our statesmen are doing wat they can to pull the old shells out of the ruts made in the dark ages; and the press does its best to enlighten the darkness of both old and young Cabbages. The chemists, too, bear a hand to help us out of the slough. So, zur, has I was a saying, me and the old doman still likes them; and what we do have of anything, we likes it good. I thought I would like to see what one of the wise men of the east had to zay. You know, zur, has they come about now, I just got one of their what-you-may-call-'ems, and had a go at the Straws on the new system; and, would you believe it, zur, talk about a crop and zize, why it beet all I had zeen into smithereens. I had such woppers; I can't tell, zur, you might half think it a Salisbury. I don't know, zur, has you knows the meaning of it; but never mind, zur, they war big, and the colour I can't zay, zur, 'cause it's past all credit; and the weight, zur, I don't like to zay what it war. But you knows something 'bout earthquakes; now, well, zur, they war such a crop has made the earth sink along the rows; and the few to spare war so big and handsome-like, that we sold them each at such a price, I mustn't zay, zur, 'cause I don't think you'd belave it. But, zur, we made so much, as to send a handsome donation to the Cabbage Orphan Fund.—I am, zur, *An Old Cabbage.*

THE PLANT HOUSES.

The Stove.

With the commencement of the year we are in hopes of brighter and longer days soon to come, but for the present nothing must be done to unduly excite the plants. For a few weeks longer, therefore, the night temperature may stand at 60° Fahr., the rise during the day being regulated according to the weather, whether bright or dull. The intermediate house may be kept 5° lower than the warmer compartment.

Climbers.—The pruning cleaning, and tying up of these should be forwarded with all speed.

Allamandas.—In pruning these the growths produced last year should be cut back to within a node or two of the previous years wood. Where the plants are trained to wires they may then be tied up. The system of close and formal tying does not, however, enable us to see the Allamanda at its best. It is naturally of somewhat stiff habit, and hence it should be allowed to ramble a little. If the plants up to the present have been kept closely pruned, some of the growths may be left at about two thirds of their length. These may be tied up to the wires for the present, but after they have started into growth may be unloosed and allowed to hang down.

If the plants are growing in borders some care will be necessary in watering them; indeed for another three or four weeks they will not require any water. Plants in pots must be occasionally looked to for this, however, as the bulk of soil being much less than in the borders they will soon get very dry.

Propagating Allamandas.—Cuttings will root at almost any time of the year if sufficient bottom heat be given. The present season is usually the most convenient, as plenty of cuttings may be obtained from the prunings. The tops of the shoots should be selected—pieces containing two or three nodes being most suitable. Insert these in small pots in very sandy soil. Make the soil as firm about them as possible, and plunge in a propagating frame having a bottom heat of not less than 70° to 75° Fah., with an atmospheric temperature of 60° to 65°. Close attention to watering will be necessary, and the syringe should be drawn over them frequently. In three or four weeks signs of growth will be seen, and roots will be emitted.

Conservatory.

Chrysanthemums are to all intents and purposes, over now, except in cases where batches of such a late variety as L. Canning have been specially treated for mid-winter work. These plants will come in very handy, and by dint of care, and keeping some back as late as possible, the end of the month will be here before the last of them are in bloom. To keep a fair sized conservatory going is no easy task. It means that the growing-on department must not only be well looked after, but must be of considerable extent.

In furnishing a conservatory throughout the year the first consideration to be looked to is "succession." The house should not be full to crowding one week and nearly empty the next. A suitable succession can only be obtained by, first of all, choosing suitable plants for flowering at various times of the year, and secondly by regulating the respective flowering periods of these subjects, retarding or pushing them on as occasion requires.

Variety also plays an important part in the proper keep-up of a conservatory. There must be a change if we are not to weary of one thing.

Arrangement, perhaps, is the most important point of all. It avails little to have good flowers if they are not made use of, or if, in other words, their effect is spoiled by the way in which they are set up. By the use of a little artistic taste on the part of those who have the management of the house some excellent results may be obtained.

The Value of Cleanliness can scarcely be overated. However much untidiness may be a necessary evil in some of the plant-houses there is no excuse for it in the conservatory. If a plant is shabby, out it must go, it has no business there. Yellow leaves, fallen blossoms, dirty pots, are all alike obnoxious, and must all be removed or obviated.

At this time of the year there is apt to be a little bit of a gap in the supply of the larger flowering plants. The Chrysanthemums are gone, and there seems but little left to fill their place.

Dicksonias—These come in most useful at this juncture. D. antarctica, and D. squarrosa, are two good arborescent members of the genus that do well in a cool house, and are both well worth growing. Of a different type, but still handsome, and useful in its way is D. Culcita, which when in vigorous health throws very large fronds supported by stout stipes about two feet in length.

Other greenhouse ferns are Hemitelia Smithii, Cyathea medullaris, and C. dealbata. All of these are easily grown either in pots or tubs, or planted out in the conservatory, and a few of them scattered about the house add immensely to its appearance.

Hibbertia dentata—As a climber for the roof this is invaluable. The rich yellow flowers are about an inch and a half in diameter, and are produced with great profusion. It is a spot of grateful colour now, for yellow flowers are none too plentiful during the winter season. All the pruning needed will be the removal of the weak and straggling shoots.

Pleroma macrathum—As the flowering season passes over less water will be needed at the root until growth commences again. Whilst the flower buds are expanding manurial stimulants will have been given occasionally, but now nothing but clear water, and very little of that should be given.

Calceolaria Burbidgei is a gem for winter flowering. The plants run to three or four feet in height, if grown in eight inch pots, and are light and graceful in habit. A few well flowered plants are exceedingly showy. A little liquid manure should be given frequently.

Bouvardias as they go out of flower must be placed to rest in a cool pit. Do not give much water, and as soon as the wood is sufficiently matured cut them hard back.

Forced Flowers such as Lilacs, Hyacinths, and Narcissi, are a staple just now. Duc Van Thol Tulips are valuable on account of the ease with which they may be got to flower early. Shallow pans or pots suit them best, otherwise, being of such dwarf stature, they are inclined to look all pot.

Camellias—Where these are planted out the flower buds will be getting a good size now, and if the leaves are at all dirty their cleansing should be postponed no longer. Even now the operation should not be entrusted to careless hands, otherwise the buds, which are easily knocked off, will suffer. A piece of soft soap about the size of a walnut dissolved in a couple of gallons of tepid soft water makes a capital wash, as cheap as it is effectual. After such a cleansing the leaves of the plants will assume that glossiness that is such a set off to the flowers, the beauty of which, indeed, is sadly handicapped by dirty foliage—and the Camellia is certainly not one of the cleanest subjects.—*A.S.G.*

HINTS FOR AMATEURS.

Platycerium alcicorne.—At one time the idea was very general that this needed a warm house to do it properly through the winter, but this has been proved to be a fallacy, for not only do the plants not suffer in a cool house, but the partial rest appears to do them good, for they start away with all the greater vigour in the spring. It must not be gathered from this, however, that they will stand any amount of rough treatment, for this they will not do. At this time of the year they require to be managed very carefully. Where they are growing in cork pockets fixed to old tree stems—a most effective method of displaying them—the syringing overhead that suits them so well during spring and summer must be discontinued. In houses which cannot be kept up above 40° Fahr. at night they will require very little water indeed, especially where they are growing in a mixture of sphagnum moss, peat, and sand. Such a mixture suits them well, and the moss holds the moisture for a long time during those months of the year when the atmosphere is so close to saturation point. The low temperatures will not do any material harm to the plants, provided the watering is only judiciously performed.

Platycerium grande will not put up with the cool treatment nearly so well as P. alcicorne, and it should therefore be removed to a warm house at the approach of winter.

Covering the Greenhouse.—While it is the generally accepted method to cover up cold frames to exclude frost, very few people think of the value in a similar direction, of covering to the greenhouse. If severe frost should happen to set in it is astonishing how even a light covering will supplement the work of the pipes in keeping up the temperature. In dealing with plants therefore, such as cool Ferns and Odontoglossums, that have a deeply seated dislike to fire-heat in any shape or form, a covering thrown over the house will be of great service. It will assist in excluding the frost, and thus indirectly prevent the atmosphere from becoming dry and arid, a condition of things that is sure to result from the use of too much fire-heat.

Cold Water is injurious to most tender plants, more especially when that water is hard as well as cold. All water must have the chill taken off it before it is applied to the roots of the plants, by one of two methods—viz., the addition of a sufficient quantity of hot water, or by allowing it to stand in the house for at least twelve hours before using. The water given to greenhouse plants should have a temperature of from 45° to 50° Fahr. For plants in warmer houses it may be from 60° 70°.

Outside Vine Borders.—Those amateurs who go in for growing early Grapes, and start their Vines with the New Year with a view to this intent, will need to afford the outside borders some protection. Active roots of Vines in the early stages of growth are very sensitive to check, and hence it is advisable to have inside borders for Vines that have to be forced early. However, if the outside borders are there, it only remains to make the best of things. They should be given a good coating, say from 6 in. to 1 ft. in depth, of stable litter. This will serve a double purpose, for not only will it protect the roots from frost, but it will add a deal of valuable nutriment to the soil. An experienced cultivator can easily tell by a look at a border whether it has been regularly top-dressed or not, for if it has numbers of active roots make their way to the upper layers of soil in search of the food to be found there, instead of seeking lower strata which may not contain much that is of use to them.

As quantities of snow water and deluges of cold rain are most injurious to the roots of Vines that are being forced, some boards or sheets of galvanised iron should be laid over the litter to throw off any heavy falls of either snow or rain.

Euphorbia jacquiniaeflora.—This is one of the brightest occupants of our plant houses, and a veritable boon at this season of the year, when brightly coloured flowers are all too rare. It requires a warm house to obtain it at its best. Young plants of it in pots will do very well in frames during the summer right up to the end of September, but after that time they require artificial heat. In order to get the plants to ripen properly all the exposure to the sun possible must be given, for it is upon the proper maturation of the wood that the flowering depends. The long wreath-like strings of flowers are most handsome, and come in splendidly for cutting. When it flowers the plants will keep rather longer in condition if they are removed to a cooler house.

As the greater portion of the leaves are situated at the top of the shoots they are removed with the flowers, and hence the plants look rather unsightly when they have been topped. This should not be considered sufficient excuse, as it often is, to treat the plants as if they were of no further service, and neglect them for weeks together. The next year's supply has to be thought about, and it is to the old cut back plants that we must look for the cuttings to furnish it. These cuttings may be put in as soon in the year as they can be obtained, as sometimes the old plants are in no great hurry to furnish suitable shoots.

After the old plants have been topped they will not need very much water at the root, but they should be placed in a warm, light corner of the house, and the syringe drawn over them occasionally. The first shoots will appear at the end of the stem, as the sap will naturally run most freely to the highest point, and produce the earliest breaks there. Shoots about 4 in. in length make capital cuttings. They should be taken off with a portion of the old shoot attached—technically called by gardeners a heel. Use very sandy soil, and small thumb pots. These should be well drained, and may each contain a single cutting. Euphorbias are rather sensitive to disturbances at the roots, and by putting a single cutting in a pot there is no need to break the ball or damage the roots in any way. Late batches of cuttings may be inserted, three in a small 60-sized pot. In this case also it will be better not to attempt to separate the plants, but pot them up just as they are.

Sophronitis grandiflora.—Although Orchids are generally regarded by the usual run of amateur gardeners as being a step above their ability to manage, there are some of them that are easy enough to grow, and respond readily to ordinary care and attention. Of these Sophronitis grandiflora is a conspicuous instance. The genus contains only four or five species, all of them natives of the Organ Mountains in Brazil. S. grandiflora is undoubtedly the gem of the genus, and as it is so easy to manage is a plant that should be in every amateur's greenhouse. Flowering in November and December the flowers last for fully six weeks in condition before they begin to lose some of their brilliant scarlet hue. S. grandiflora occurs at considerable elevations in its native mountains, so great indeed, that it occasionally has to put up with white frosts. It will be gathered from this that it will bear a pretty low temperature, although it is almost needless to say that it should be saved from the frosty experience here. They like a little more heat during their growing season, when they will also require liberal supplies of water; indeed, they must not be dried off at any time, although, during the winter, the water supply may be reduced considerably. As the plants are only an inch or two in height, shallow pans are the best receptacles for them. Packed in these with peat and sphagnum moss they grow away freely enough. They also do fairly well if fastened to blocks of wood or rafts. In the latter condition they will naturally dry up much more quickly than they do when in pans, and during the summer months they will need to be dipped twice a day if the weather is hot.

Clerodendron fallax.—When these have fruited the fruits should be gathered when ripe, the husks broken and the seeds taken out, and packed away. If sown in heat towards the end of February good plants to flower in the following autumn will be obtained. The old plants may be saved if desired. Cut them back and keep them rather dry for another fortnight. Then place them in heat in order to start them into growth for the production of cuttings.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Quickset Hedge.—As the hedge has become so very bad, *S.B.*, your best plan would seem to be to pull it out and plant another one. If you do not wish to do this you must fill up the gaps by planting young stuff both where the old ones have died away, and where they are thin at the bottom. In the latter case the plants that are required to make the base of the hedge good must be kept closely pruned in each year. The straggling portions of the old plants may be cut out now, the strong upright growths being headed back to about 4 ft. from the ground. The smaller ones need not be all cut back to the same height, but each alternate one may be left 6 in. longer. If you persevere in pruning each year you will eventually obtain a good hedge. It is a common practice in the country to put up a rough "dead" hedge, formed of boughs intertwined amongst uprights obtained by driving stout stakes into the ground, for the purpose of protecting young hedge plants from animals. This may be worth trying in your case.

Painting Hot-water Pipes.—Yes, *B.*, Brunswick Black would do to paint your pipes with, but it is not the mixture generally used for the purpose, which is lamp black and boiled oil. You can get these ingredients from a neighbouring oilman, and mix them yourself. When fit for using, the stuff will be of the consistency of thick paint.

Berried Plants.—Ardisia crenulata will need a stove temperature, or it will not grow well, *Atlantis.* Skimmia japonica, and Solanum Capsicastrum will both succeed in a greenhouse.

Viburnum Tinus is quite a success as a pot plant. *F. Early.* Two thirds of good loam, and one of leaf soil, with a little rough river sand will suit it very well.

Cyclamen Leaves are undoubtedly pretty and effective for vases, *H. S. N.*, but it is ruination to the plants to take them off. If you must have them, however, the better plan will be to sacrifice a few plants, strip them entirely of their leaves, and pitch them away, rather than to injure the whole batch by taking toll of a few leaves from each.

Cyclamen Seed must be sown at once, *George.* The soil should consist of mellow loam, broken up finely and passed through a sieve, and good leaf soil, treated likewise, with a good sprinkling of sharp sand. A temperature of about 60° Fahr. will be necessary to insure speedy germination. Place a piece of glass over the seed pot or pan to prevent rapid evaporation of the moisture in the soil. In order to insure success the temperature must be kept equable, and should not be permitted to go to extremes, either of heat or cold.

Seaweed as a Manure for Asparagus is a great success, *J. D.*; in fact, the Asparagus seems to like it better than anything else. Where it is used, dressings of salt will be unnecessary.

Forcing Mint.—*Reader* asks for a few instructions as to how to force Spearmint.

The roots should be lifted carefully, placed fairly close together in shallow boxes, in the bottoms of which holes have been cut for drainage, and covered with light soil. A temperature of 60° Fahr. will be needed to excite the roots into growth. A good deal of water will also be called for, as with the small quantity of soil contained in the boxes the moisture is soon used up or dissipated. Frequent sprinklings with the syringe will be of great service.

To Protect Parsley.—Your best way, *G. Raeburn*, will be to cover up the Parsley as it stands rather than to lift it. A hand-light, or even a box with the bottom knocked out would come in very handy for the purpose.

Passiflora caerulea.—I have a plant of this on a back wall of my greenhouse. It made a lot of growth last year, and I think it wants pruning. How shall I set about doing it?—*W. Akers.*

You must cut all the small growths out, spurring them back close to their junction with the larger branches. You need have but little fear of cutting out too much, for as long as there are a few pieces of healthy wood left young shoots will be produced in abundance, and will soon cover the wall again; indeed, the trouble usually is to find room for them, so thick do they get.

Poinsettias are propagated by cuttings, *B. D.* After the plants have finished blooming, they are cut down, allowed to rest awhile, and then placed in heat. The cuttings are taken off when about 4 in. in length. You will require a brisk bottom heat and an atmospheric temperature of at least 60° Fahr. to root them with any freedom, and even then they are often captious subjects to handle, as whole batches of cuttings will damp off for apparently no reason at all.

VIEW IN THE GARDENS, FALKLAND PARK.

THE accompanying illustration represents a portion of the garden of T. McMeekin, Esq., Falkland Park, South Norwood Hill, who has been carrying out many improvements on the estate during a number of years past. The portion represented may be described as a corner of the ornamental grounds rather than the garden proper. A portion of the mansion may be seen over the top of the glass-houses. What is seen of the latter is a small portion of a range of seven houses, connected by a corridor behind joining the ends of all together. The balustrade in front of the houses marks the boundary of the terrace garden, which is devoted to spring and summer bedding of the prevailing style, the spring bedding consisting of hardy plants, and the summer bedding of tender ones.

The water seen in the foreground, and passing under the rustic bridge at a distance on the right, is completely connected, so that only isolated portions of it are seen in the picture. Water Lilies may be seen in the water under the bridge on the left; they are now well established and keep up a succession of bloom all through the summer. Several of the recent hybrids and varieties are included amongst them. Other aquatics find suitable conditions at various places along the margins and in the water. The rustic bridge and the arbour in the foreground are gradually becoming covered with varieties of Clematis, which were in bloom at the time the photograph was taken. From the top of this rustic structure, fine views are obtained over a wide stretch of country, in some directions; while from other points of the ground, which is situated on a hill, Windsor Castle can be descried on a clear day, and easily picked out by means of a telescope or field glass.

In the immediate vicinity of the rustic arbour are peat beds, in which many American and other peat-loving snbjects, such as Kalmias, Heaths, and Pieris are planted. They flower profusely. It may here be remarked that the Heaths consist largely of varieties of Calluna vulgaris, and Erica cinerea. Rock Roses (Helianthemum) thrive in the vicinity of the rocky banks. Various deciduous and evergreen, alpine or rock plants form bright patches of colour during their respective seasons of flowering.

On the sloping banks of the upper portion of the ornamental water are various Irises in large patches which reach down to the water's edge, and are thereby benefited in dry seasons, particularly the water-loving kinds. Primula japonica and P. rosea are treated in the same way on the opposite bank. Beyond these are large, informal beds cut in the grass, and equally informally planted with large masses of various showy and popular herbaceous plants of many kinds, which keep up an ever varying display all the summer, of a kind that could not be produced by the formal beds of the summer flower garden. Away on the right, and scarcely visible in the picture is a considerable amount of rootwork and rockwork, on which a great variety of subjects is planted. In the spring time the grass in this neighbourhood is enlivened with Daffodils in great variety, planted on the grass by Mr. A. Wright, who has had charge of the place, and these improvements, for some years past.

VIEW IN THE GARDENS, FALKLAND PARK.

INTENSE CULTURE.*

IN almost every garden connected with a gentleman's residence, the kitchen garden is so limited in size, compared with the requirements of the establishment, that ordinary cultivation is quite out of the question, if a constant supply of different kinds of vegetables is required all the year round; and the highest credit is due to any gardener who produces extraordinary crops of first-class vegetables from a limited area. To secure such results the culture must of necessity be intense, otherwise it would be impossible for the soil to grow double or treble the weight of food of that simply managed in the manner agricultural land is. The kitchen garden and its cultivation is one of the best tests of a gardener's ability; not only so, but it reflects the highest credit, or otherwise on his training and intelligence; consequently, every young man who is ambitious to rise in his profession should make kitchen garden work one of his most intense studies. Many a gardener has come to grief through inadequate supplies of vegetables for his employer's table, but I have never known one yet who was a first-class vegetable grower, who did not get on and make his mark in the horticultural world.

However, it may possibly be advisable to state what, in my opinion, is intense culture in the kitchen garden. It may be summed up in a few words, viz., deep and thorough cultivation of the soil. Deep cultivation has a most beneficial influence in many ways. Amongst which may be mentioned the following:—good drainage, warmer soil in winter, and cooler in summer, a vastly improved rooting medium, followed by fine crops, also a more uniformly moist condition of the soil. All cultivators of the soil, who have had much experience, are well aware that if the ground is dug only one spit deep for a number of years that a hard pan or bottom is formed, through which it is difficult for water to

* A paper read at a meeting of the Chiswick Gardeners' Mutual Improvement Association on November 19th.

either descend or ascend; consequently, the root run is much limited, and if a dry season comes the crops suffer severely as the moisture rapidly evaporates. In fact, on some soils the pan becomes so hard that the soil cultivated above might almost be resting on a solid rock. On the other hand, should seasons be very wet, the ground is one perpetual puddle, as the water cannot possibly escape freely; the roots either die or simply exist, and the crops must of necessity be of inferior quality. It is really marvellous how deep the roots of most vegetables will go if a suitable medium is provided. I have measured Onion, Leek, Celery, Peas, etc., 3 ft. long, and Brussel Sprouts, Broccoli and similar vegetables over 4 ft. And as to how deep such crops as Carrots and Parsnips would go under favourable conditions is a query I could not definitely answer; but it is no unusual occurrence to find roots 4 ft. long, and even then the point gone. In fact this subject of roots is not only an important one, but most interesting not only to the horticulturist, but likewise to the agriculturist, as many farmers will tell you that the roots of Wheat will go down 6 ft., for which reason dry seasons affect it less than other cereal crops, again proving conclusively the immense value of securing a deep root run.

From my own experience, I am quite certain that I could not in years past have secured continuous supples of tender vegetables if deep cultivation had not been accomplished for, as stated in the case of wheat, the roots had gone down so deeply that long periods of dry weather had comparatively little effect on the growth. Perhaps next in importance to deep culture, comes surface cultivation; during the summer months, by frequently moving the surface soil, a powerful check is given to the drying influences of the sun's rays, moisture is conserved, and those robbers of the land, viz., weeds, are kept in check, to say nothing of the cleanliness of the garden. To prove how valuable is this system of hoeing the soil, any vegetable crop may have one portion hoed as advised, and another portion left untouched, pulling out any weeds from the latter as they appear. The difference will convince the most sceptical of the beneficial influences following frequent hoeing of the soil.

It may possibly be thought that deep cultivation and frequent hoeings are impossible in many gardens through lack of labour; this unfortunately is too often the case in many gardens, but even then a portion of the garden could be trenched every winter, when other work is not so pressing, so that in the course of, say, three winters the whole of the vegetable quarters would be trenched, and a start then made to go over the whole again. As to hoeing, instead of increasing the labour, it materially reduces it by keeping down weeds, as an expert man with a Dutch hoe will get over a lot of ground in a day.

If specially fine crops are wanted, an application of chemical manures should be worked in when hoeing; but this subject of manures is so complex, if I may use that word, that the greatest care is needed as to what manure is employed, or the expense of purchasing, and the labour of applying may be almost entirely wasted. First, we must ascertain what elements are present or absent in the soil we have to deal with, and the constituents required by the crop. Suppose we take a piece of land of a light or moderately light character, and plant half with Peas, and the other half with Cabbages, and after each had made a fair amount of growth, we gave each crop a dressing of nitrate of soda at the rate of one ounce to each surface yard; the result would, in the case of the Peas, be nil, and an absolute waste, as the Pea family absorbs all the nitrogen it requires from the atmosphere; but in the case of the Cabbage portion, the benefits of the nitrate application would be very marked, and probably increase the value of the crop at least, 100 per cent. In this way we secure the very best possible results in the kitchen garden, *i.e.*, by providing a suitable and deep rooting medium, cleanliness, and studying the requirements of the various kinds of crops; for by keen observation, and a few careful experiments it is possible to discover with a fair amount of accuracy what are the best manures for different crops on the soil the cultivator has to deal with. It is, however, frequently stated by many gardeners, that if they could get plenty of farmyard manure, they would require no other manure.

Opinions differ on the subject; and while I fully admit that a good farmyard manure contains all the elements of plant food required by vegetable crops, the question arises, how may we get good farmyard manure? The answer must be, very seldom; for this reason, the manure as it is made is wheeled out into a heap in the open air, and first becomes very hot, and the ammonia may be seen escaping daily in the form of steam; not only so but being exposed to all the rains that come, many of the most valuable elements are lost, and I question if one ton of such manure contains 20 lb. of fertilising matter, the remainder being composed of water, and other unnecessary ingredients. At the same time, it must be admitted that, apart from all manurial properties, farmyard manure acts mechanically on the soil, causing it to work more freely, against which must be placed the greatest amount of seeds of noxious weeds imported into the garden with the manure. This is avoided with chemical manures, to say nothing of the ease of application in their intense or concentrated form, which does not fill the soil with a superabundance of humus, needing lime to correct the injurious effects. Another point of some interest is, does farmyard manure tend towards the increase of insect foes in the garden? I believe it does if buried year after year in the soil, and for that reason I prefer it as a mulch, thereby fertilising and retaining moisture.

Liquid manure is a valuable aid, whether it is from the drainings of cattle sheds or from manure heaps, and is more useful and effective than solid manure. It is not only rich in plant food, but in a form which can be taken up immediately by the roots. Every exhibitor of vegetables, etc., is alive to its value, and employs it more or less freely, and what is done by them could be done by those who do not exhibit, much more generally than is the case now. Some have an idea that such feeding has a tendency to coarseness; but if a man desires to have tender vegetables in quantity, high feeding must be the rule, so that the soil is well stored with plant food, and able to respond to the cultivator's wishes at all times and seasons, and not land him in a difficulty at a season that is sure to come awkward, if it ever does occur.

(*To be continued.*)

BIRMINGHAM HORTICULTURISTS AT DINNER.

On Wednesday, the 16th ult., the Birmingham and Midland Counties' Chrysanthemum, Fruit, and Floricultural Society held its annual dinner at "Ye Olde Royal" Hotel, the famous hostelrie under the direction of Host Emile Chatriane, who provided an excellent menu, served with precision and promptitude.

The chairman of the society, Mr. W. B. Latham, of the Botanic Gardens, presided, faced in the vice-chair by Mr. J. Pope, whilst to the right and left of the chair were Mr. W. Jones, treasurer, and Mr. J. Hughes, the energetic secretary of the society. Others present included Messrs. Robert Sydenham, W. B. Child, Acocks Green: W. H. Dyer, Northfield; C. H. Herbert, Sparkhill Nurseries; William Spinks, Solihull; Wm. Gardiner, Harborne; Mr. J. Deacon and Mr. H. A. Burberry, Highbury; David Haynes; Arthur Watkins (Thomson & Co.); W. Wright, Moseley; A. Noakes (Hewett & Co.); Alfred Jenkins, Wylde Green; G. Pressley; W. B. Griffin; Allen; Toreville, Kings Heath; Stubbs, Ipswich; and many others—in all some eighty guests.

The chairman, in submitting the customary loyal toasts, referred to the many changes which the sixty years of Her Majesty's reign had witnessed, and in the improvement of the condition of every work or profession that of the gardener had undoubtedly been included. The speaker recalled his own experience of fifty years ago, when it was six o'clock to six every day, with no four o'clock movement on Saturdays. In many other ways, continued he, the lot of the gardener has been improved; but he questioned if the gardener even to-day was paid so well as other trades, although he counselled them not to be dissatisfied with their lot. Here honours were paid to the toast. Mr. J. Carless proposed "The Society," remarking at their last show he sympathised with the judges in the undoubted difficulty of their task of adjudicating so keen was the competition. He coupled the name of Mr. W. B. Latham, the chairman, whom he described as an excellent captain of an excellent ship. That gentleman, in responding, paid touching tribute to the names of such historic exhibitors as Page & Gallier, whose connection with the society in its early days was only equal to that of another of their old supporters, Mr. H. Lee, who was present with them that evening. (Applause.) The chairman then went on to refer to the important question which had arisen as to the site of their future shows, and the advisability of holding their next exhibition in a building larger than the Town Hall where they had found the space too limited to admit of the opening out of the large groups and in other ways. The subject had, of course, still to be discussed in committee. There were some difficulties in the way, and ways and means would be a great question with them, and a guarantee fund might be found desirable.

Mr. W. H. Dyer proposed the health of "The Exhibitors," referring with satisfaction to the support given to horticulture by the leading families in the neighbourhood, and coupled with the toast the name of Mr. J Deacon, gardener to the Rt. Hon. Joseph Chamberlain, M.P., who, on rising to respond, was received with applause. Mr. Deacon said that considering he was one of the latest introductions to their district and their society, he was flattered with their placing the response to this toast in his hands. As a successful exhibitor, he was proud to belong to an employer whose thorough love of horticulture, and the enthusiasm with which he followed it was not equalled in all England. Adverting to the keen competition at their last show the speaker said it was no easy matter to stage successfully at Birmingham. Their prize list induced some of the best men to come forward, and although he had competed during the last ten years in the Western Counties, and in the south at Kingston and London, yet he found it more uphill work at Birmingham, where the exhibitors fully held their own with all comers. He agreed that the show should be held on a larger basis, and should like to see it take its proper place in the shows of England.

Mr. J. Hughes proposed "The Non-competitive Exhibits" and "Special Prize Donors," to whom he attributed much of the success of their shows. Mr. J. Pope, in responding, explained that the idea of enlarging their show had in the main originated with him, and his ambition was to see their 1897 exhibition *the* exhibition of England. He believed it would induce greater outside support, and hoped that the movement would meet with the success it undoubtedly deserved. Mr. Robert Sydenham also responded, stating that it always gave him pleasure to support the Birmingham Society, and promised still further support in the way of a Challenge Cup, if the 1897 show was held in the Bingley Hall. He thought the class for small groups was one attracting attention, and might be encouraged in this way. Mr. E. Crook also responded.

The chairman here announced that telegrams had been exchanged during the evening with the National Amateur Gardeners' Association, London, who were similarly celebrating their anniversary that night at the Holborn Restaurant, under the presidency of T. W. Saunders, Esq. The text of telegrams was as follows;—"The president National Amateur Gardeners' Association, Holborn Restaurant, London. The Birmingham Chrysanthemum Society at their annual dinner assembled, send greetings, and wish you a pleasant evening, Hughes, secretary"—to which reply had been received—"Greetings heartily reciprocated; wish Birmingham Chrysanthemum Society every success — President N.A.G.A. (Applause.)

Mr. W. Spinks (Solihull) proposed the health of the officers in a well chosen speech, and Mr. W. Jones, the treasurer, in responding announced that their year's working showed a deficit of £23 5s. 2½d., their income having been £437 6s. 8d., and their expenditure £460 11s. 10½d. It was stated, however, that the society had still a balance at the bank, and need not lose heart. Mr. Jones warned his hearers that in an enlarged programme increase of expenditure was inevitable, but he thought that with increased facilities there was no reason why their shows should not be the greatest successes. Other toasts followed. Mr. G. Stacey proposed the "Nursery and Seed Trade," to which Mr. C. H. Herbert very ably responded. Mr. J. Child submitted the toast of "Our Visitors," coupled with the name of Mr. A. E. Stubbs, of Ipswich, who responded. The usual tribute to chair and vice-chair brought an enjoyable programme to a close, the various toasts and speeches having been well punctuated by songs from Messrs. Allen, C. Phoenix, Walker, W. B. Griffin, Peake, Deacon, Jenkins, Burberry, Stubbs, and Yardley, the latter gentleman also contributing a finely executed concertina solo.—*Gyp.*

WINTER FLOWERS AT CHELSEA.

In continuation of our notes from last week, we here deal with some more of the numerous flowers in bloom in the nursery of Messrs. J. Veitch & Sons, Chelsea. No special preparations whatever are made for a supply of flowers at Christmas, so that those in bloom merely represent the various subjects in their proper seasons.

Winter Flowering Begonias.

Progress continues to be made in this class of plants, so that in the near future we may be provided with a race of hybrid Begonias, flowering naturally in winter, and inferior in extent to the summer flowering race only. Winter Gem, John Heal, and Adonis are now well-known, as well as Begonia socotrana, one of the parents which has given rise to the winter flowering race. Amongst the newer varieties we noted in flower was Ensign, which was honoured with an Award of Merit from the Royal Horticultural Society on the 24th November. The double flowers are of a rich rosy carmine, and the compactly arranged leaves are vigorous, dark green, and healthy. The flowers of Myra, on the contrary, are single, large, and rosy-carmine, while the leaves are obliquely-orbicular, and dark green. Those of Mrs. Heal are 3 in. across, and of a rich crimson-carmine. The variety shows a great increase in the size of bloom over the earlier varieties of the race. The habit of the plant is dwarf. All of the above three are novelties about to be put into commerce.

The Rock Show House.

A house is kept at a fairly high temperature for the accommodation of various fine foliage and flowering stove plants. The path running round the house is furnished on both sides with rockwork, consisting of Derbyshire tufa, covered with a great variety of low growing and creeping plants. Numerous Ferns, Selaginellas, and other subjects, furnish an abundance of greenery, amongst which various flowering plants are arranged, including Amaryllis from the famous collection here. The crimson bracts and yellow flowers of Amasonia punicea are very brilliant, and keep up a display for a long time. A neat plant is Tillandsia Lindeni vera, with its rosy bracts and large blue flowers. Very chaste are the drooping white flowers of Eucharis candida, tinted with yellow inside the chalice. An uncommon species is Medinilla javanica, with its pink flowers and violet anthers. The delicious fragrance of Toxicophlaea spectabilis is well-known in the stoves of those who have been fortunate in making the acquaintance of the species. Reinwardtia tetragyna, with its large and showy yellow flowers, is equally well suited for a greenhouse as for the stove. Poinsettias are popular winter flowering subjects in many establishments; and here we noted the type, as well as P. pulcherrima plenissima, the form with bracts to the individual flowers as well as around them, and P. p. alba, with distinct looking white bracts in fine condition. The orange-scarlet flowers of Siphocampylos humboldtianus are very choice in their way, and recall in a measure those of a Centropogon, except in colour. The deep sky blue flowers of Eranthemum pulchellum are very welcome for their colour at this season of the year. The small fruits of the Otaheite Orange are very abundantly produced. Sarracenias and a healthy lot of the Australian Pitcher Plant (Cephalotus follicularis) also find a place in this house. Besides the plants already mentioned, Philodendrons, Palms, Ficus barbatus, &c., supply greenery. This house is kept gay all the year round.

Cool Show House.

This corresponds to a greenhouse or conservatory, for we never see it without a display of popular and useful plants in bloom all the year round. At present the atmosphere is redolent with the fragrance of Roman Hyacinths, and Mignonette of a very fine strain, the spikes of bloom being of large size and the plants dwarf in habit. Flowers are also furnished by floriferous, and compactly grown plants of Erica hyemalis and E. gracilis. Dwarf and late struck plants of white varieties of Chrysanthemums also prove very serviceable, as do Marguerites, Cinerarias, Chinese Primulas of a fine strain, Azaleas, and Acacia platyptera. Well grown and berried plants of Solanum Capsicastrum contribute to the display. A double flowered and golden yellow variety of the annual Chrysanthemum coronarium is also turned to excellent account by flowering it in pots at this season of the year.

Bouvardias and Carnations.

Numerous low span-roofed houses are devoted to collections of different subjects. Cyclamens have been flowering profusely for a long time past. They belong to the giganteum strain, and have large flowers of various hues, such as white, rose, purple, and white, with a crimson mouth. The flowers are equal in size in all cases, but the white variety is certainly very choice.

The leading types of Bouvardia are kept in stock, and for winter work both the brilliant and the light colours are equally indispensable. The pure white Vreelandi is one of the oldest and best of its type in cultivation. Priory Beauty, with a profusion of large soft pink flowers, originated in a private establishment on the Surrey side of the Thames, and is believed to be a sport from Vreelandi. It has been preserved to horticulture by Mr. John Heal, the foreman in the new plant department of this establishment, whose keen observation enabled him to spot a good and distinct thing. The brilliant scarlet and large flowers of President Cleveland have not yet been surpassed in this particular line of colour. Yellow is represented by the soft yellow Flava. The white Alfred Neuner and the pale pink President Garfield are yet undisputed by rivals with double flowers. Most of the above bear large trusses, but particularly Vreelandi, Priory Beauty, and President Cleveland. They are equally suitable for decorative work as pot plants or in the cut state.

One house is wholly devoted to a collection of tree Carnations, of which we noted the best varieties out of a large number in bloom. The glowing scarlet flowers, and the dwarf habit of Winter Cheer, recommend the variety to cultivators. Primrose Day is a bright yellow variety. During the last few years Mrs. Leopold de Rothschild has become very popular with gardeners, for cut flowers and conservatory decoration, in winter as well as summer. The flowers are of large size, freely produced, and of a charming rosy-pink hue. A strong contrast is furnished by the brilliant scarlet Lucifer. Following the range of intensity we come to the Shazada, having maroon-crimson flowers, amongst the very darkest of this hue. Canary Bird well indicates the colour of this variety. Amongst other kinds of recent introduction we noted the soft rosy pink Reginald Godfrey, and the pure white Miss Mary Godfrey, which flower very freely. La Neige is another white variety which we cannot overlook. Various other sorts keep flowering in a house kept at cool greenhouse temperature and freely ventilated.

Other houses are filled with Palms, Crotons, Dracaenas, Aralias, and other fine foliaged plants of the most popular, as well as the rarer, decorative, and useful kinds. Nothing is overlooked which may contribute to the completeness of a display in either warm or cool houses.

NEW CHRYSANTHEMUM SOCIETY FOR ABERDEEN.

A largely attended meeting of people interested in Chrysanthemums was held in the Trades Council Buildings, Aberdeen, on the 19th ult., with the purpose of forming a Chrysanthemum Society for Aberdeen and the North. As recorded in our pages a Chrysanthemum show, under the auspices of a special committee, was held at Aberdeen on the 20th and 21st November, the results of which were very successful. Previous to this public meeting, the said committee held a private one. Mr. Reid, seedsman, who acted as secretary, reported the financial results of the show as follows:—Income, £51 7s. 6d.; expenditure (including £17 17s. 9d. in prize money), £39 19s.—leaving a balance in hand of £11 8s. 6d. Besides money, there were six handsome pieces of silver plate and a medal, given as prizes. A proposal was made to acknowledge Mr, Reid's services in some tangible form, but Mr. Reid declined to accept anything, and a cordial testimony for his services was ordered to be recorded in the minute book.

Councillor Maitland was called to the chair, and after the reading of the financial statement, he put it to the meeting whether it should now definitely form itself into a Chrysanthemum Society. The results of the past season should encourage them to go forward in this enterprise. Mr. Robson, seedsman, moved the resolution formally, and made comments upon the nucleus of a fund in hand, and the popularity of the flower whose cultivation the society would foster. Mr. Simpson, Cotton Street, seconded, and the motion was unanimously adopted. It was resolved that the committee should consist mainly of city members, with representatives from outside districts. The committee was elected as follows:—Messrs. Grigor, Fairfield; Duncan, Stoneywood; Simpson, Cotton Street; Proctor, Devanha House; M'Donald, Balgownie; Smith, Duthie Park; Mortimer, Tullos; Middleton, Stoneywood; Minty, Westburn Road; Ogg, Morkeu; Taylor, Raeden; Kyloh, Woodlands; Paterson, Sunnybrae; Lennie, Bannermill; Borthwick, Rubislaw; Morgan, Dunmail; Reid, Durris; Mercer, Lauriston; Grant, Crimonmogate; Howie, Drumtochty; Smith, Cullen; Pirie, Ardmiddle; Wilkie, Viewmount, Stonehaven; and Mackie, Dalmain, Carron-on-Spey.

Mr. Reid was unanimously elected secretary, and it was decided to award the secretary an honorarium of £5 for the year. Mr. Robson, remarking that the most important duty yet lay before them, proposed Councillor Maitland as chairman of the society.

Mr. Maitland enjoyed, in a peculiar degree, the confidence of all classes of the community. His advent in public affairs in Aberdeen had come like a meteor; but everybody now recognised his genius and looked to him as the friend of every good movement. If he would accept office, the success of the society was assured.—Mr. Maitland, in accepting office, said he esteemed it a very high honour to be chairman of such a society. Mr. A. Grigor, Fairfield, was cordially elected as vice-chairman. It was remitted to the committee to draw up rules, &c., for the society and make proposals as to a schedule for next year. There were 153 subscribers to last year's movement. The proceedings, which had been very hearty throughout, were then brought to a close.

FLOWERS FOR DECORATIVE PURPOSES.

The members of the Devon and Exeter Gardeners' Association were favoured with a paper on the above subject by Mrs. McAlister, Hamslade, Bampton, on December 16th. The essayist commenced by touching upon the great advance that had been made of late years in the use of plants and flowers for house decoration. Some of the hardier Palms, such as Kentia belmoreana, Phoenix reclinata, and Latania borbonica, Aspidistras, Ficus elastica, Dracaena indivisa, and Bamboos would do fairly well in the house. Among the flowering elements, Azaleas, Primulas, Genistas, Clivias, and Chrysanthemums, were all very useful. All plants for indoor decoration, continued Mrs. McAllister, were better in small pots, and a covering of fresh green moss was serviceable and added a finish.

Where cut flowers were in great demand a supply must be grown in the reserve garden. Such beautiful varieties of sweet Peas as Apple Blossom, Orange Prince, Dorothy Tennant, Princess Beatrice, and Mr. Gladstone were most valuable. In the way of annuals, blue Cornflowers, Sweet Sultan, Coreopsis, Shirley Poppies, Nasturtiums, French and African Marigolds should all be grown. Of biennials white Foxgloves and Canterbury Bells should be mentioned. Of perennials a very long list might be made out.

Proceeding to deal with the arrangement of cut flowers, the essayist pointed out that whereas in former times we were satisfied with an inch or so of stem with our cut flowers, we now require that the stem shall be in proportion to the size of the flowers, and that buds and leaves shall be supplied as well. Flowers never look their best when many varieties or colours are mixed together, said the lady, for then individual beauty seems to be lost. In all floral arrangements the colours should harmonise, and a sufficiency of suitable foliage must likewise be supplied. All hardy flowers, such as Dahlias, Roses, and Poppies should be cut early in the morning when the dew is on them. Lilac, Azaleas, and Laburnum will be found to last much longer in water if the bark is stripped off part of the way up the stem.

In table decoration it is important that glasses suitable to the flowers should be used, and that anything heavy or laboured should be avoided, everything being as light and dainty as possible. A seasonable decoration for Christmas could be made with Poinsettias laid on the cloth with some fronds

of Maidenhair, and a few trails of Smilax. Six or eight small glasses could be filled with Roman Hyacinths, or Lily of the Valley. The centre-piece should consist of other white flowers. A few sprigs of well-berried Holly might be arranged round the bases of the candelabra, the latter being furnished with red shades. Iceland Poppies, in the three shades of orange, yellow, and white. Their long stiff stalks render them very easy to arrange, and if cut in the morning before the bees are at work they will be found to last several days, even in the hot summer weather. The Shirley Poppies are also most valuable for table decoration.

On special occasions, such as silver weddings and other social functions, floral decorations occupy an important position. It is fortunate, therefore, that there is scarcely any time when we cannot get something out-of-doors. The endless variety of spring and summer flowers give place to the berries of autumn, which are followed in their turn by the Christmas Roses and yellow Jasmine.

TO THE LONDON PLANE.

PLANE-TREE of London, the Orient Plane,
Humbly thy praises I sing;
All through the season, in sunshine and rain,
Daily thy homage I bring.

Slowly thy leaves from their wintering creep,
Clad in a russety down;
Summertide makes them a bright polish take;
Autumn arrays them in brown.

Oft has the morning sun, mirrored in dew,
Shone from thy leaves manifold,
Then, ere the gloaming received his adieu,
Burnished thy leafage with gold.

Dreary November, now riding the blast,
Deaf both to pity and grief,
Moans as it musters to carry the last
Struggling and lone dying leaf.

Now, like a hand 'tis outstretched in distress;
Lo! it is severed and falls;
Briefly I bid it farewell, and confess
Sorrow my heart now enthralls.

Bur-like and spherical clusters of fruit
Cling to thy branches forlorn;
Yes, and will linger till each from its shoot,
Earthwards by wild winds is torn.

Mortals when sickness or fierce foes assail,
Cling to the bare bones of life,
Just as thy seeds in their dead coat of mail,
Safely outlive winter's strife.

Beautiful Plane, 'tis the close of thy day;
Keenly I'll look for the noon,
Patiently wait for the flowery May—
Wait for the bowery June.

—*Osmunda, 16th November*, 1896.

CHRYSANTHEMUM CULTURE FOR EXHIBITION.

(*Continued from p.* 267).

TREATMENT WHILST IN A YOUNG STATE.—The more cool and airy these plants are kept the better. Anything approaching heat entices them to move at a time when little or no good is done. If single pots have been used, in a month's time the young plants should be very slightly shaken out, and given a little stronger loam. This is necessary, as the material they are struck in must of a necessity be of a sandy nature. After they are well rooted they are better out of this. The above applies also to those that are struck, five in a pot. By no means use any artificial manure at this stage. Always crock freely. A nice fitting one must go at the bottom, and some broken pieces as small as Peas on the top. Good drainage and plenty of it will never at any time harm Chrysanthemums. The plants at this potting should not be rammed, but should at the same time be potted firmly, and all pains taken with them as they are just starting on their career. For this shift I like a 4-in. pot in which, if the treatment has been good, they will stop until the final potting is commenced. Lastly, by all means keep them cool and very slowly moving. Frames are far the best place for the plants. Plenty of covering must always be kept on hand at this stage of growth, for frost will work great harm.

MATERIAL FOR FINAL POTTING.—As far as soil is concerned the cultivator for exhibition must bring all his knowledge to bear at this stage. The best material in existence is good turf of a yellow or brown colour—black I do not like at all, as it generally denotes the presence of ashes, and is always of a loose nature. The above should be taken off as deep as the fibre goes, that is two or three inches. Take it off neatly, for the sake of appearance. When this is done choose a dry position outside on which the sods can be stacked. The size of the stack will necessarily be in proportion to the number of plants grown. Commence with a layer of sods at the bottom, then a good covering of manure, which is all the better for being dry and well decomposed. If the manure at hand is not good, better leave it out. Anything approaching vegetable matter should by no means be used. Build this stack up, using alternately a layer of sods and manure, crushed ¼ or ½ inch bones, Clay's, Thomson's, Ichthemic Guano, or any other good artificial manure may be added. Charcoal forms, along with broken oyster shells, the best grit possible for this subject.

When the stack is finished two or three sheets of galvanised iron should be put on the top, and tilted, to throw off the rain. When the soil is wanted, start at one end and chop it straight down with a sharp tool into pieces about the size of Apples. Mix thoroughly and then put it on the bench for using.

HOW TO POT.—Chrysanthemums are flowered in various sizes of pots from 5 in. to 9 in., the smaller ones being more for plants obtained from tops struck in March or April. An 8-in. pot is large enough for all other purposes. Of course 9-in. may be used, but as a rule the smaller the pot the better. For all purposes crocking forms a main feature. A larger quantity of crocks must be used than for the young plants. Always mind that they "bed" or lie nicely. Soot, if sprinkled among the crocks, is the best preventative against worms. Again, a thin layer of sphagnum moss is a thing not to be despised if it is at hand in plenty. Now spread a quantity of the rougher material over the crocks or sphagnum and then place the plant in position. It should be 1 in. or so below the rim of the pot when potting is finished to allow for a little top dressing. Firm potting is the backbone of successful Chrysanthemum growing. As the plants are potted set them out in an open position as close together as they will stand. Be very careful with the watering-can. Just a sprinkle to keep the tops up is all that is necessary, using a rose that will settle the surface of the soil nicely and evenly.—*J. G. Pettinger, Strawberrydale Nurseries, Harrogate.*

(*To be Continued.*)

BIG PLANTS AT AYR SHOW.

"MUM," according to his remarks on p. 262, is in great distress over my statement in favour of the first prize lot of specimen Chrysanthemum plants at Ayr Show. I can assure him I am in no way distressed over the matter; they were worthy of it, also of the praise they received from the gentlemen that adjudicated the awards in the plant classes.

With the exception of one plant they were certainly under 7 ft., and the one exception was not to be ashamed of. I heard a person say he questioned if there was under 2,000 blooms on the same plant. I did not count them, but it was the heaviest flowered plant I have seen. This and the others were clothed to the pots with healthy foliage; and according to a statement made to me by the gentleman to whom the first prize lot belonged, they were over 7 ft. through, with flowers of good size, colour, and freshness. If "Mum" thinks lightly of such plants I am afraid he has had very slight practice in growing specimen plants. I speak not against dwarfness; it is in the plants' favour. I have seen dwarfer and probably neater plants at other shows, but after all is said, the Ayr plants have the honour so far as culture goes in producing plants of big dimensions combined with quantity of flowers of good quality. If "Mum" has not produced plants like unto those at Ayr Show, I advise him "to go and try to do likewise."—*W. Rushton.*

CHRYSANTHEMUM GROUPING.

I HAVE been much interested with the excellent remarks of A. P., A. S. G., and Mr. George Potts on the above subject. There can be no question but that the miscellaneous groups are much to be preferred to the huddled mass of colour which generally obtains at 'mum shows. Mr. Potts' suggestion on page 267 is an excellent one, and where practicable should be acted upon. We used to run both styles, but on account of insufficient room had to cut one out. The committee after due deliberation decided to retain the 'mum group for the reason that where there was one gardener who could put up anything like a decent miscellaneous group, there were three who could not on account of not having the necessary foliage plants, whilst all of them could manage a 'mum group.

This year we had a class for twelve cut blooms on long stems arranged in a space 3 ft. by 2 ft., with plants or foliage. There were some excellent exhibits, the best being set up with branches of Beech, Brake, Ferns, etc. If exhibitors were allowed to use something similar amongst the plants in pots, those without Palms and other foliage plants would not stand out against any alteration in the present system of arrangement, for they would be able to make a good show without spoiling the whole of their collection, which you are bound to do, however careful you may be in taking them to and from the show. —*C., Secretary.*

NOTICES OF BOOKS.

THE NARCISSUS OR DAFFODIL*

*Biggs & Son's Handy Series of Fruits, Flowers, and Vegetables. No. 1

THE NARCISSUS OR DAFFODIL. By T. W. Birkenshaw, Head Gardener, Totley Hall, Sheffield. With additions. Illustrations from Photographs by Messrs. J. Carter and Co., Seedsmen, High Holborn. Price 2d. Biggs and Son, 139—140 Salisbury Court, London, E.C.

Here we have a small pamphlet of some 32 pages that runs over the whole range of the history of the Daffodil, culture, classification, and selections of the best varieties for any given purpose. Mr. Birkenshaw, the author, like most other writers on the subject, feels unable to omit the classical but mythical legend of Narcissus. Well, we do not quarrel with him, for the beauty of the poetry is fascinating enough for those who can get away from mere cultural routine and hard matters of fact. We smile incredulously, however, when Mr. Birkenshaw treats us to a new classification of the Daffodil which was read by Mr. J. G. Baker at the Daffodil Conference in 1884. So much has been said about Daffodils during the last 12 or more years that the subject is now pretty well worn. Ther eis one more criticism we will make concerning the name Alba plena odorata as applied to the double Gardenia variety of the Poet's Narcissus. Both alba and odorata have wrong terminations, and both are equally superfluous, for all the varieties of the Poet's Narcissus we have met are white and sweet scented. There are two double varieties, but that under notice is N. poeticus recurvus plenus.

In speaking of the culture of Daffodils the author does well to state that they should be changed from place to place each time they are transplanted. If vigorous growth is desired this practice is necessary. Shallow planting is to be preferred in stiff soil, he says; but surely the statement that the double Poet's Narcissus requires a more retentive soil and to be planted 6 in. deep, is imaginary, not to put it more forcibly. We have seen it flowering profusely in borders of light sandy soil where the bulbs were almost on the surface. Better treatment would no doubt give larger flowers, though not more of them. White Daffodils dislike manures near them, and we take it that the author means rank farmyard manures. To this group he might also have added the Tenby Daffodil which is very impatient of the manure cart. Artificial manures used judiciously should prove very beneficial. Bonemeal or bonedust is here recommended. Why not potash and nitrogen as well, in safe quantities? The author recommends early planting, say in the first or second week of August or earlier. This would be desirable where the ground is available. The bulbs should be lifted every second or third year without fail. Seedling bulbs do not reach their best development till they are nine years old.

EVERYBODY'S MEDICAL GUIDE.*

*Everybody's Medical Guide: a Handbook of Reliable Medical Information and Advice. By M. D. (Lond). London: Saxon & Co., Publishers, 23, Bouverie Street, Fleet Street, E.C. Cloth 6d. Leather 1s.

This little handbook of 122 pages is merely intended to afford hints and suggestions rather than to be acted upon in any or every case. The force of this

we can readily comprehend, because the reader may recognise a symptom or partly so, yet be unable to give it that diagnosis which the physician with his extensive practice, and the acquired skill of his profession, can readily do. Travellers going abroad, and those in the immediate district of civilisation, will derive advantage by consulting the pages of this guide. This aspect of the question is maintained throughout the book, and in carefully reading over the articles relating to various diseases and ailments, we fail to find any attempt to mislead, or give the impression of quackery. On the contrary, the directions given, whereby to discern from symptoms what is the matter, are very simple, and the advice is reliable. In cases involving danger, arising either from the medicine recommended, or from the nature of the patients' illness, the latter is always advised to consult a physician, before taking further action. Otherwise, however, the advice given in the book may be acted upon, and in this respect lies the advantage of having such a guide at hand for reference, in cases of emergency more especially. Many maladies to which the human race is subject may be warded off by judicious eating and drinking, as well as by frequent exercise in the open air, and advice in such cases is frequently given. The number of maladies mentioned here and prescribed for is astounding. Useful chapters are also given furnishing "Suggestions for the Maintenance of Health," "Laws Relating to Infectious Diseases," "Invalid Dietary." "Drinks for Invalids," "London Medical Fees." &c.

GARDENING MISCELLANY.

A WELL-ARRANGED GROUP OF CHRYSANTHEMUMS.

THE king of winter flowers is the Chrysanthemum. What should we do without it? It would indeed make a gap for the florist and decorator. One of the best and most varied groups I have seen for some time is that well-arranged in the conservatory at Park Vale, Birmingham; and as seen from the drawing room it is a most charming sight. All the leading sorts, "incurves" and Japanese are well represented. Some well-flowered dwarf plants about 18 in. high finish off this group to perfection. Most of these dwarf plants are furnished with flowers right to the pots, forming a natural and well-clothed finish. I was likewise charmed with a house of Primulas here, including the Queen Type; and Sutton's best varieties, double and single, and their Star Primula are all well represented by well-grown and profusely-flowered, grand examples of cultivation. A grand batch of Calceolarias and another of Cinerarias are worthy of the same remarks. The credit of which is due to Mr. Showell's gardener, Mr. W. H. Westbury.—*Rusticus.*

SOLANUM MACROCARPUM.

THIS most interesting plant has recently been fruiting in the Temperate House at Kew. The stems are furnished with stout sharp spines from ½ to ¾ of an inch in length. The persistent sepals are also spiny, although the spines here are not so long nor so stout as those of the stem. The fruit is globular, hard, thick-skinned, and free from any corrugations. In colour they are a dull orange scarlet, and from one to one and a half inches in diameter.

SKIMMIA JAPONICA.

THE splendid batch of this pretty plant exhibited at the last Drill Hall meeting by Messrs. Cutbush & Son, Highgate, N., was an excellent reminder of its value during the winter months. The berried plants that are amenable to cultivation in the greenhouse are all too few, and it seems a pity that we do not see Skimmia japonica given a more favoured place in private establishments. It is not over compact in habit, perhaps, but still the bright red berries more than compensate for supposed deficiencies in this respect. When in flower, too, the plant is attractive, for the Holly-like blooms emit a very fragrant perfume. Small specimens in six inch pots come in very useful for decorative purposes throughout the winter months.

ACACIA PLATYPTERA.

SEVERAL plants of this Acacia have been flowering of late both in the Temperate House and greenhouse No. IV. at Kew. Like most of the Acacias the flowers are bright yellow. They are produced in single heads, borne on short peduncles. The phyllodes, or modified leaf stalks are broad, obliquely truncate, mucronate, and clothed with stiff hairs. The branches are broadly winged, and the whole plant is of rather straggling habit, Acacia platyptera is a native of the Swan River, from whence it was introduced about the year 1840.

A BUNCH OF VIOLETS.

VIOLETS at Christmas are welcome flowers, particularly when as sweetly scented as we should expect them in March. A large bunch reached us the other week from Mr. James Mayne, gardener to the Hon. Mark Rolle, Bicton, Devon, accompanied with the note "the good old Marie Louise." The flowers were of a much darker hue than usual, with a white centre, and delightfully fragrant. Mr. Mayne makes a point of having plenty of Violets during the autumn and winter months, by making up some hotbeds, on which lights are placed. Some soil is put into them, in which the Violets are planted. Little further care is necessary beyond attention to ventilation, and keeping the plants clean, including the removal of decaying leaves, which might cause damping amongst the flowers in the moisture-laden atmosphere of Devon. The old Marie Louise still remains a favourite with growers, not only in this country but on the other side of the Atlantic, where our cousins continue to hold the variety in the highest estimation.

HOW TO COOK POTATOS.

ALTHOUGH we have made great advances in our cultivation of the Potato it is to be feared that the way in which the tubers are cooked is not always satisfactory. There comes to us an account of how Potatos used to be cooked many years ago at a then famous restaurant in Covent Garden. The Potatos were first washed carefully, and then placed, unpeeled, in a sand bath. Here they were subjected to a high temperature until they were well cooked and mealy—usually two or three hours. An eminent physician has expressed his opinion that all starchy foods, including, of course, the Potato, are far easier of digestion and assimilation when prepared at a high temperature than they are when cooked by a lower one. By boiling we can only give a temperature of 212° Fahr., whereas by baking, 300° and higher can be obtained. The sand bath is not an absolute essential, as a hot oven will answer nearly as well. The skin of the tubers should first be punctured in several places to admit of the escape of the steam. The most important point is to watch for the exact moment when the Potato are baked dry, when they will turn out of their skins quite mealy.

RHODODENDRON LORD WOLSELEY.

A GOOD specimen of this Veitchian hybrid is now in flower at Berrow Court, Birmingham, the residence of Arthur Kenrick, Esq. The plant is growing in a 14-in. pot, and has seventeen expanded trusses of its beautiful bright orange-coloured flowers, averaging eight flowers to each truss. There are ten buds yet to open. This is a good example of cultivation. Plants and flowers are well done here. There is also a good house of well-grown Cyclamen of Sutton's superb strains, now in perfection. Examples of these were shown at the late Birmingham Chrysanthemum Show, and obtained a leading place amongst several exhibits of Primulas. Bouvardias are equally well done, proving themselves most useful for cutting purposes. Several Cattleya labiata and Dendrobes are likewise in flower there, and many other novelties are exceedingly well done under the fostering care of Mr. Alfred Cryer, the gardener-in-chief.—*Rusticus.*

SALVIA SPLENDENS.

CONSIDERABLE use is made at Kew of Salvia splendens, and in greenhouse No. IV. some capital specimens in eight inch pots are to be seen each year during the earlier part of the winter. The species in qnestion has the great merit of holding its flowers longer than most of its congeners, and the racemes of bright scarlet are most effective. Like all the Salvias, S. splendens needs rich soil, and good feeding, for if starved at all the lower leaves soon go, and half the beauty of the plant with them. The variety S. s. grandiflora, which received an award of merit at the hands of the floral committee of the Royal Horticultural Society during the past autumn, is an improvement upon the type, in that it is said to travel better, and to stand more knocking about. The flowers, too, are a little longer, and the racemes are more compact, although this latter can scarcely be termed an improvement, as it does not add to the effect, and imparts rather more than a suspicion of stiffness.

DIOSPYROS KAKI.

THE succulent house at Kew contains two fine specimens of the Date Plum that recently carried good crops of fruit. Each fruit is as large as a medium-sized dessert Apple, spherical, and bright orange in colour. They are said to make fairly pleasant eating The plant requires the shelter of a house where it can be protected from frost in this country—those at Kew are placed in the cool end of the succulent house to which very little fire heat is applied. In the extreme south of England and in the Channel Islands it may be grown outside. It was introduced from China as far back as the year 1789.

VIBURNUM TINUS.

OUR flower gardens and pleasure grounds throughout the country contain numerous plants of this well-known favourite, but it seldom gets any farther than the outdoor garden. It is such a success there that it seems as if it has performed all the duties that could possibly be expected of it. It is a plant of several parts, however, and does splendidly when grown in pots for the decoration of the cool conservatory. Not only does it flower freely at a time when flowering plants are none too numerous, but it readily takes on the trim, shapely dwarf bush form that plant growers love. Considerable use is made of it at Kew in this direction, and greenhouse No. IV. contains some symmetrical little plants in 6-in. pots, full of health and vigour as well as of flower buds.

LAPORTEA MOROIDES.

THE Poison Tree, as Laportea moroides is popularly called in its Queensland home, might be classed amongst the plants that are more curious and interesting than pretty. It belongs to a suspicious natural order, viz., the Urticaceae, and so far bears out the habits of its kind as to need very careful handling, if the operator would escape having his hands blistered by the stinging hairs with which the leaves, stem, and fruits are covered. More than one inquisitive plant lover has been tempted to smell the luscious looking fruits that look not unlike half ripe Mulberries, and the consequences of such temerity are usually painful enough. A plant in the Begonia house at Kew is carrying several of the drooping panicles of fruit. The leaves are large, and cordate, or nearly orbicular in shape. The plant is rather ornamental, but from its unsociable tendencies is not likely to become a great favourite in our stoves.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Araucaria imbricata. — *Sigma*: The books do record that this tree was introduced in 1796. The oldest tree in this country was that which died at Kew in 1893. The seed from which this was raised was brought home by Archibald Menzies, the surgeon of Vancouver's expedition to the Pacific and the north-west coast of America, in 1791-95. Though introduced so early it is more than probable that the Kew tree was the only specimen of its kind in this country for some years. It can hardly be said to have died of old age, because it never was a thriving specimen owing to the treatment it received in its early days in protecting it, owing to the belief that it was not quite hardy in our climate. The soil also in all probability was unsuitable to its welfare, for it never reached a greater height than 30 ft., if so tall as that. The oldest tree of an Araucaria need not necessarily be the largest. The species was still rare in this country in 1836, for King William IV. considered it a choice gift when he presented Lady Granville with one of the Kew specimens for her grounds at Dropmore. The tree in question was 5 ft. high at that time but now measures something like

63 ft. to 65 ft. in height. There is a younger but more robust specimen, though not quite so tall, say about 60 ft. with a diameter of 3 ft. near the base. Doubtless there are many other fine trees in this country, though we feel sure that no one exists of the age of 100 years. Possibly our readers have seen trees of A. imbricata whose height would be worth recording. In any case we should be obliged for any such records.

Tree Tomato.—*A.S.* : It can be and is frequently raised from seeds ; but plants so raised take longer time to come into bearing than those raised from cuttings. The latter may be rooted in a stove or propagating pit, with a little bottom heat, much in the same way as Bouvardias or Solanums are treated. Young shoots just getting firm at the cut part should be used.

Flowers of tan.—*R. Smith* : Your best plan should be to give the house a thorough cleaning out, so that all decaying matter may be cleared away. This should be done before propagating operations are commenced. The cocoanut fibre refuse and all other loose material making up the bed should be thoroughly cleared away and fresh material put in its place. Before this is done, however, the glass and woodwork of the interior should be washed and given a good syringing with petroleum and water, or even with emulsion. All plants should be transferred to another house or other compartment before operations of this nature are commenced. The fungus arises from spores, and belongs to the same class as that which causes clubbing in Cabbages.

Value of Ashes on vegetable ground.—*A. Wallis* : It all depends upon the nature of the ashes ; coal and coke ashes are of no value whatever in the way of plant food. Should the ground consist of stiff loam, usually termed clay, such ashes would improve its character mechanically by making it more porous and open, allowing superfluous moisture to drain away quickly during wet weather, or the melting of snow. Soil thus rendered porous offers facilities for the roots to penetrate more freely and deeply. On the other hand, if much wood is burned in the fires from whence the ashes are obtained, the latter will contain a good percentage of potash, which is one of the most valuable elements of plant food. These ashes also contain other valuable ingredients, so that they may be applied to advantage to vegetable ground, fruit trees, and bushes.

Cutting back Tea Roses.—*H.J.* : Whatever you do, spare the strong shoots. If you want them to look tidy you could nail them to the wall, their full length, and merely shorten them a little about the end of March or the beginning of April, according to the weather. It is of little consequence if they are crowded at the present time seeing that the leaves have fallen. They may be thinned out after all danger of frost is over, by cutting away the older stems for the benefit of the younger ones.

Names of Plants.—*J. L.* : 1, Trichomanes radicans ; 2, Selaginella kraussiana Brownii ; 3, Lygodium palmatum ; 4, Stenotaphrum glabrum variegatum ; 5, Sedum sarmentosum carneum ; 6, Cotyledon retusa.—*T. Walker*: 1, Cypripedium barbatum Crossii; 2, Laelia anceps sanderiana ; 3, Maxillaria punctata; 4, Oplismenus Burmanni variegatum.—*A. S., B.* : 1, Juniperus sinensis aurea ; 2, Cupressus pisifera plumosa aurea ; 3, Cupressus nutkaensis (Thujopsis borealis is an old synonym) ; 4, Taxus baccata fastigiata.

Chrysanthemum Mrs. Briscoe-Ironside.—*Florum amator* : The flowers of this variety are of medium size, measuring 5½ in. to 6 in. in diameter, and of a chaste and delicate blush hue. The florets are of medium width, closely incurved, more or less interlacing with one another, and often whorled. They are also of the same hue on the obverse and reverse. The blooms are thus compact in form and pleasing, but only moderate in size.

Fruits to Name.—*Wm. Keen* : Apples—1, New Hawthornden ; 2 and 3, Warner's King. Pears—1, not recognised ; 2, Passe Colmar.

Communications Received.—W. L.—T. G.—F. R.—Queensland.—J. W.—H. J. J.—Webb and Sons.—Kelway & Son.—P. W.—A. J. B.—A. F. B.—A. H.—D. Kennan.—P. N.—W. Naylor.—T. S. G.—Samuel Morgan.—Y.—Constancy.—L. L. A.—Alpha.

TRADE CATALOGUES RECEIVED.

KELWAY & SON, Langport, Somerset.—Wholesale Catalogue of Seeds.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and Complete Descriptive List of Chrysanthemums.

DICKSON, BROWN AND TAIT, 43 and 45, Corporation Street, Manchester.—Catalogue of Vegetable and Flower Seeds and Garden Requisites.

WEBB & SONS, The Royal Seed Establishment, Wordsley, Stourbridge.—Webb's Spring Catalogue.

T. METHVEN & SONS, 15, Princes Street and Leith Walk, Edinburgh.—Seed List.

H. J. JONES, Ryecroft Nursery, Hither Green, Lewisham.—H. J. Jones' Chrysanthemum Guide and Catalogue for 1897.

COVENT GARDEN MARKET

December 30th, 1896.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts and Filberts, per 100 lbs.	35 0	
Grapes, per lb	0 6	1 6
Pine-apples, —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples, per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	1 6	3 0
Azalea, doz. sprays...	0 9	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	2 6
Chrysanthemums, doz. blooms	1 0	6 0
Chrysanthemums, doz. bunches.	3 0	6 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	3 0
Geranium, scarlet, doz. bunches	6 0	9 0
Hyacinths (Roman) doz. sprays	1 0	1 6
Lilium longiflorum per doz.	4 0	8 0
Lilac, White (French) per bunch.	4 0	5 0
Lily of the Valley doz. sprays	1 0	2 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	6 0
Mimosa, per bunch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (indoor), doz.	0 6	1 6
" Tea, white, doz.	1 0	2 0
" Niels	6 0	9 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	1 0	1 6
Pink Roses, doz.	2 0	3 0
Smilax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms ...	0 6	0 9
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz blms.	9 0	15 0
Violets (French) per doz. bunches.	1 6	2 0
Violets (English) per doz. bunches.	1 6	2 6
Violets (Parma) per bunch.	3 0	4 0
Violets Czar, large, per bunch.	2 0	3 0

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Chrysanthemums, per doz.	4 0	9 0
" per pot	1 0	2 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, in var. doz	6 0	24 0
Erica, per doz.	9 0	15 0
Erica Hymalis, per doz.	12 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	12 0	15 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	12 0	18 0
Solanums, per doz.	12 0	15 0
Tulips, doz. pots.....	8 0	12 0

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Edited by J. FRASER F.L.S.

SATURDAY, JANUARY 9th, 1897.

HARDY FLOWERS IN BLOOM.—If proof were wanting of the mildness of the winter over the British Isles, it is amply furnished by the flowers, native and exotic, now blooming in the open. Late in the season, Roses were flowering in the far north, but as recently as Christmas eve the frost was so keen in Fifeshire that curling and skating was expected in a day or two. At Ambleside, however, in the north of England wild flowers in bloom were relatively plentiful. Concurrently with this we had evidence of flowers in bloom, and Strawberries fruiting towards the south and west of England. Monthly Roses, Snowdrops, Crocuses, Red-Campion and other spring and summer flowers were plentiful at the end of last week at St. Mawgan, in the beautiful vale of Lanherne, Devon, as well as at other places on the south coast. Bunches of Primroses were gathered at the same date in the neighbourhood of Liskeard, Devon.

In the suburbs of London, Primroses and other spring flowers may be noted; the grass is greener than at mid-summer, and is thickly dotted all over with Daisies in some

places. At Hounslow, Middlesex a bed of a yellow Viola is as gay as one might expect it at the end of March All these flowers were in strange contrast to the dense fog which prevailed all over the lower portion of the Thames valley on Saturday last. The weather in Ireland is usually even milder than on this side of St. George's Channel, and as far north as Belfast various garden flowers are flowering entirely out of season. These include purple and red Primroses, Godetia, double and white varieties of Lilac, pink Hepatica, Stocks, Daisies and gold-laced Polyanthus. More seasonable, however, are the Christmas Roses, Laurustinus, Ivy, and the yellow Jasmine (Jasminum nudiflorum). Roses continue to open their flowers, and may be looked upon as a remnant of last season's growth, which the open winter has prolonged thus enabling the buds to open. All these flowers as well as the abundance of berries of various kinds, impart a cheerfulness to the garden and wayside, and are as much appreciated at this dull season of the year as a greater abundance would be in summer.

Jamaica Fruit in London.—Of all the British West Indian Islands, Jamaica is the most prosperous, and a bold attempt is being made to improve upon its present conditions. A Commission to inquire into and investigate the prospects of this sugar-growing colony is about to leave England and Dr. D. Morris, C.M.G., the assistant director of the Royal Gardens, Kew, has been appointed as expert adviser. Of more immediate interest is the fact that steamers have begun to ply directly between Jamaica and London, for the conveyance of of fresh fruit. Hitherto what fruit we have had from Jamaica has gone by way of America, and thence to this country. The steamer Port Victor brought the first consignment for Messrs. Garcia, Jacobs, & Co., and this appeared in Covent Garden on the 30th. ult., creating a considerable amount of interest both amongst London and provincial buyers, including wholesale dealers from Liverpool, Manchester and Glasgow. The market was crowded as is usually the case when an innovation on anything like so extensive a scale is made.

The consignment consisted chiefly of Oranges and Bananas, the former being packed in cases of two sizes containing 150 and 200 fruits respectively. Fair prices were obtained for them, but, it was admitted that 30 to 50 per cent. of the fruits were out of condition owing to their being gathered when too ripe and improperly packed. Owing to the excited state of the market it would be difficult to give anything like a correct average price, though from 6s. to 9s. were obtained for each case. Experts were, however, satisfied with the results of the experiment, and considered that when the art of packing for long journeys was better understood by the consigners, and the proper time to harvest the fruits had been ascertained, success would be almost certain. A regular fleet of steamers plying between Jamaica and London could not fail to be of material advantage both to British cultivators in the island and to consumers at home. Mr. Garcia thinks that there is ample room for developing the foreign trade of fruit of this nature without encroaching upon the domain of the home growers in any way. There will always, of course, be a demand for Oranges, and that class of fruit is never likely to be be grown for market in this country. Neither can Bananas be considered as competing with any home industry. On this occasion 1,500 bunches accompanied the Oranges, and two-thirds of them were sold at 4s. 6d. to 8s. per bunch.

On the same day as the above another consignment of Oranges and Bananas by the steam-ship Elderslie was seized by the medical officer of the port of London as unfit for food in the South-west India Dock. The steamer was about to proceed to Newcastle, and by arrangement with the authorities of the port of London, she was to throw the decayed cargo overboard on her journey northwards. The fruits had been too ripe when gathered, but this will be remedied in the future.

Mr. Harman Payne has been elected a corresponding member of the National Horticultural Society of France, in recognition of his services to horticulture.

Mr. H. F. McMillan, who went from Kew in 1895 to to take charge of the Botanic Gardens at Peradeniya, Ceylon, has recently exchanged his title of head gardener for that of curator.

Mr. John Addison, who has been gardener to Mrs. Lloyd, at Merton Lodge, Hammersmith, over sixteen years, has been appointed gardener to Miss Behrens, 28, Avenue Road, Regent's Park, N.W., and we wish him every success in his new appointment.

A Stoking Accident.—Mr. John Wiles, aged nineteen, employed at Messrs. Brown's nurseries, Peterborough, in making up a greenhouse fire, was overcome by the sulphurous fumes, and falling in the stokehole, his clothes caught fight, and he was burned to death. The body was partly calcined.

Silver Wedding of Mr. and Mrs. Edward Webb — On this auspicious occasion Mr. and Mrs. Webb, of Wordsley, Stourbridge, were presented with a massive silver bowl and a pair of handsome claret jugs by the employees of Messrs. Edward Webb and Sons, the eminent and well known firm of nurserymen.

The Physick Garden at Chelsea is well-nigh the sole remnant of picturesque old Chelsea left untouched by the brick and mortar fiend. As far as its original purpose goes it has long been useless, although kept up carefully by the Apothecaries' Company. Should the company give up its charge, it will fall into the hands of Earl Cadogan. Its value as a site for building purposes is obvious, but it would be a thousand pities for this, the last of many old English botanic gardens, to be lost to posterity. The names of Sloane, Banks, Linnaeus, Miller, and Lindley, are all inseparably connected with it, and it is full of plants that are aristocrats of their kind, since they possess a pedigree dating back to the days when their ancestors were first introduced to this country. We learn that a project for acquiring this spot of many memories is again before the local authorities.

Newcastle Flower Show.—The Durham, Northumberland, and Newcastle Incorporated Botanical and Horticultural Society held its seventy-second annual meeting at 24, Westgate Road, Newcastle, on December 18th, Alderman Joseph Baxter Ellis presiding. The report for 1896 was read, and, much to the sorrow of all the well-wishers of this old society, was a most gloomy and disheartening one. The past year has been almost disastrous from a financial point of view. At the commencement of the season a surplus of £344 9s. 9d. was in hand. This has had to go, and even now there is a deficit of £26 12s. 11d. The spring show, held in the Town Hall in April last, caused a loss of £100, due chiefly to the unpropitious weather. At the summer show, in the Recreation Ground, the receipts from the gates were small, and they were £170 behind. Bad weather had much to do with this failure also. At the Chrysanthemum show, held in the Town Hall in November, another £100 had been dropped. In moving the adoption of the report the Chairman said that their calamities did not date from last year, for taking into consideration the £120 which the Town Moor Management had remitted to the society for rent, over £900 had been lost in three years. In face of these difficulties the council had decided to hold only the summer show next year. At the election of officers Mr. Eustace Smith, of Benton House, was chosen president, and the Mayor of Newcastle (Councillor John Goolden), vice-president. Seven members of the council were likewise elected.

Erratum.—Cypripedium Henry Graves was raised by Messrs. Pitcher & Manda, but was first flowered by Mr. Grey, for Henry Graves, Esq., Orange, New Jersey, and not by Mr. Henry Chapham, as stated on p. 278.

Royal Horticultural Society.—The first meeting of the Royal Horticultural Society in 1897 will be held as usual in the Drill Hall, James Street, Westminster, on January 12th, one to four p.m. On or before that date the society's new book of arrangements containing particulars of the shows, lectures, committees, &c., for 1897, and the report of council and new list of fellows will be issued.

Mr. John Stogdon, our youngest correspondent, started from Southampton last Saturday for a trip to Cape Town and Durban. He will no doubt see much that will impress his young and receptive mind, and furnish him with much to be remembered concerning the visit in his riper years. While on some of his rambles after plants on the Surrey Downs he picked up a double form of Cardamine pratensis and another of Ranunculus acris.

A Fine Odontoglossum wilckeanum.—The ground colour of the original, and likewise that of most of the forms of O. wilckeanum coming under our notice is yellow. A beautiful form, however, with a white ground colour, and rich spotting, turned up at the Central Sale Rooms of Messrs. Protheroe & Morris, on the 1st inst., and was knocked down to H T. Pitt, Esq., Rosslyn, Stamford Hill, for 15 gs. A true Laelia anceps alba, with pure white flowers, was on view at the same time.

Gardeners' Royal Benevolent Institution.—Notice is hereby given that the fifty-eighth annual general meeting of the members of The Gardeners' Royal Benevolent Institution will be held at "Simpson's," 101, Strand, in the County of Middlesex, on Thursday, the 14th day of January, 1897, at 3.0 p.m., for the purpose of receiving the Report of the Committee and the accounts of the Institution for the present year; electing officers for the ensuing year, and other affairs; and also for the purpose of placing twenty pensioners on the Funds—*ten* under Rule III. S, and *ten* by the votes of the subscribers. After the annual general meeting, at the same place, at 6.0 p.m., the usual annual friendly supper will be held, H. E. Milner, Esq. F.L.S., in the chair. Friends of the Institution who desire to be present at the supper should communicate at once with the Secretary. *Secretary, George J. Ingram, 50, Parliament Street, S.W.*

Reading and District Gardeners Mutual Improvement Association assembled at the "British Workman," Reading, on the evening of December 21st, to hear a lecture on "Rose Growing," by Mr. John T. Strange, of Aldermaston. Mr. Strange is well known in the district where he resides as an enthusiastic amateur. Dealing first with the question of stocks: the Manetti stock was the best for a beginner, but it was not suitable for Tea Roses. The Dog Rose of the hedges was an excellent stock. The briers should be prepared for planting by cutting off all suckers, and by carefully trimming the roots. It was better to chance their dying afterwards, than to have long straggling roots which conduced to suckers. Deep planting was fatal to the brier. It was convenient to plant in double rows, leaving a space of about 12 in. or 15 in. from plant to plant, and 3 ft. between the double rows. They should have, if possible, a nice open space in the vegetable garden, sheltered from rough winds. The height for half standards, the favourite stock for Tea Roses, was from 2 ft. to 2½ ft. For dwarfs, various stocks were used, the first being the seedling brier. In working the dwarf stocks the object was to get the bud as nearly as possible upon the roots so as to lessen the chances of suckers. When first planted, the roots should only be about an inch below the surface of the ground, and a good earthing-up could then be given to keep them steady. When the time for budding arrived, as much of the soil as was necessary could be drawn away. Mr. Strange then went on to detail the *modus operandi* of budding. Treating of cuttings he mentioned early in October as the best time for insertion, With regard to the selection of Roses, he believed the hybrid Tea to be the Rose of the future. It had been said that Reading soil was not good for Roses, but for his part, he believed it to be good enough for anything. A vote of thanks to the lecturer for his able and practical paper terminated the proceedings.

The Apple is surpassed by no other fruit in the number of ways in which it may be prepared for food.

Acacia dealbata has been in great demand in the Cardiff district of late, from 6s. to 10s. per case of 14 lbs. or 16 lbs. having been paid for it.

Mistleto in good condition and well berried has realised from 10s. to 20s. per cwt. Much of it is obtained from the orchards of Normandy.

Roses in South Wales.—English blooms have been fetching from 2s. to 5s. per bunch of a dozen blooms, France sends heavy consignments which sell at from 3s. to 8s. per crate of 600 blooms.

The Demand for Daffodils of good types such as Narcissus obvallaris, N. Emperor, N. Empress and N. bicolor Horsfieldi, has been excellent during the past few months.

A Hive Bee weighs about one-five-thousandth part of a pound, but when it comes in from the fields laden with honey or bee-bread (pollen) it weighs nearly three times more.

Blackberries are propagated from roots in America, and the roots after being cut into small pieces are spoken of as "seed." They are cut in the autumn, protected from frost during winter and planted out in spring.

Wild Birds and Protection.—The Home Secretary upon the application of the London County Council, has issued an order including the chaffinch in the list of birds enjoying the protection of the Wild Birds' Protection Act, 1880.

Eastbourne Horticulturists were favoured, on December 10th, by Mr. J. Gore with an interesting and instructive lecture upon Melons and Cucumbers. The lecturer handled his subject in a practical and exhaustive fashion. Mr. H. J. White presided.

Scottish Horticultural Association.—The energetic managers of this society are entitled to all credit for the manner in which they endeavour to keep the Chrysanthemum in evidence in all its most novel and useful forms. As our advertisement columns last week shew, 7 new classes are introduced for this year, whilst 5 of the old are withdrawn. The new classes are for blooms of the latest varieties which have proved their excellence, viz., Australian Gold, Edith Tabor, Emily Silsbury and Mrs. H. Weeks. Since printing our last issue we learn that the new class for 24 *incurved* should read 36 *incurved*.

Charitable Horticulture.—During the last year the government of the United States has distributed gratuitously upwards of 230 tons of seeds, the cost of carriage alone exceeding $70,000. Enough of seed, we learn, was given away to plant 21,038 acres of Cabbage, 10,768 acres of Lettuce, and 10,712 acres of Tomatos, other vegetables being in similar proportions. The vegetable seeds alone cost the government $75,000, and transport and other expenses nearly doubled this sum. People who are able and ought to buy what they want are the ones who benefit by this wholesale throwing about of free seeds, and this fact has led the Secretary of Agriculture to say that he sincerely regrets this unnecessary and wasteful expenditure of public money, and to hope that Congress in good time may put a stop to it.

Mr. Cypher's Seventieth Birthday.—In commemoration of his attainment to the threescore years and ten, Mr. Cypher gave a dinner to his employés at Cheltenham on the evening of Friday, January 1st. The veteran horticulturist was accompanied by his two sons, Mr. William Cypher and Mr. Frank Cypher, his two nephews, Mr. John Cypher and Mr. William Cypher, and the heads of the various departments in the nursery. After an excellent repast, songs and speech-making were the order of the evening. Mr. Cypher, who was accorded an enthusiastic reception, said that it was thirty years last August since he laid the foundation of his business. It had grown to be a large place and a large responsibility. He was an old man, he said, and he had much to thank the Almighty for. He concluded his short speech with some excellent advice to be careful and saving. He himself had begun in a small way, and had practised strict economy, but perseverance and carefulness had brought their own reward.

An open air demonstration in connection with the Horticultural class at Broadhempston, Devon, was held at Well House, the residence of Mr. R. Palk recently.

Expensive Varieties of Hyacinths and Tulips never sell very readily in the European markets. Those varieties which are plentiful and reasonable in price have been pretty well cleared out. Some of the very best in cultivation are among the cheapest because common.

Market Gardens are losing ground, as if they had ceased to pay, in Essex, Lancashire, Nottingham and Sussex. Essex and Sussex are within easy reach of London, and Lancashire growers are within easy reach of numerous large towns.

Mary to Mistress.—"Tom, the gardener, was trying to make a fool of me. He gave me some pots of earth and told me to put them into a dark press, but I wasna sae daft. I emptied them into the ash-pit." Mistress (horrified): "Oh, Mary! These were my Hyacinths."—*People's Journal.*

Pasture Experiments at Rothamsted.—The annual results of the pasture experiments show that the plot which has been manured for many years with salts of ammonia alone is fast approaching a condition of barrenness. The first crop of hay last summer was less than 1 cwt. per acre, and only the inferior grasses are now able to struggle for existence.

The Medicinal Value of Apples.—The *Bulletin of Pharmacy* states that, "Although the Apple is such a common fruit, very few persons are familiar with its remarkably efficacious properties." To eat an Apple just before retiring for the night is the very best thing to do to obviate indigestion. To many this may seem rank heresy, but the *Bulletin* goes on to assure its readers that no harm can come, even to a delicate system, by the eating of a ripe and juicy Apple the last thing before going to bed. The Apple is excellent brain food, because it contains a greater quantity of phosphoric acid in an easily digestible form than other fruits. It stimulates the action of the liver, promotes sound and healthy sleep, and disinfects the mouth. Moreover, it is a grand preventive for throat diseases. We are here reminded of the old couplet—

If you eat an Apple going to bed,
You'll let the doctors beg their bread.

Profitable Vegetable Culture.—There comes to hand an account of an individual who saved £2 by supplying his family with fresh vegetables grown upon the ungenerous soil and unfavourable aspect of the Newcastle Town Moor. Commenting upon this one of our contemporaries suggests the provision of allotments for town dwellers, and says that if allotments can be found in London they can in other places. It goes on further to state that "there are comparatively few metropolitan houses but which have a strip of land attached, and that most of these strips are cultivated." We wonder what sort of a London house the writer has been imagining. Land in London is ——— well! land, and the houses in which many working men live have often scarcely a back yard let alone a garden.

Brixton Hill Wine.—Most of us at one time or another have heard of the large Fig tree on the walls of Lambeth Palace. More recently we recorded the case of a Vine in the Old Kent Road or close in the vicinity of that populous thoroughfare. Now we hear of a "Brixtonian" brand of wine and champagne being made by a resident at Brixton Hill. Well, the main thoroughfare there is wider and the gardens larger than in the neighbourhood of the Old Kent Road. When the wine was converted into sparkling champagne, the beverage was considered beyond reproach and certainly superior to many of the brands in the market. Brandy was also distilled from the wine, and was quite equal to some of the French brandies. Wines of rare worth have also been produced from Mulberries by the same experimenter. Both the Grapes and Mulberries were grown in his garden at Brixton Hill. There is, however, nothing new about the production of home-made wine from Grapes grown in English gardens, seeing that it has been made from Grapes grown upon cottage walls at Kew more than ten years ago. People never know what they can do with, or get out of, their gardens till they try.

An enclosure has been placed round Cannon Heath by Lord Falmouth, and the local officials at Wateringbury have resolved to take action to compel him to remove it.

Emily Henderson is now well-recognised as the best pure white Sweet Pea in European cultures. It grows vigorously and produces three or four flowers on a raceme.

Figs are both abundant and cheap in Matagorda County, Texas, and sanguine natives hope soon to see the day when Figs will become one of the important crops of the state.

Cut Flowers from Holland.—Those growers of Dutch bulbs, who were so injudicious as to send over cut flowers by the ton to compete with those raised from their bulbs in this country, are now rather depressed by the heavy stock of bulbs on hand. They are thus being boycotted.

Sub-irrigation of Cannas.—Dr. Saunders gave the results of some interesting experiments in irrigating Cannas at the last annual meeting of the Ontario Fruit Growers' Union, held at Kingston, Ontario. A tile under drain had been laid between the rows with an occasional one at right angles. Large amounts of water were poured into these. The vigour of the plants was greatly increased thereby, and they not only produced larger flowers, but bloomed earlier.

Statue of Charles Darwin.—This statue which is to stand in front of the great naturalist's old school near the Shrewsbury Free Library is to be of bronze, and to be 6 ft. 6 in. in height. It will be mounted upon a granite pedestal. The whole of the estimated cost, £1,000, will be defrayed by the Shropshire Horticultural Society. This body has placed the execution of the proposed work of art in the hands of Mr. Horace Montford, director of the newly-established school of sculpture at South Kensington.

Free Horticultural Library.—The Corporation of Worthing have recently opened a free library in which the books of horticultural interest which have been got together form a most important and special feature. The commendable action of Worthing in thus recognising the value of horticulture is a most happy venture, and we trust is an example that will soon be followed by other corporations. The majority of our public libraries are very deficient in horticultural literature, in spite of the fact that it is to horticulture that we have to look for assistance in solving that great problem of how to feed the people.

Dwarfing Trees.—This art is commonly practised in China and Japan, and although many different methods may be employed they have all one end in view—viz., the retarding of the flow of the sap. Pruning, confining the roots in a small space, withholding water, and bending and twisting the stem and branches are some of the most common ways of coercion. When a tree has been chosen to operate on, its main stem and roots are twisted in a zigzag form; its roots are confined within a narrow space, and no more water is given than is absolutely necessary to sustain life.

Devon and Exeter Gardeners' Association.—The annual supper held by this society took place on January 1st at St. Martin's Castle Hotel, Exeter. The chair was taken by Mr. G. H. Lansdale. Messrs. J. Weeks, W. Andrews, F. W. Meyer, W. Street, C. Berry, H. Webber, W. Mackay, and A. Hope were also present. After the usual loyal toasts had been honoured, the chairman proposed the "Devon and Exeter Gardeners' Association." The society had been in existence for five years, and had done good work among gardeners. During its existence about sixty papers had been read, dealing with all sorts of subjects, from which a good deal of information must have been obtained by the members. He coupled with the toast the names of Messrs. W. Mackay and C. H. Clarke. Both of these gentlemen replied, both of them asserting their belief in the power of the society for good. Mr. F. W. Meyer next proposed the "President, Vice-Presidents, and Committee." He averred that a good deal of the success that they had achieved as a society was due to the energy and fitness of their officers. With this toast he coupled the names of Messrs. W. Andrews and J. Weeks. In responding, Mr. Andrews thanked the company for the honour that had been done the officials, and paid a high tribute to the secretary, Mr. A. Hope, who took the greatest trouble in assisting the association forward.

A PERFECT SPECIMEN PLANT OF THE CHRYSANTHEMUM.

In trying to define what a perfect specimen plant of the Chrysanthemum should be, a good many things have to be considered. Extreme height is not considered a good quality by anyone; it is ungainly and most inconvenient at housing time. Again, diameter cannot be considered a good quality if more than one plant is allowed in a pot (which most societies allow) because it then merely becomes a plantation, the breadth of which can be extended indefinitely. That brings us down to the form of the plant, the foliage, the flowers, neatness, and general effect.

The natural form of the plant and the prettiest is the bush form. The foliage should be deep green and well developed, with not the slightest trace of mildew or aphis, and covering the stems of the plant down to the pot. The flowers are very seldom up to the standard that we see on the show boards, but they should be as near as possible to that standard; they should at least be fresh and the colour clear, with petals of good substance, and free from aphis. The centre flowers should be the highest on the plant, gradually getting lower towards the outside, giving it a nice rounded appearance. It should be neatly trained, having no obtruding stakes or clumsy ties; the height should not be more than 3 ft. 9 in., and the diameter 3 ft. Some authorities give less dimensions than these, but I give them as the maximum, beyond which the plant begins to look ungainly. When finished, the plant should look as if naturally grown, giving the mind a pleasing sense of symmetry and beauty.—*'Mum.*

HINTS FOR EMIGRANTS.

The Emigrants' Information Office has supplied us with particulars concerning various British colonies from which we excerpt a few notes which may be of interest to our readers. It is too early in the year for the ordinary emigrant to go to Canada; the beginning of April is the best time to start.

In New South Wales the demand for labour in town and country is improving, although it has been in a bad way for some time past. The selection of land by small settlers is proceeding very satisfactorily throughout the colony, especially in the Riverina district, and the demand for men skilled in shearing, fencing, clearing, or saw-milling, has in consequence greatly improved. A report from the rich valley of the Hunter states that there is a demand for skilled farm labourers and dairymen, but none for mechanics or miners. Another report from the valuable dairying district of Kiama, south of Sidney, states that there is no demand for labour; land there is selling at £24 an acre, and renting at 30s., so that farmers going there require some amount of capital.

Victoria.—The commission appointed to inquire into the financial failure of the Mildura Irrigation Colony has reported that it was mainly due to the insufficiency of the irrigation works, and that the Government contributed to this result by their neglect. They recommend that a loan of £30,000 should be advanced by the Government on security of the land, and that the original concession to Messrs. Chaffey should be cancelled. General female servants are in good demand throughout the colony. There are excellent openings for farmers, dairy farmers, fruit growers, and wine growers, if they have a little capital, and some experience of the country.

South Australia.—Owing to the want of rain, especially in the north, farmers have greatly suffered, and the demand for agricultural labour, for shearers, and general hands throughout the colony has been small. There is a scarcity of useful female domestic servants.

Queensland.—General female servants are in great request here as elsewhere. In the pastoral country, 200 miles west of Rockhampton, there has lately been a good demand for married couples at £60 to £100 a year, and at Bundaberg for men able to work in the sugar mills, and to cut cane in the fields. Throughout Queensland at the present time there appears to be a fair amount of work, but the demand for labour is mostly supplied by those on the spot. There is a good demand for land suitable for sugar cane growing, along the north coast at Mackay, &c., the sugar industry being in a prosperous condition.

Western Australia.—Emigrants to this part should be prepared to turn their hands to all kinds of farm and station work, to cut down timber, to use the pick and shovel, and to rough it generally. The Government is spending large sums of money on public works and buildings.

Tasmania and New Zealand.—The mining industry is, apparently, the most thriving one in Tasmania, and the prospects generally are good, the mines relieving the depression in trade. In New Zealand there has been an increase of the demand for skilled and unskilled labour. At this season of the year unskilled labour is fully employed at shearing, farm work, bush felling, &c.

Cape Colony and Natal.—A correspondent at Burghersdorp, north of Queenstown, Cape Colony, writes:—"Immigrants would find the railway the most likely sphere of labour; in these small up-country towns and districts there is little demand for outside labour, but a good man who could turn his hand to several trades would get on." Large numbers of persons continue to arrive in the colony from England and Australia, and many find much difficulty in getting work. The local supply of labour is quite sufficient in Natal.

VEGETABLE CALENDAR.

The principal work in this department at present is in making preparations for a more busy season. All ground when cleared of crops should be ridged up at once to expose it to the mellowing influence of frost and wind. Calculations should be made of the amount of ground it is possible to trench deeply, and the remainder should be ridged as advised above. Ground intended for early crops such as Parsnips and Onions, and which has been trenched, may, with advantage, have the surface loosened with a fork, to get it thoroughly pulverised by the time of sowing. Where it is intended to form new Asparagus beds—and a new one should be formed annually—the present is a good season to get the proper materials together. The nature of the land must be the guide of the additions necessary to make a good bed. If the ground is of a retentive character a large addition of road or river sand with thoroughly rotted manure will effect a great and permanent improvement. Good drainage and a deep root run are essential in obtaining fine heads of Asparagus. The surface for a depth of 6 in. may, with advantage, be composed of sand entirely. On the contrary, if the ground is light and sandy, little will be needed beyond deep trenching; and a very liberal allowance of cool dung, and fish manure or sea weed—if obtainable—will form good additions. If the ground is prepared early, a crop of Spinach may be taken from it before the time for planting the Asparagus arrives.

Broccoli.—One of the most useful vegetables at this season is Snow's Broccoli, coming in as it does directly after the autumn Cauliflowers. This and any other Broccolis just turning into use must be carefully protected from frost, by lifting them under the protection of glass if possible, or in a cool shed, or temporary structure, made frost proof. The plants should be lifted entire, with as little damage to the leaves as possible, and if a nice ball of earth is kept around the roots the heads of flower will receive but little check, and will give a supply for several weeks, to be followed by later successions.

A Sowing of Early Cauliflowers may be made at the present time; but avoid using undue heat in bringing up the seedlings. Dean's Early Snowball is a model little Cauliflower when properly handled and well cultivated. For turning into use quickly it is the best; but the young plants must not receive any check after the seedling stage, otherwise disappointment may result. For frame culture it is one of the best.

Growing Crops.—These include Spinach, Onions, Cabbages, and other autumn sown crops; and will require frequent hoeing to keep the surface of the beds sweet and friable. This will give a healthy impetus to the roots, which will be reflected in the healthy growth of the plants. Crops under glass will need great attention during such changeable weather as we have lately experienced. Free ventilation on all favourable occasions must be given, to prevent damping, and the surface of the beds should be raked over occasionally to prevent mouldiness or other fungoid growths from spreading.—*J. R.*

THE ORCHID HOUSES.

Cattleya House—Laelia anceps.—This fine winter-flowering Orchid with us is somewhat late this season in coming into flower, but the blooms that have expanded are exceptionally highly coloured. To show them off to advantage, they should be arranged, if possible, together at the end, or along the side of the division in which they are grown. A few Ferns or Palms dotted in here and there shows them off to good effect.

L. a. williamsiana is about the first of the white forms to flower, and is one of the easiest and most satisfactory of the albinos that we have; for it rarely, if ever, fails to produce a crop of flowers, which can hardly be said of some of the white forms.

As the plants go out of flower, they should receive a good clean up, and a thorough soaking to enable them to plump up preparatory to their being repotted or rebasketed, as the case may be, always, of course, allowing them to become moderately dry before the repotting process is attempted.

Fog.—The effect of fog on Laelia anceps even in this district, which is twenty miles from London, is most disastrous, making the sepals and petals curl up as if the flower had been fertilised. What it must be in and near London, I do not know.

Vanda amesiana.—This is a great favourite with the ladies on account of its sweet perfume, and being a dwarf habited plant, and one that requires cool treatment, is easily managed. When grown with the Cattleyas it is apt to become affected with a little white scale, which is difficult to dislodge, as it gets down in the axils of the leaves; but when grown quite cool, that is with the Odontoglossums, it does not become affected. Last year I recommended the temperature of the Cattleya house for this species, also for V. kimballiana. We find those grown quite cool have done much the best in respect to V. amesiana, but with V. kimballiana the extra warmth of the Cattleya house seemed to be most appreciated.

Cockroaches.—These are troublesome customers to the Orchid grower when once they get into the warm divisions, for if not trapped they soon increase with the extra warmth, and will not only eat the flowers, but the new roots, which is, of course, the life and soul of the plants. Perry's beetle paste is very good, but the safest and most easy trap that has come under our notice is the "Acme trap"; it is always set, and once the beetles get in, escape is impossible, and this method of catching them does away with all risk of your tabby getting poisoned.

The Weather.—Here it is very mild, which makes it difficult to keep things from starting into growth too soon. A dry airy atmosphere must be maintained, with the temperature as low as possible, without exceeding the limits as advised in a recent calendar.—*C.*

THE FLOWER GARDEN.

As a result of the mild autumn and early part of the winter the work in the majority of gardens is pretty well forward. In ordinary gardens the yearly amount of planting does not occupy any very great length of time, and every opportunity has presented itself for getting it out of hand.

Tidiness must still be preserved as far as possible, even although there is not very much in the way of floral beauty out of doors just now. The Christmas Roses are having it all to themselves, although it will not be long before the Snowdrops put in an appearance.

The rains have left the gravel paths in a very sodden condition, and it is at such times as the present that we are able to appreciate a well-made path at its full value. The roller must be set to work at every opportunity.

Anemones.—The commoner kinds of these pretty flowers may be planted at any time, weather and soil of course permitting, between September and March. By planting in several batches a succession of bloom is secured. Planted under trees they should not be subjected to the indignity of an arrangement in a formal pattern. All they want is to be buried about 3 in. deep and left to take care of themselves.

The finer and more valuable varieties ought not to be treated so cavalierly. In order to do them well they need to have a considerable amount of

care lavished upon them. Where Anemones are taken up as a hobby elaborate preparations are often made for them. The soil, if it is not considered good enough by the cultivator, is dug out to the depth of 2 ft., and then replaced by a prepared compost of two parts of good turfy loam, and one of cow manure, with river sand in sufficient quantities to keep the soil open. The results obtained are of course very fine, but it is a matter of question whether they pay for all the trouble. Usually it is sufficient to give a good deep digging, working in plenty of manure. This serves to minimise the effects of drought, and to supply the plants with moisture and nutriment as well.

Seed Lists.—The seed catalogues for the year issued by the various seedsmen are now pretty well distributed, and many gardeners will be anxiously scanning their columns with a view to making up their orders. Bearing in mind the great numbers of easily grown annuals that are now to be had for very little money, as well as the great usefulness of these selfsame plants where cut flowers are required in quantity, it will be a wise plan to deal pretty largely in them. Beds and borders will be able, thereby, to boast of a greater share of floral wealth, apart from the increased quantity of subjects suitable for cutting from that will be obtained. It is always advisable, however, to devote a border in the vegetable garden to the cultivation of these plants, for, not unnaturally, the gardener does not like to curtail the beauty of his flower beds. Breaks of Sweet Sultan, double Scabious, Coreopses in variety, Godetias, Chinese Asters, etc., come in very useful, and will prove admirable reserves to the herbaceous border.

Aquilegias.—These charming perennials have been vastly improved of late, and the range of colours is now very extensive. The florist has found them fairly tractable material, for they cross and intercross with great freedom. Hence, if they are to bear seed that shall produce plants anything like the parents, special varieties must be isolated and protected from the visitations of insects. The quaint forms of the flowers with their long characteristic spurs are charming, and for table decoration nothing can be more effective. Not only are they light and elegant, but they last well in water. A packet of the mixed "hybrid" seed will furnish a great variety of colours. They will grow in any ordinary garden soil, although they really prefer a moist and sheltered position.

There are also several species that are well worthy of attention, in addition to the hybrids spoken of above. A. caerulea, a very pretty native of the Rocky Mountains, does well planted in a sheltered nook near the base of the rockery, where it can get a fair depth of soil. A. chrysantha, with its yellow flowers, as the name indicates, is equally as valuable, and is a suitable subject for the herbaceous border.

Dahlias.—During a spell of inclement weather, when outside work is impossible, it will be well to give the Dahlias a look over. Any decayed portions should be cut out with a sharp knife. Varieties from which it is desired to propagate should be separated from the rest, as it is time to make a start within the next week or two if anything like a good stock of desirable forms is to be obtained. The roots should be laid in shallow boxes and covered with a little light soil. A capital place for them is a vinery that was started about the middle of December. The syringe should be drawn lightly over the boxes twice a day to stimulate growth.—*A. S. G.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Trichopilia crispa marginata.—Since Lindley first named the type of the species, several names have been given to T. crispa and, apparently, different varities of it. There can be little doubt, however, that T. c. marginata is the best of the varieties in cultivation. It first appeared in the collection of Mr. C. B. Warner, of Stratford Green, who had bought three plants with the impression that they were simply T. crispa. All three turned out to be different when they came into bloom, and that under notice was the best, and was described and figured by the late Robert Warner in his *Select Orchids Pl., I* tab. 5 (1862). Since then however the plant has never become particularly common in cultivation and has not been surpassed by any better from. The short drooping peduncles bear from one to three flowers, the sepals and petals of which are of a light crimson-red, with a broad but irregular white margin. The lip is more jagged at the edges than in the type and dark crimson, narrowly edged with white. The white edges add much to the effectiveness of the flowers, and suggest the varietal name. A coloured illustration of it appears in the *Lindenia Pl.* 527.

Cattleya Trianaei Imperator.—The distinction of this telling variety consists chiefly in the colouration of the flowers but particularly that of the lip. The sepals and broad petals are well folded back and of a warm rosy hue. The lip, on the contrary, is of a deep purple-red, the rich hue extending well down into the tube, and becoming intensified to crimson on the basal part of the lamina. In these respects the variety stands out preeminently distinct amongst its compeers, many of which have already received special names, and been described in different publications. A first-class Diploma of Honour was accorded it at a meeting of the Orchidéenne when shown by Messrs. Lucien Linden & Co., of Moortebeek on the 10th of May last. A full page illustration of it is also given in the *Lindenia Pl.* 528

Cypripedium Mrs. G. Botterell. *Nov. var.*—This beautiful Cypripedium was raised from C. savageanum superbum as the seed parent, crossed with C. lathamianum. It will be seen at a glance by connoisseurs of Orchids in general, and Cypripediums in particular that both parents are themselves hybrids, so that the parentage is very complicated. The seed parent was a fine variety of C. savageanum which was raised from C. harrisianum (itself a hybrid) crossed with the pollen of C. spicerianum. Now C. harrisianum was raised from C. villosum crossed with C. barbatum. This gives the pedigree on the mother side; but the complication is greater when it is remembered that some authorities reckon the reverse crosses as synonymous. The pollen parent (C. lathamianum) was raised from C. spicerianum crossed with C. villosum. Thus three original species have taken part in the production of C. Mrs. G. Botterell; so that with a double cross in the second generation, it is difficult to say what relation it would bear to either of the originals. Laying aside pedigree and looking at the flower, I should say it is a glorified C. spicerianum of which it has the form and the slender, arching peduncle, but the bloom is larger and altogether different in colour. The upper sepal owes most to C. spicerianum, of which it has the claret midrib and broad pure white margin; all the central and basal portion is of a rich brownish purple of a shade but rarely seen, and which would appear as the effect of the purple of C. barbatum on the brown of C. villosum. The combination of colour, however, is quite unique of its kind. The petals are like those of C. spicerianum in form, but the rich reddish brown of the upper longitudinal half has been derived from C. villosum; the lower corresponding half is yellow, lightly overlaid with brown. The lip is almost entirely that of C. spicerianum. The staminode is pale reddish-brown. The whole flower has a polished surface but particularly the petals. The potentiality of the original parents as to influence on the progeny then stands in the following order:—C. spicerianum, C. villosum, and C. barbatum. Orchid growers may rest satisfied that no attempt was made to coin a name from these, nor from the names of the primary hybrids. The hybrid was raised by Mr. A. Wright, gardener to T. McMeekin, Esq., Falkland Park, South Norwood Hill, who is responsible for the name.—*J. Fraser.*

Cypripedium Insigne montanum Falkland Park var.—Names seem to lengthen, but montanum may be looked upon as indicating a group or race that is very different in general aspect from the old type of C. insigne which comes from lower elevations on the Himalayas. The dorsal sepal of C. insigne is broadly oblong with a dark green ground for the greater part of its length, while that of the montanum group is much broader, with the green more limited in extent, inclined to yellow, and the spotting on a much grander scale in most cases. The Falkland Park variety under notice has a nearly orbicular dorsal sepal about 2¼ in. across. It is of a light apple-green, heavily blotched with rich brown, and having a few purple blotches extending on to the broad white margin, towards the apex. The blotches measure 2-6 millimetres across, the larger ones at the base being nearly ¼ in. wide. The petals are 1 in. broad near the apex, and measure 5½ in. across when spread out. They are prominently spotted all over with rich brown on a greenish-yellow ground. The large lip is heavily overlaid in front with a shining brown hue; and, curiously enough, is brown more or less marbled internally.

Gleanings from the World of Science.

Chelidonium majus in Medicine.—Some three months ago a letter from a Russian doctor, M. Denisenks, appeared in *Vrach*, a St. Petersburgh medical review, and a note upon the subject was given in *Nature*. The subject of the doctor's letter was the treatment and cure of cancer by means of the juice of the Wart-wort or Greater Celandine. He earnestly entreated his colleagues to make experiments upon the plant, in order to confirm his own experience or otherwise. In the first place he tried the juice as an external agent, but was unsuccessful, after which he experimented with a preparation of it as an internal remedy. After prolonged use of it the cancer growths disappeared. Since then the same doctor has published two further letters of an interesting character dealing with seven cases of cancer under his treatment, four of external growth which could not be treated surgically, and three cases of it in the oesophagus and stomach. Photographs were given of the external growths, showing the cancer in different stages, and after the repeated administration of the drug internally, the growth entirely disappeared. The internal growths under treatment also became very much reduced in size. According to this medical testimony, the treatment and results seem reliable, and if so, it is the first scientific record of cancer growths having been removed or caused to disappear by means of medicines take internally. The coloured sap of Chelidonium contains two very poisonous alkaloids, and cases of poisoning by it are not uncommon, so that the drug should never be used without medical advice. Bad efforts might also follow the continued use of the drug even in limited quantities. The plant itself is of course closely allied to the Poppy, from which opium is prepared, being a member of the same family.

The Leaf-cutter Bee.—Entomologically this (to the Rose amateur cultivator) provoking bee is known as Megachile centuncularis. Mr. Fred Enock, in *Knowledge*, says that as soon as the leaf-cutter bee has made her burrow she flies off and selects a rose of the Tea type (in our experience hybrid perpetual Rose leaves are often used), from which she first cuts a circular piece somewhat larger than the diameter of the hole into the bottom of which she fits it, so that it assumes a concave form. Then from the same leaf she cuts an oblong, wedge-shaped piece, which she drags down the burrow, thin edge foremost. The operation is repeated with great exactness till the sides of the first egg-cell are made up of a dozen or more of these oblong pieces, the first of which is fitted into the oblong base, and the rest overlapping the edges of one another, till the desired size is attained. Then the bee visits flowers, collecting pollen and nectar with which to make a delicious "pudding" for her future progeny. One egg is deposited with each pudding, so that, when the larva hatches out it finds an abundance of food to hand sufficient for its wants till it reaches the winged state. About a dozen circular pieces of Rose leaves are then placed in the burrow to form the lid of the first cell, and the bottom of the second, in the same hole.

The Sparrow in Trouble.—Amongst the few really injurious birds native to this country the common house sparrow (Passer domesticus) reigns chief. Some of his depredations in the neighbourhood of Staines and Colnbrook were recently recorded in these pages. Now it seems that the feathered pest is active, and destructive on account of numbers, in the neighbourhood of Wycombe. Many a brick is thrown at his devoted head in various parts of the country, but in the West Riding of Yorkshire a reward of a halfpenny was formerly offered for his head, dead or alive. Again it is suggested that the sparrow clubs should be revived for the purpose of supplying the halfpenny for every sparrow killed. The necessity for this is given as the havoc effected amongst the grain crops of the farmer. Agriculture is said to be seriously retarded by sparrows, which fairly consume the produce of the fields, to the ruin of the farmers.

HINTS FOR AMATEURS.

Red and White Currants.—These are exceedingly popular fruits with all classes of society. In the kitchen they are in especial favour for the making of fruit tarts, preserves, and other delicacies which we look to the genius of the kitchen to supply. On the dessert table also, they are often to be seen, for there are many people that relish their somewhat pronounced acidity. We will deal with the two together, as the same kind of treatment will suit them both equally well. The Red Currant of our gardens is a modern descendant of Ribes rubrum, a plant which if it is not a *bona fide* native of Great Britain must have been introduced so far back that the exact date is absolutely unknown. The White Currant is a garden variety of the same species, and through the modifying influences of cultivation possesses rather less acidity than the red form. The same may be said of the pink or champagne Currants.

Soil and Situation.—Red and White Currants will grow in any garden soil of ordinary depth and fertility. A good rich loam, at least 2 ft. in depth, and inclined to be heavy than otherwise, is probably the very best medium, for Currants take a great deal out of the soil, and during a dry season, if the soil is too light, and the bushes are not watered the fruit will either shrivel or ripen off prematurely, when it will be sour and disagreeably acid. As to situation, plenty of light and exposure is necessary. On the whole the Currant is a most accommodating subject. A position that is very frequently assigned to Currants is in rows about 3 ft. from the edge of the walks in the kitchen garden. Where pyramidal Pears, or cup shaped Apples are dotted along in this position the Currants form suitable subjects for planting between them. The great disadvantage attaching to this system of planting is that during the period when the fruit is ripe it is a matter of some difficulty to give protection against birds. Planting in quarters is therefore recommended by many growers, when the protection of the fruit is greatly simplified. Then there is culture upon north or east walls to be considered. Space for one or two trees can usually be found, and the season of fruiting will be greatly prolonged thereby, as the fruit upon the wall trees will not ripen so soon, or go off so quickly as that borne by the bushes.

Planting may be conducted at any time between the fall of the old leaves in autumn, and the time when the buds swell and burst in spring. It is desirable, however, to plant as early in the autumn as possible, in order that the plants may get a hold of the new soil in good time. Any of our readers who contemplate planting should see to it at the earliest opportunity, for it must be remembered that, like the Gooseberry, the trees start into growth pretty early in the season. When planting in quarters, about 5 ft. should be allowed between the trees. When planting by the edges of walks not less than 4 ft. between the bushes should also be given, or there will not be space left to pass between them.

Bush Trees.—The common method of training is the cup-shaped form. The pruning needed by such bushes is very simple indeed, and no amateur need be afraid to tackle it. These cup-shaped trees consist of a number of main branches growing perpendicularly, and arranged in a circle at equal distances apart. All the lateral growths will now need to be spurred back to within half an inch of their bases. There is very little use in leaving them any longer than this, as an examination of trees that have been thus treated will quickly demonstrate. About an inch away from the point of their origin the young side shoots commence to get pithy. As this pith is delicate it dies on exposure to the weather, and the wood outside it usually follows. Where the spurs have been left rather long, therefore, they are generally tipped with a dead snag that is of no value to the tree at all, and is only unsightly. Therefore, it is the best plan to spur back fairly close at the outset.

As a rule about 3 ft. is a good average size for the main branches to grow to in a perpendicular direction, and once they have attained this height the terminal shoots or leaders may also be cut closely back each year—that is within two or three buds of the point at which they originated. Young trees should have the leaders shortened back to within 4 in., 5 in., or 6 in.—the latter only if they are very strong. This may go on until the branches of which they form the terminations have grown as tall as is desirable. In all cases, whether dealing with trees that have reached their full dimensions, or young ones that are still small, the leaders must be cut back to a bud pointing outwards, so that the shoot springing from it shall continue in the same direction as the remainder of the branch. The central axis or stem from which all the main upright branches proceed should be kept clear of any growths or suckers for the same reason as in the case of the Gooseberry.

Wall Trees.—A favourite system of training these is to take up three main branches, and treat them in precisely the same way as the main branches on the bush trees, *i.e.*, spurring back the laterals to within about half an inch of their bases, and shortening the leaders each year. Such trees are very sure and regular bearers, and besides prolonging the season when planted in suitable positions have this advantage, that the fruit they bear, being higher above the soil, is not so liable to get splashed with dirt as that upon the bushes.

Propagation.—The most effective method of propagation, and the one most generally adopted, is by cuttings, which may be inserted any time after the leaves have fallen up to about the end of February in an ordinary season. We may remark here, however, that a cutting put in in autumn is at a great advantage over one inserted in spring, the gain in time being very considerable—more, in fact, than the actual difference of time between the two periods. Cuttings should be about 1 ft. in length, and for 6 in. at least all the eyes should be picked out in the same way, and for the same reason, as was recommended when dealing with the Gooseberry. The instructions then given as to the position in which to put in the cuttings, and the method to adopt, may be applied with equal success to both Red Currant and Gooseberry, and further direction would, therefore, be superfluous.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Vine Border.—I purpose growing Vines, and should be grateful if you will give me, through the medium of the "Amateurs' Page," some instructions as to what soil to use, the depth of the border, etc.—*D. Kennan.*

The basis of the soil should be good loam, obtained from the top spit of an old pasture. The sods may be roughly cut up with the spade. To five cubic yards of this add one yard of old lime or mortar rubbish, from 1½ to 2 cwt. of ½ in. bones, and, if it can be obtained, a little charcoal. Mix the whole thoroughly together before using. If the loam is inclined to be light rather less of the lime rubbish will be needed. The width of the border should be about that of the width of the house. Thus for a house 12 ft. in width a border 12 ft. wide would be needed. In depth the border should be from 2 ft. to 3 ft. We do not recommend a very shallow border as the Vines are liable to suffer from lack of water. On the other hand a too deep border is apt to get soddened and sour. The amount of drainage will depend upon the character of the subsoil in your locality, whether gravelly or not. From 1 ft. to 1½ ft. of broken bricks will be required, however. On this a layer of the sods should be laid entire, and the prepared soil may then follow.

Seed Lists.—You will obtain what you require, *A. B.*, from any of the seedsmen whose names appear in our advertisement columns.

Forcing French Beans.—Will you tell me what heat I should require to force French Beans in pots? also what varieties would succeed best with me.—*Samuel Morgan.*

In order to insure speedy germination a temperature of not less than 60° Fahr. by night must be given. During the day the house should rise to 65°. Ne Plus Ultra or Osborne's Forcing are both capital varieties for forcing purposes.

Primula obconica.—Would you advise me to split up the old plants when they have done flowering? as I am told this is the best way to propagate this Primula.—*Alpha.*

You certainly may divide up the old plants as you suggest, but we prefer to raise plants from seed each year in the same way as we do the Chinese Primulas. Young plants bloom rather more freely than the older ones, and the flowers are distinctly finer. Sow in fine sandy soil at the same time as you do the Chinese Primulas, and place the seed pan under the same conditions.

Asphalte for Garden Walks.—There is a great deal of difference between this and the true asphalte, *A.* The latter is prepared from a bituminous limestone found at Val de Travers in the Canton of Neufchatel in Switzerland, and also at Pyrimont, near Seyssel, a small town in the department of Ain on the banks of the Rhone in France. The asphalte used for making garden walks is made from coal tar, made hot, and mixed with gravel or cinders.

Cardoons.—*Constancy* asks for some information as to the uses of Cardoons.

The stalks of the inner leaves are stewed and sent to the table thus. They are also used for soups and salads. The dried flowers possess the quality of coagulating milk, and are employed for this purpose in France. On the whole, therefore, it is a very useful plant, although its cultivation is usually in this country limited to the larger gardens.

Pruning Tree Roses.—You must wait until the beginning of March before you attempt to prune your Tea Roses, *L. L. A.* The winter is by no means over yet, and we do not know what surprises the rest of January and February may have in store for us.

Bouvardias.—After flowering well throughout December my Bouvardias have become very shabby of late. Some of their leaves have fallen, and the rest look rather shabby. What am I to do with them?—*W. Naylor.*

Give the plants very little water, do not excite them in any way, and allow them to go gradually to rest. When the wood has become thoroughly ripened prune them hard back. When they are started into growth they will then make compact little plants. They should be repotted when they have commenced to break into growth.

Early Grapes.—If you intend to force early, *M., Swansea*, we should advise you when building your vinery to have an inside border. The Vines are then much more easily handled during cold weather.

Propagating Dahlias.—*P.* writes:—"I have some roots of Dahlias of special sorts of which I wish to get cuttings, when shall I have to make a start with them."

The old roots may be put into heat as soon as convenient. Lay them in shallow boxes and cover them with any light soil that may be handy. As soon as the cuttings are about 4 in. in length they may be taken off and inserted singly in small pots. Use sandy soil.

Rhubarb.—I have an acre of ground which I intend planting with Rhubarb for forcing for market. What kind is best? The soil is rather moist and heavy, leaning to clay. Would this suit it? Which would be better, to buy the roots, or sow the seed in February or May?—*Allotment.*

The soil mentioned will suit Rhubarb very well if trenched and well worked. We should certainly advise you to purchase roots of a good variety rather than to go to the trouble of raising your own plants from seed. The latter plan would mean the loss of a good deal of time as compared with the former. The spring is a better time for planting than autumn, consequently you are in good time to make a start this year. Victoria is a capital all-round variety, and would be the best for your purpose.

Rhubarb for London.—How do you account for the fact that a large quantity of Rhubarb is forced for the London and other large markets in the neighbourhood of Leeds and Bradford? Is it the soil or the climate that has to do with it?—*Allotment.*

No doubt the soil is suitable enough for Rhubarb in the localities you mention. Probably the reason why a situation close to big towns like Leeds and

Bradford is chosen for its culture in preference to outlying districts is the fact that the local trade is brisker, and that the cost of cartage between the producer and consumer is not so great. Doubtless the surplus finds its way to London, but you must not lose sight of the fact that hundreds of acres in the vicinity of the metropolis are devoted to Rhubarb, and it is from these areas that a great deal of the regular supply of this favourite esculent is obtained. Any supplies that are sent from Leeds and Bradford would be only casual and not regular.

CYPRIPEDIUM NANDI.

This distinct and pretty secondary hybrid is the result of crossing C. callosum with the pollen of C. tautzianum, the latter being derived from C. barbatum Crossii with C. niveum. It is remarkable how clearly the three species used in the production of C. Nandi can be distinguished. The broad dorsal sepal partakes in general appearance of that of C. callosum, but is more recurved, which shows the influence of C. barbatum; the basal half is creamy white, heavily veined with pale green; towards the centre it is veined and suffused with purple, the upper portion being pure white. The petals are white, veined with green at the base, the outer edges, and towards the apex, being heavily suffused with bright purple, the whole being covered with dark brown spots. The lip is rich purple, veined with a darker shade, and partakes, to a great extent of the characters of C. niveum, as also does the disc of the column, while the suffusion of purple in the petals and lip show the influence of C. barbatum.

There is a remarkable feature in the hybrids in which C. barbatum has been used as one of the parents, that in the offspring there is usually the purple suffusion as seen in C. tessellatum porphyreum, C. selligerum, C. Charles Rickman, etc. I do not know of any other species where there is such a consistent characteristic.

C. Nandi was first exhibited at the Drill Hall, September 11th, 1894, when it received an Award of Merit, coming from R. I. Measures, Esq., Cambridge Lodge, Camberwell. It requires the warm house treatment. Care must be taken to avoid drip, as its having a good deal of the constitution of C. niveum it is liable to damp, if moisture is applied in any way overhead.—*C.J.H.*

PRUNING GOOSEBERRIES.

In this, as in many other subjects relating to gardening, there are several ways of achieving success, and it is, indeed, impossible to dogmatise. When penning the article which "Brightspade" criticises I did not suppose that the system of pruning Gooseberry bushes I then advocated was the only one practised. "Brightspade" believes in allowing all the shoots to remain at full length. I do not doubt that they bear well enough, but here the disadvantage comes in. Gooseberry bushes are not very tall, and long shoots are sure to have their ends close to the ground, when the fruit becomes splashed with dirt and practically useless. I advised shortening the shoots *by* one third their length, which is little more than cutting the straggling tips off. "Brightspade" avers that a shoot shortened *to* half or a third its length produces a large number of shoots the following season. But how does that statement refer to the original, against which I presume it is levelled?—*Rex.*

As a grower of Gooseberries I have read with interest the reply of "Brightspade" to "Rex." Will you allow me to say both are right and both wrong?—or in other words the truth lies between them.

As a *general rule* Gooseberry bushes should be thinned, not topped or shortened, but, inasmuch as the various kinds differ greatly in their habit of growth it is difficult, if not impossible, to lay down any hard and fast rule. Then again soil and aspect have a great deal to do with the growth; and so, whilst in our case the trouble is to produce *enough wood*, in another case the difficulty arises from too rank a growth. In my own plantation, the new shoots on well established bushes often measure from 2 ft. to 3 ft. in length, the consequence is they touch the ground; the tips strike root on the "Banyan" principle, unless shortened, and where they do not touch in winter, the weight of fruit in summer lays them on the ground, when the berries are simply coated with mud after rain. My experience teaches me that to cut back *too hard* in such cases is simply to produce a rank growth of lateral branches and very little fruit, but that a judicious pruning will keep them just clear of the ground and weeds, without destroying their fruitfulness. I quite agree with the writer that the judicious thinning out of the bushes is of the highest importance, especially in view of the persistent attacks of insect blight with which growers have had to contend of late years.

I write not so much to criticise, as to offer my small contribution of practical hints, gathered from a somewhat extensive experience of 20 years.—*Benjamin G. Berry.*

INTENSE CULTURE.

(*Concluded from p.* 282).

All that has been said about deep cultivation is applicable with equal force to hardy fruit culture, as anyone may prove by planting any kind of fruit bearing trees on land only dug one spit deep, and also at the same time, trees on land dug two or more spits deep, the difference may not be so very much marked for the first year, but afterwards it will be seen at a glance where deep cultivation has taken place, the difference in the vigour of the trees, and the size and quality of the fruit being very noticeable. Market men will, perhaps, in some instances inform you that the expense of so deeply working the land is too great for them, and only those with plenty of capital could possibly undertake it. This is correct to some extent, but on the other hand arises the question if it would not pay such men to cultivate such land on a smaller scale, so that what they have might be done thoroughly, or in other words, intensely. If a man can get as much produce from one acre by first class culture, as he formerly did from two acres, he not only pays himself better but also sets a good example to his neighbours, and confers a benefit on mankind.

One of the most notable instances of successful intense fruit culture that I have ever seen I witnessed during the past summer at Crockenhill, near Swanley, at which place Mr. Jonn Woods has over 600 acres of fruit trees, 400 acres of Hops and vegetables, and fifteen acres of glass. This gentleman has worked up to his present position from a poor boy, starting to work for 3d. a day. Eventually he rented a bit of land, and by energy and untiring industry he has now over a thousand acres. In a season like the past, his crops of hardy fruit were enormous, and of very large size and good quality. Under glass the crops of Tomatos, Grapes, etc., were equally good. If you were to ask Mr. Woods the secret of his success, he would tell you that it was "deep cultivation and plenty of manure," combined, of course, with his own perseverance.

I might mention many things of interest that I saw at Mr. Wood's large place, but my principle reason for referring to it is to show what are the possibilities of culture of the land when done thoroughly; and there is no reason why some of the young men present here this evening should not be equally successful cultivators. Failures, of course, always occur, and I question if any man of note in our profession has not had his share; but instead of depressing them, the failures have acted as a spur, causing them to tackle the matter with a strong determination to surmount all obstacles and win in the end.

Cypripedium Nandi.

However, to return to the point, it is perhaps in Grape growing that we may see the greatest advance during the past twenty-five years, and no one will dispute that the culture in all its details must be of a very high order indeed, now, to secure success, not only on the exhibition table, but also for market. For the former purpose, very few employers would now permit their gardeners to have only three or four bunches on a vine to obtain extra fine bunches and berries. There must be at least a good average crop of fine produce; and if a gardener can get a full crop of Grapes of high quality every year, that will make him a successful competitor, there is infinitely more credit due to him for his skill, than to a man who crops very lightly on purpose to win prizes. In fact, I do not think it is any real test of ability to obtain prizes under such conditions; but ability certainly is shown forcibly when, as stated, a man receives high honour with Grapes grown on heavily cropped vines.

The subject of Grape growing is so wide that I could not enter into it now; but there are a few points connected with it that I may briefly allude to,

first of which is the formation of borders. I think too much importance has been attached to forming elaborate borders; the results seldom equal anticipations, whereas a border formed of sound fibrous loam, with a good sprinkling of plaster or mortar refuse will, according to my experience, give much better and more lasting results. What we require is a sound, solid, but porous border, that may be termed a store-house for the roots to draw all the food they require from as needed. This food can be supplied from the surface by the cultivator in such a manner as his judgment may deem advisable. Another advantage arising from this surface feeding is that the roots always come to the top for the good fare provided for them, thereby getting all the benefit of solar influences, as well as immediate increased vigour when fertilisers are applied.

What those fertilisers should be must depend to a great extent on the soil, such things as Vines, Peaches, and in fact all stone fruits must have lime and potash. Lime may be applied with advantage in the form of bone-meal, or superphosphate, and potash in the form of muriate of potash or kainit. Another very powerful fertiliser that I have used in connection with the above is muriate of ammonia (sal-ammoniac). This must always be used with care, as it would soon do serious injury if applied carelessly; however, when employed judiciously, it is a great aid to any fruit-bearing tree, either under glass or outside, that may be carrying a heavy crop of which there appears to be some doubt of finishing properly.

For a number of years I have practised with chemical manures on Vines and other fruits, and I can safely assert that they are of immense service. If used with discretion not only do they add to the weight of crops, but likewise to the size of the fruit, colour, and flavour. There are also many artificial manures on the market all more or less of assistance to the gardener; but the difficulty is to know which is the most adapted to your soil, and consequently the most economical. To discover which, some chemical knowledge is necessary, and there is no question that it would pay all cultivators of the soil to acquire some knowledge of chemistry; it would prove of great value, especially to young men, who have their way to work in the world.

QUEENSLAND.

In these days, when so many men of all classes, tired of the strife and strain of commercial life are turning naturally for relief to the land and its quieter pursuits, we hear, in this connection, too much of England's expensive and overcrowded acres and too little of the millions of cheap, sparsely-settled lands of our colonies. This is said, not in dispraise of the Mother Country, but merely in justice to her colonial estates, which, in this regard, do not get notice enough in our everyday news-sheets. These remarks were directly suggested by the perusal of one of the many excellent pamphlets that the Queensland Government is plentifully issuing as to the fruitfulness, cheapness, and vast area of her land that is to lease or sell on easy terms. Queensland has reached that settled stage of her history when her position as a steady community and an important member of the Empire is assured; she has fixed industries that give stability, and has proved that her resources—pastoral, agricultural, mining, etc.—are to all intents and purposes illimitable. There is thus a steady and growing population, and assured markets for those who cultivate the soil of Queensland.

In the matter of fruit-growing, for instance, the colony offers particularly strong inducements to the small capitalist-cultivator. The soil produces readily, on the coast, every tropical fruit, and on the high table-lands every product that is grown in the temperate zones. For these, as has been said, there are good and growing local markets; while facilities for export to the United Kingdom are ever on the increase. Amongst the fruits that may be profitably raised, the Banana takes a foremost place. This is a fruit which crops plentifully and soon, grows nowhere in the world better than in northern Queensland, and the land needs little preparation for it. Locally, it is looked upon as a staple food as well as a luxury, being highly nutritious; children thrive on it amazingly. Again, the Banana carries excellently, and people here at home are rapidly waking up to its merits as an agreeable food.

A company has recently been started to carry Bananas direct to England from the West Indies, the fruit having hitherto been imported *via* America. This is a sure sign that the Banana has a big future in England; considering the fact that virgin soil specially suited for Banana growing can be had on the easiest of terms in this colony, and the facilities that exist for shipment from Queensland, there is no reason why her settlers should not have a big share in the new trade. The prospects of Queensland as a fruit-growing country are, in fact, exceedingly bright, and good openings for fruit-growers with energy and a little capital are to be found there.

FLOWERS AND PLANTS IN CEYLON.

Writing to a friend in the old country, Mr. H. F. Macmillan, curator of the Botanical Garden, Peradeniya, Ceylon, and an old Kewite, relates some facts concerning the vegetation in that tropical island, as follows:—

"Now is the time with you that a glimpse of the lovely verdure of vegetation is to be obtained only in glasshouses; but here it is just as rich as at any other time of the year. Now, in fact, (15th December), is the flowering season of a great number of things. The Victoria regia, which has never before been managed at Peradeniya, nor in Ceylon, has been flowering freely for more than a month in our ornamental lake here. Next year I hope to be able to raise a number of this interesting aquatic, the flowering of which has well-nigh caused a sensation. Curiously enough, it always flowers here at the same time of day as it did at Kew—about 5.30 or 5.45 p.m. Here, also, its majestic appearance is well supported by the splendid vegetation in its immediate vicinity, including clumps of the Giant Bamboo (Dendrocalamus giganteus), 80 ft. to 100 ft. high, fine specimens of Caryota urens, and other graceful Palms. It is not, however, without care and attention I have managed the Victoria so well, the heat here being insufficient for it.

"There are but few epiphytical Orchids to be seen in flower now, on account of recent heavy and continuous rains, which, however, some ground Orchids seem to revel in, Eulophia virens in particular. If the Victoria regia deserves the name, 'Queen of aquatic plants,' well may Amherstia nobilis claim to be termed Queen (or King) of flowering trees. It is perpetually in flower, but at its best in the dry and hot months of March and April. Seldom, however, does it set fruit here, it being a native of the Malayas. Lagerstroemia flos-reginae, a deciduous tree of our jungles, is another most gorgeous bloomer, the colour of the flowers resembling those of the English Lilac.

"Spathodea campanulata is another very fine flowering Bignoniaceous tree, a native of West Tropical Africa. A great disadvantage, however, with this tree, as with many others of showy blossom, is that it grows to such a height and bears flowers only upon the uppermost branches, making it impossible for one to get any proper idea of their true form; and the natives, though particularly nimble in the art of climbing, always try and enforce upon you how dangerous a task it is, undoubtedly with a view of maintaining the monopoly of it themselves and of extracting a centosum (tip) from your pocket. I, for one, do not wish to compete with them, not on account of an over-abundance of 'adipose tissue,' as you used to politely call it, but partly for the reason that my 'Buffalo Bill hat' or 'topie' has too wide an area to allow my getting close enough to the trunk of a tree. This is necessarily so, as the sun's rays seem peculiarly strong in these latitudes.

"Another objection that a European usually finds to climbing trees here is that he never knows when a cobra, a polonga, or any other blood-curdling creeper may come half-way to meet him. An enthusiastic hybridist, however, who would not mind these little objections, would find here a veritable golden field for operation. I have not yet started, as I find so many things to occupy my time—at least, I have not made a proper start, but I will one of these days.

"Talking of hybridisation reminds me of an article which appeared not long ago in a Ceylon paper. It was headed, 'The Land of Flowers,' and purported to have been taken from The Gardening World. In it, Ceylon was said to deserve this title somewhat more than any other land, which is, perhaps, correct; but the short description given, though not, perhaps, exaggerated was unnecessarily vivid—at least, so it would appear to one living in the country as I am.

"A great portion of Ceylon has undoubtedly a very luxuriant vegetation; but you would also be surprised to find long stretches of country almost barren, or rather having no vegetation worth speaking of. The writer of the article in question, I fancy, must have been going on hearsay rather than observation—a very common occurrence with travellers indeed. For example, a lady traveller from Australia the other day remarked to me that she had not by any means been disappointed as to the vegetation of Ceylon, of which she read and heard so much, but she did not really expect to see such lovely fields of 'wheat and barley'—meaning rice fields.

"I do not think any one who has a knowledge of Ceylon Orchids will say that they are, as a whole, pre-eminent with those of all other countries. There is only one Nepenthes in Ceylon, and that only at the low elevations, not so high up as Peradeniya. The Moon-flower is not a Convolvulus but an Ipomoea, belonging, of course, to the same family. The majority of Europeans here will not agree with your correspondent, whoever he may be, that life is so very easy to maintain in Ceylon. Enervation and enfeeblement do not usually steer clear of us for many generations, nor for many years, especially if one is not stationed up-country, where the Bananas, Mangoes, Cocoanuts, etc., instead of 'offering themselves in abundance,' cannot, I daresay, be bought for much less than they can in London. Ceylon, or rather the greater part of it, is, perhaps, hard to beat for beauty of scenery and vegetation, but happily we do not live in such a state of things that one has simply to 'pluck, eat and live.' Pity our labour force if ever we come to this.

"As to these gardens, I think we can well bear comparison with any other botanic garden of the East. They are over 150 acres in extent, are beautifully undulated, and the average elevation above sea level is 1,540 ft. The number of species (not all strictly tropical) inside the gardens is very large, and is yearly increasing, to do so being my duties. Our herbarium is acknowledged to be the best in the East, and our library would surprise you. We have also a Museum of Economic Botany (on the same principle as at Kew), a Laboratory, a permanent botanical artist, label writers, plant and seed collectors, etc.

"You will have seen from the papers that poor Dr. Trimen, my chief, died. I was very sorry for him; he was a perfect gentleman. He worked at his book bit by bit in his bed, until almost the hour he breathed his last. He never would to the last admit that he was more than 'somewhat of an invalid.'"

NATURAL REPRODUCTION OF CONIFEROUS TREES.

Unless in the case of our native Conifers—the Scotch Pine, the Yew, and the Juniper—self-sown specimens have rarely been detected. There are, however, several exceptions to this rule that have at various time come under my own notice. At Woburn Abbey both the Weymouth and Bhotan Pines (Pinus Strobus and P. excelsa) have reproduced their kind freely, particularly the former, which in one of the Pine woods has grown so plentifully from seed that advantage has been taken of these young plants to utilise them as forest trees.

At Holwood Park, in Kent, the property of the Earl of Derby, some of the most promising young specimens of Lebanon Cedar are such as were lifted from beneath one of the old trees, said to have been planted by the great statesman, William Pitt, when he owned the property. But at many other places, as well as Holwood, the Lebanon Cedar has reproduced itself from naturally planted seed.

I have only noticed one instance of any of the Abies family, growing naturally from seed, and that was in the case of A. nordmanniana at Penrhyn Castle, in Wales. The tree had produced an unusual quantity of cones, containing good fertile seeds, and many of these germinated freely on the ground where shed, and were carefully lifted and taken to the home nursery where they grew into fine specimens. In a gravelly woodland where old Cluster Pines (P. Pinaster) were the main crop, I have seen several self-sown trees spring up, but these, curiously enough, were always lank and weak of growth.

In Ireland, near the shores of Lough Neagh young specimens of the Lawson Cypress (Cupressus lawsoniana) may be seen growing on the sloping banks of the ditches that were opened for the drainage of the bog-lands; these of course, were the produce of trees that had been planted in an adjoining wood. The common Silver Fir in certain places reproduces its kind, so does the Larch, while plentifully enough, seedling Scotch Firs spring up wherever the conditions of soil are at all favourable. Both the Yew and Juniper grow freely from self-sown seeds, but here again the conditions of soil play an important part. Around an old specimen of the upright or Irish Yew I have seen numbers of seedling plants—not all true, for a large percentage revert to the species. Amongst the Spruces, Picea excelsa, P. nigra, and P. orientalis have reproduced their kind in this country, the latter two only occasionally. Thuya occidentalis is rarely seen growing in a truly naturalised condition, but that it does sometimes so occur I have had ocular demonstration. The above are the only instances of self-sown coniferous trees in this country that have come under my own notice.—*A. D. Webster.*

HARDY FRUIT AT FOREST HILL.

Messrs. John Laing & Sons have for long been celebrated as growers of hardy fruit, and most of the central, as well as a not inconsiderable number of our local, shows throughout the country have testified to the high quality of the fruit grown by them in their nurseries at Forest Hill.

In addition to the problem of how to grow good fruit, the question as to how to keep it for as long as possible, without appreciable deterioration has to be dealt with. In far too many gardens insufficient attention is paid to this, with the result that after Christmas there are very few Apples worth the eating. It is not only necessary, therefore, to cultivate a few late varieties, but also to endeavour to keep the mid-season ones good. To do this does not necessitate the erection of very expensive fruit-rooms, and we were afforded an object lesson of this during a visit to Messrs. Laing's establishment at the commencement of the present month. The fruit-room there is of the simplest construction, and yet of its efficiency there can be no doubt, judging from the grand samples of fruit which its shelves accommodated. The walls and roof are double, and composed of wood throughout. The space between the outer and inner sides is packed with sawdust, which apparently defies the frost, for the house is not heated artificially. Here the Apples get the low, equable temperature that they must have if they are to retain their flavour and refrain from shrivelling.

Pears, of course, we do not expect to see in quantity at this season of the year. Some gigantic fruits of Uvedale's St. Germain, however, claimed our attention and admiration at one and the same time, and well sustained the credit this variety has of being the largest Pear in cultivation. As a stewing Pear Uvedale's is excellent. The well-known Catillac belongs to the same category, and its roundish form is distinct enough. Winter Nelis, and Josephine de Malines are two dessert varieties of first-class merit coming into season in January.

Apples formed the bulk of the display, and we were agreeably surprised to see how fresh the fruit appeared to be. Of the very late varieties Norfolk Beefing was much in evidence. The dull bronze of the skin, streaked with deep carmine, is distinctly attractive, and the flesh is exceedingly firm, although rather acid. Tarranaki Russet was a new one to us that should be very popular as a late dessert Apple when it is better known. The fruits are large, conical in shape, and in colour a rich russet-brown. Cox's Orange Pippin, and King of the Pippins are inevitably found nowadays in any representative collection in the southern counties, although they are scarcely so popular further north. Blenheim Orange is a standard variety that has possibly more parts than any other Apple. The tree grows well, and bears heavily, whilst the fruit is either fit for dessert or for use in the kitchen. As a dessert fruit it can scarcely be claimed that it is equal to Cox's Orange Pippin but it is still good. Atlanta is similar in shape to Court Pendu Plat, but it is not so rich in colour, and lacks the peculiar depressed eye of the latter variety. Worcester Pearmain is certainly the prettiest early dessert apple we have, and we were surprised to see some of it left yet, for its season is long past.

Culinary varieties were in strong force. A dish of Emperor Alexander that greeted our gaze would, we fancy, be hard to beat at this advanced season. Newtown Wonder was conspicuous by reason of its high colouring. Peasgood's Nonsuch, and Bismarck, are too well-known to need further description, or other praise than has already been bestowed upon them. Mère de Ménage is a most distinct and valuable variety, and despite its irregular shape it has a very gay appearance when well coloured. Hoary Morning is remarkable for its even shape and thick bloom. The bright red streaks give it a very handsome look. This was in excellent condition, and although the fruit was not large it was in excellent preservation. Queen Caroline, with its flattened fruits and pale yellow hue, unspotted and untinged by even a suspicion of red, keeps remarkably well. The same may also be said of Golden Noble, for the two sorts bear a resemblance to each other. Yorkshire Greening, a very late sort, is a grand cooking Apple, and its keeping qualities add considerably to its value. The old Catshead is now not often seen, and although it can scarcely be called a pretty Apple, it possesses good cooking qualities. It is impossible to mistake its peculiar oblong and angular shape. Wellington, Dutch Mignonne, Waltham Abbey seedling, Flower of Kent, and Kentish Fillbasket were all in excellent preservation with the Messrs. Laing, and demonstrated most forcibly that they not only know how to grow good fruit, but also how to keep it.

WINTER FLOWERING PLANTS AT ASCOTT.

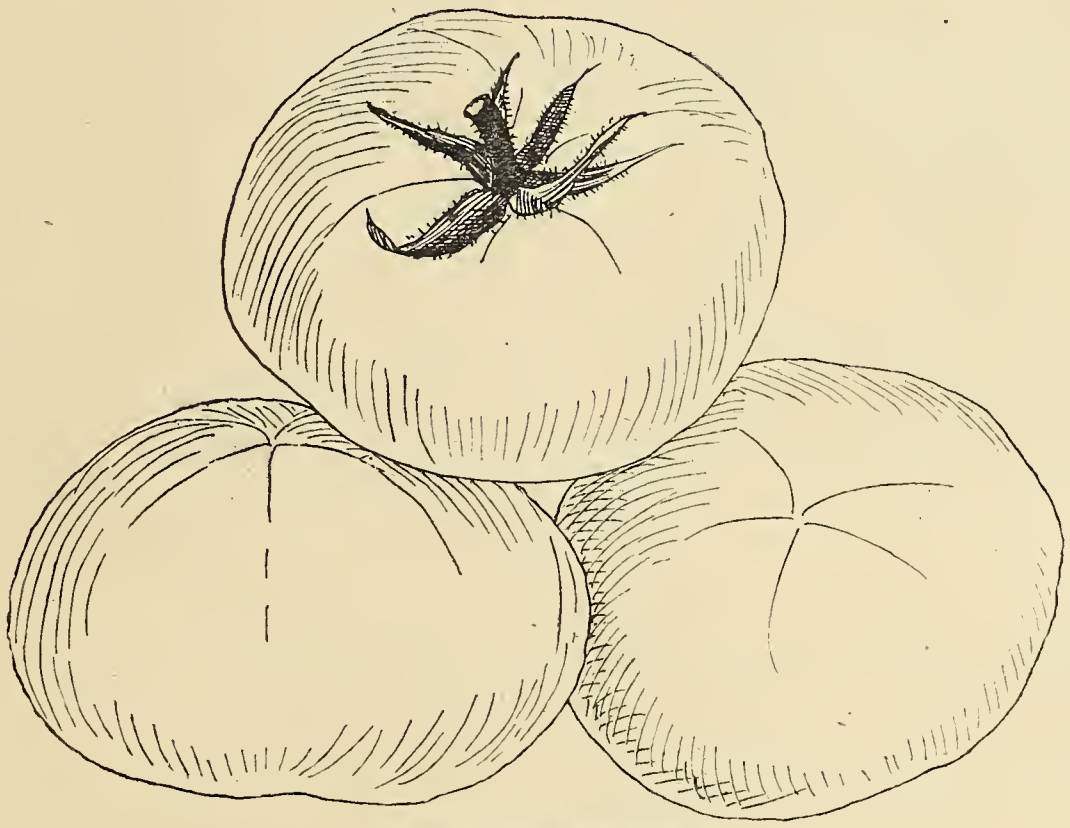
It was a dull, foggy winter's morning just before Christmas when I took carriage from Leighton to Ascott, the beautiful seat of Leopold de Rothschild, Esq. Upon arriving there, the sun was shining brightly, and a glorious sight I beheld when looking around the houses of this well-kept, charming establishment in company with Mr. John Jennings. Words of mine cannot accurately describe the beauty of the Carnations, zonal Pelargoniums, Begonias, Cyclamen, Chrysanthemums, &c.

Carnations are grown here in very large quantities, and well grown too. What can please a lady more than giving her throughout the winter grand flowers of various Carnations? Here they are grown chiefly in 6-in. pots. In one of the houses the centre stage is occupied with between two and three hundred plants averaging six to eight flowers each, of Mrs. Leopold de Rothschild. The side stages carry about 400 grand plants of Miss Joliffe, with many buds and flowers. The flowers of the former are large, of a soft rose-pink, toned with orange, and suffused with white, and very fragrant. Those of the latter are of a charming pink and very free.

I noticed amongst the tree Carnations the following, which are flowering profusely, are distinct and well worthy the attention of those in search of good varieties:—Andalusia, good yellow; Duchess of Devonshire, white, suffused with rose, a charming thing; Edna Craig, pink; Henry Gibbons, bright claret-crimson, a grand winter bloomer; Lucifer, bright scarlet; Laura Pallet, crimson and yellow; Miss Godfrey, white, very fragrant; Phoebus, bright scarlet; President Carnot, deep claret; Primrose Day, one of the finest deep yellows in commerce; Sir R. Wilson, pure white; Winter Cheer, brilliant scarlet shaded with crimson. These are a good lot, as seen here.

A house devoted to Cyclamen is a glorious sight, as the plants are well grown and profusely flowered. Here they are quite at home, many carrying dozens of their useful flowers of most distinct colours—pure white, deep crimson, and rose. All the Giant strain of Sutton's well-known varieties cannot be excelled. The foliage is strong, and the flowers are large and thrown well above the foliage.

Winter-flowering Begonias have also special attention and they are worthy of it too. A house devoted to them is a picture, and contains large quantities of well-grown plants of Gloire de Sceaux, of Continental origin, with handsome foliage and attractive flowers. The foliage is of a bronzy metallic lustre and crimson beneath; the freely produced flowers are bright rosy-pink. Plants about 2 ft. high are grand. The beautiful bright rose-pink Gloire de Lorraine is also flowering in great profusion and these two are well worth growing in the most



Tomato Young's Eclipse.

TOMATO YOUNG'S ECLIPSE.

The accompanying illustration gives an outline of this new Tomato which took a leading place at the trials carried out at Chiswick last year, under the auspices of the Royal Horticultural Society. Seventy-four sorts were subjected to trial and comparison, and the severity of the test may be judged when it is stated that only three of them were honoured with Awards of Merit. These were Young's Eclipse, Chiswick Dessert, and Nield's Seedling. The first-named was raised by Messrs. Young and Dobinson, Holmesdale Nurseries, Stevenage, Herts. It was raised from The Conference to which the fruit bears a considerable resemblance in size, shape and colour, but differs in its much more fruitful character. The stem is sturdy and short-jointed, so that the bunches, bearing an average of six fruits each, when grown in pots under glass, are produced close together. The fruits are slightly flattened, smooth, bright scarlet, of a useful size for table use, and attractive. The accompanying sketch was prepared from fruits, of which a boxful was sent us about the third week of November last. The fruits were gathered from plants which had been fruiting all the summer.

limited collections. They are easily done and flower all the winter.

A house of zonal Pelargoniums is also very attractive; all the best varieties suitable for winter flowering are well done and grown in great quantities. Other winter flowers, such as Chrysanthemums, Poinsettias, &c., are all equally well done. The place is admirably kept, showing strong evidence of practical skill in the various departments, both inside and out, the credit of which is due to Mr. John Jennings, who has had the responsible charge here some years.—*Urbanus.*

CHRYSANTHEMUM CULTURE FOR EXHIBITION.

(*Concluded from p.* 284.)

STOPPING AND PINCHING.

AT this point we arrive at a time of the utmost importance in growing Chrysanthemums for exhibition, and I would advise my readers who are in any way interested to follow and note very closely what is to follow, as nothing can make up for a mistake in taking or securing the buds at the proper time.

To commence with, I think the best plan to clear the way is to inform my readers for what reason plants are stopped or pinched. This operation, it is perhaps needless to say, is performed by taking the lead out of the plants, an inch in length being sufficient for most varieties. As I said above, unless the bud of a Chrysanthemum shows at a proper time, perfection cannot be expected. For instance, if some plants were not pinched they would show bud too early. The result would be, either a great bud that would never open at all, or a bloom greatly deficient in colour. Madame Carnot affords a good instance of the former state, and Etoile de Lyons, Viviand Morel, and Good Gracious, of the latter. By the bye, one grower, with what pretensions I don't know, was dissatisfied with the way in which the colours of varieties in various catalogues of large growers were described. He said that while Good Gracious was described as a delicate pink, it was in reality a light cream, which was quite true in his case, but it only served to show how he had grown his plant. Good Gracious is at its best when taken from a second crown or terminal bud, resulting quite as stated in the catalogue, whereas from an early bud the colour might be put up with except for the very bad opening properties of the bloom, if the bud be taken too early.

However I am going rather astray! Let it be understood that pinching is in a sense not an expedient for gaining time but for losing it, and to check the plant so that it will give a bud at a seasonable date.

PLANTS THAT ARE NOT STOPPED.—These are allowed to grow on without any intermission, and are always a trifle taller than those that are stopped. These plants will show a bud sometimes very early, according to the variety. This is accounted for by the fact that they have never been checked. First, crowns, in many instances, are done away with on this system; in fact, it is safe to say that the best blooms result from second crowns, and terminal buds, with the exception of a few varieties.

Another fact that must not be overlooked, is, that a grower that stops his plants does, in the true sense, throw his first crown five or six weeks later, so that the first bud that shows after the plants are stopped is really the right bud to take in many instances. There is not much to say for either way of growing, but for beginners I would prefer the system of stopping, and I would choose the first week in April for effecting that purpose. A few varieties may be stopped still later than that. The buds must then be taken as they appear. One strong reason for this opinion is that if beginners grow plants on the natural system, that is, no stopping at all, they are apt, in their great enthusiasm, to secure the first bud that comes. Experience has shown me that it is a great mistake, and I would strongly caution any amateur against committing it.

HOW TO SECURE THE BUD AND KEEP IT.—From August to September is the proper period to secure the buds. A true sign that they are about appearing is that near the top of the shoot small breaks will start to appear, the bud afterwards following, enclosed in three small leaves. This operation requires a close, observant eye, and should never be attempted by anyone till they have seen it once done. They should always be kept secure by firm tying and good stout stakes. I know of nothing more depressing to the 'Mum grower than a continual run of breaks and losses of buds through wind.

In conclusion, I wish my readers a successful and prosperous New Year, with the hope that we shall meet at some future time.—*J. G. Pettinger, Strawberry Dale Nurseries, Harrogate.*

NOTICES OF BOOKS.

THE ORCHID HYBRIDS: Enumeration and Classification of all Hybrids of Orchids published up to October 15th, 1895. By Geo. Hansen, till recently foreman, Sierra Foothill Agricultural Experiment Station (Department of Agriculture, University of California, Amador County, California) now Landscape Architect, Oakland, San Francisco. London: Dulau & Co., Soho Square. Price 2.50 dollars or 10s.

WHEN Mr. Dominy commenced the hybridisation of Orchids at Exeter, or even while continuing his work with Messrs. James Veitch & Sons, on their removal from Exeter to Chelsea, he, doubtless, had not the faintest idea of the vast extension to which the art would reach towards the end of the nineteenth century. Probably Mr. Seden, who continues the work for Messrs. Veitch, cannot yet conceive a limit to this vast field of labour. A glance through Mr. Hansen's book will impress the reader with the number of hybrids now in existence. Even here, however, the number of hybrids has been greatly compressed or condensed by the rigorous classification adopted by the author, and which many Orchid growers will not feel inclined to follow.

To give an instance of what we mean, we note that Cypripedium harrisianum was first raised from C. villosum as the seed parent, crossed with the pollen of C. barbatum. The same cross has been made by a considerable number of raisers who have given different names to the resulting progeny. The reverse cross has also been made, C. barbatum being the seed parent. All of these latter hybrids have been classed by Mr. Hansen as synonyms of C. harrisianum. Where C. barbatum was crossed with the pollen of C. villosum Boxalii, and C. villosum crossed with C. barbatum Crossii, the resulting progeny are admitted to the rank of varieties, namely, C. harrisianum apiculatum and C. h. roseum, respectively. Where C. barbatum was crossed with the pollen of C. villosum aureum, the resulting offspring is merely regarded as synonymous with the original C. harrisianum. Of course, this is merely an arbitrary classification on the part of the author, and may be regarded as helpful to the science of the subject, in serving to simplify the subject; but after all, the question arises how many writers on the subject will, or can abide by this method. We have even greater misgiving in the case of raisers and growers. We have no desire to moralise on the subject, nor offer it as criticism, but merely to indicate in a feeble way how complicated the whole history of Orchid hybrids has already become. The author himself entirely breaks down in the case of Calanthes, because unable to unravel the tangled skein; and we are not at all surprised that this should be his conclusion on the matter.

In a chapter dealing with the genera and species employed in the work of hybridisation, the author relates several cases of horticultural oddities in the line of hybridising, such as the crossing of Zygopetalum Mackayi with Epidendrum ciliare; Laelia purpurata and Sobralia macrantha with Cattleya Mossiae; but he knows nothing of what became of the crosses. We could mention other absurd crosses which have come under our notice and relate the castles in the air that have been built upon them. Similar work still proceeds in certain quarters, not only amongst Orchids but amongst other plants, but most of these doings may be located amongst the vagaries of the art and left there.

Mr. Hansen, in dealing with bigeneric hybrids, natural or artifical, does not always follow the method generally pursued in compounding a name for the progeny from its parents. For instance those raised between Cattleya and Laelia, whether the former or the latter be the seed parent, are all classed under Catlaelia; Laeliocattleya is not recognised. He commences by giving a list of synonyms. Under the heading of Catlaelia we note that Catlaelia arnoldiana—bella, and C. Aylingii—canhamiana, bella and canhamiana being the names of the original hybrids from the respective crosses. Where he uses—, we should employ =, because more generally understood in this country. The next headings we meet with are *Cattleya species used in crossing*; and *Cattleya hybrids used in crossing.* We think that these headings should have been in other type than italics, and larger, in order to catch the eye of the reader, for they are certainly important, but are often almost lost by being squeezed into small space in the middle or towards the bottom of the page, as the case may happen. Under the headings each species that has been used is given as a cross column heading, with the list of species with which it has been crossed. Then come *Laelia species used in crossing*; and *Catlaelia hybrids used in crossing.* Next we come to Catlaelia as a bold heading, and under it all the bigeneric hybrids, natural and artificial, together with their synonyms known up to the time of publication. The names are followed by that of the authority for the same, where known; but a large number have appeared at the meetings of the Royal Horticultural Society, and are accompanied by R.H.S., with the date. References are also given to works or periodicals in which they may chance to have been figured. The late Professor Reichenbach is given as the authority for Cattleya dominiana, but on looking up one place cited we find that the professor described it under the name of Laelia dominyana. He is likewise credited for using Cattleya dormaniana, but on reference to the original description we find it written Laelia dormaniana, Rchb. f. Of course both of the above are now classed under Catlaelia by Mr. Hansen, and by others under Laeliocattleya.

The book, with the first supplement, runs to 257 pages printed in large and bold type; and it must have cost the author an untold amount of work, though evidently a labour of love. In any case it is a laborious compilation which has been carried out by that painstaking and persistent attention to work and study for which the author's countrymen have long been famous. The lists of the various Orchids which have been employed by hybridists, and of the resulting progeny, constitute the most valuable part of the book, as a ready means of reference to all concerned and we should like to see it brought up-to-date.

FLOWERING BULB CULTURE: A Complete Guide to the Propagation and Culture of Flowering Bulbs either for pleasure or profit. Price 2nd. London: Published by George Tucker, 1, 2, and 3, Salisbury Court, Fleet Street.

This is a pamphet of some thirty-one pages, and is No. 4 of the "Salisbury" series of garden produce handbooks. It includes thirty-five short articles, an introduction and a summary, dealing with the treatment of Hyacinths when grown in pots, glasses, water, and moss; also with indoor Tulip culture as well as out-of-doors. Crocuses, Snowdrops, and Scillas are also dealt with. In speaking of the tulipomania which seized our forefathers, the author states that in 1771, a sum of 450 guineas was offered and refused for a Hyacinth; yet as late as 1835 a new Tulip named Citadel of Antwerp was sold to a M Vanderninck, of Amsterdam for £640.

In an article on "bulbs in rockwork" the author says that the use of rockwork for bulb culture has never yet been advised, as far as he remembers. Bulbs, on the contrary, are never absent from large rockeries with a fair collection of plants; but the peculiar feature which he advocates is the making of rockwork in restricted town areas so as to take pots of bulbs all through the season, so as to lengthen the display. He reckons that a mass of bloom could be maintained in this way for at least six months in the year. With a considerable amount of trouble, this might be done, but the number of kinds would not be numerous after the month of June, particularly as this system would chiefly be pursued by amateurs having a special predilection for bulbs. It would also require great care to avoid an artificial appearance with pot plants frequently renewed. Some useful advice is given in the matter of selecting the bulbs, and which may safely be followed. Hyacinths require protection in the open to prevent the bulbs being frozen at any time, and "Cokernut-fibre" and kindred substitutes are stated to answer the purpose. Artificial manures are recommended in preference to stable manure, even when the soil is light.

The Yew Trees at Duganstown, are mentioned by Hayes, Avondale, & Co., Wicklow, in 1744, and stated to have stems 25 ft. in height, supporting a thick roof like head of greenery.

GARDEN FOES.*

INSECTS.

AMONGST these we find some of the gardener's most deadly and destructive foes; and as so many of them carry on their work of devastation in the dark, they are most difficult to battle with. Every gardener, however, ought to make himself acquainted with their habits, and mode of living, for though to him many of them are enemies, and must be got rid of at all hazards, others are his friends, which should be preserved; but unless the tiller of the soil makes himself acquainted with them, how is he to distinguish one from the other?

If we ask the majority of people what an insect is, they would be unable to describe one. Some would tell us that it is a thing that creeps, others would say a snail, a woodlouse, a spider, and the like. Now none of these are insects, neither is the mite that is so distructive to our crops, so we will dismiss these for the present, and pass on. If we turn to a dictionary, in the same way as a gentleman of my acquaintance did when he wished to look for the botanical name of the cocoa bean, "Theobroma cacao," as he was about to give a lecture on that refreshing beverage, it is possible we should get rather mixed, as he did, for he triumphantly rolled a Cocoa-nut in its husk on to the platform, ejaculating, "This is the joker that gives you the refreshing cup for breakfast!" The majority of dictionaries describe an insect as follows:—"It is an articulate animal, whose body is divided into three distinct parts, the head, the thorax, and abdomen, having six legs, and two or four wings, respiring by means of punctures, along the sides of the abdomen." Now this is all very well for one versed in entomology, or who may have a knowledge of insect life, but it does not describe an insect definitely, and the uninitiated find some difficulty in acquiring that knowledge. We will therefore endeavour to make this more plain. Most gardeners should know that the animal, like the vegetable, kingdom is divided into classes; these are again divided into orders, genera, families and species. By some entomologists the whole of the insect world is divided into nine orders; by others some of these are sub-divided, making thirteen. Most insects commence their existence in the egg form, which hatches in the course of time to larvae, grubs, or caterpillars, changing again to the chrysalis or pupa, from which in due course the perfect insect emerges. From this it will be seen that most insects undergo several changes before they arrive at the perfect state. It is essential that gardeners should know this, and make themselves acquainted with their habits. We will take the orders according to the old classification, the first of which is—

1. APTERA OR WINGLESS INSECTS.—To this order the flea and lice belong, and as these are in no way injurious to the garden crops, we may pass them by without further notice. The next order is

2. DIPTERA OR TWO-WINGED.—In this we find find some of our greatest foes, while others are our friends, as they subsist on those we ourselves wish to destroy. As an example, let us take the Crane Fly or Dandy-long-legs, as it is sometimes called. The gardener is often annoyed to find many of his plants eaten off just below the surface of the ground, shortly after being planted. If he removes some of the soil he will there find a thick leathery looking creature without legs. This is the larva of Tipula oleracea, which should be at once destroyed. It is to this order that the Celery Fly, Tephrites onopordinis and Anthomyia ceparum or Onion Fly belong. The cradle of these mischievous little creatures is the interior of the leaves. They work as the miner does, but instead of in the bowels of the earth, in the parenchyma or cellular tissues between the two epidermal membranes of the leaves. Most gardeners have observed their brown appearance, and find these little creatures hidden under the skin as it were. If you hold one of them up to the light you will there see the miner at work, boring away at the vegetable membrane. Its head is armed with a hook formed of two horny pieces, and with this it digs away into the parenchyma of the leaf. When the larvae are full fed they change to the pupae, and in the course of a short time come forth as winged insects. Fortunately for the gardener these little creatures have a deadly enemy in the shape of another dipterous insect, an ichneumon, named Alysia Apii, which lays its eggs in the body of the larvae, and so destroys myriads of them. Where they are very numerous the plants should be looked over, and the larvae crushed between the finger and thumb. As for the destruction of the Onion Fly, deep cultivation will do more than anything else; but where this is troublesome, the plants should be occasionally dusted with soot when damp, from the end of April to the beginning of June. The plants may also be earthed up till the latter date.

Carrot Fly, Psila rosea, is also troublesome. One is often annoyed to find the roots of Carrots attacked, small holes being made in them, the foliage turning yellow long before it is time. Deep cultivation and a change of ground is also a remedy against their attacks, likewise a dressing of gas lime.

(To be continued.)

*A paper read by Mr. H. C. Prinsep at a meeting of the Brighton and Sussex Horticultural Society, on the 15th October. There were 300 people present, and the paper was illustrated by lantern slides.

GARDENING MISCELLANY.

COCOS INSIGNIS.

Cocos plumosa is invaluable for decorating purposes, and the semi-erect habited fronds with their long drooping pinnae are at once distinct and ornamental. C. insignis exhibits precisely the same characteristics with regard to habit. The pinnae, however, are rather narrower, although they are fully as long. They are of a rich green on their upper surfaces, and shining silvery-white upon their lower ones. Having never seen the plant at an advanced age we are unable to speak definitely as to whether the resemblances then between the two are as close as they are in the baby stages, but judging from the specimens we recently saw with Messrs. John Laing & Sons, at Forest Hill, S.E., C. insignis possesses a vigorous constitution, and would be likely to grow to a good size.

WEEDS.

THE old books tell us that the Creator, looking upon the work of his hands, pronounced it very good, and doubtless it is; but why, it is often asked, do these useless weeds grow apace, and if allowed, to the detriment of other plants, which man takes under his fostering care? They speak to the sluggard, in a manner and tone unmistakable, that if he is to profit from the bounty of the earth he must he up and doing, and if he is to share at all in the munificent provision that Nature lays at his feet, he must follow her leadings, and by diligence and perseverance in well doing endeavour to secure for himself and his belongings a fair share of the hidden treasures of the earth.—*W. B. G.*

PRIMULA MARCHIONESS OF EXETER.

THIS is a double white Primula of great merit, and a distinct improvement upon the common double white variety which, however, is so useful for cutting from. The flowers are very much larger and more double, although they are not perhaps produced with quite so much freedom as in the latter case. The foliage is strong and vigorous, and the plant is evidently gifted with a very strong constitution. It is well worthy a place in every collection of double Primulas. Messrs. John Laing & Sons grow quantities of it in their nurseries at Forest Hill, where it is thought highly of.

DRACAENA LAINGII.

TAKEN as a whole the Dracaenas are one of the most useful classes of plants we possess, and we have now a great diversity of form, size, and shape of the leaf, and colour amongst them. D. Laingii appears to come very close to D. Doucettii. The leaves are similar to those of the last-named variety, and the habits of the two plants are identical. In D. Laingii, however, a narrow light red stripe runs up the whole of the leaf, and this serves to set off still further the green, and the white variegations. Narrow-leaved Dracaenas of the kind under notice make very effective table plants, and stand out with great distinctness amidst a collection of stove subjects. We recently saw some nice specimens with Messrs. John Laing & Sons, at Forest Hill.

ASTERS AS POT PLANTS.

CALLING in to see Mr. M. Mills, gardener at Coombe House, Croydon, during the autumn, we were much struck with the beautiful display these, in conjunction with some of his earlier Chrysanthemums, made in the conservatory; and to all on the look out for something fresh and beautiful for the purpose, we most heartily recommend the culture of this comparatively neglected family. They have the merits of cheapness, easy management, and exquisite beauty in their favour. His plants were taken from the parent stools in the open borders, during the third week in February, and potted into No. 16 pots, using a good sandy loam as compost. They were stood out in the open on a bed of ashes, and received the necessary waterings, and staking to secure them from wind. The following are among the cream of the collection, and comparatively dwarf:—Aster acris, A. Vesta, A. Lady Trevelyan, A. Amellus bessarabicus, A. spectabilis, A. laevigatus nanus, A. horizontalis, A. A. H. Grant, A. vimineus, and A. Andromeda.—*W. B. G.*

HURST & SON'S CLOVER AND GRASS SEED CIRCULAR.

January 1st, 1897.

WE have pleasure in handing you our annual report upon the Clover and Grass Seed Crops of the past season, based upon the best information we can procure from reliable sources.

According to our deductions, the supplies of many articles will be less abundant than last season, and consequently a higher range of prices will presumably prevail.

ENGLISH RED CLOVER AND COWGRASS.—A very small quantity has been harvested, forming a striking contrast to the great acreage and yield of the previous year. The samples we have already seen are generally inferior in size and character. Fortunately there still remains on hand a considerable proportion of the well-harvested 1895 crop—this will go a long long way towards making up the present year's deficiency.

SINGLE CUT COWGRASS.—It is difficult to meet with a sample of new seed, consequently the yearling parcels command high prices.

FOREIGN RED CLOVER.—There seems to be a shortage in the new crops of most continental countries, but France has still a large quantity of yearling to offer. The boldest and best ripened samples we have seen are from South-east Germany, but it is almost too early to say what Germany may be able to offer in the aggregate. The United States and Canadian crops are reported as very uneven, some producing states having hardly any seed. Should America, as the season advances, become an importer, it would make a considerable difference to the European markets.

WHITE CLOVER.—The English crop is very small, but some good yearling parcels are still to be met with. The German crops are short; the American is above the average.

ALSIKE.—A general deficiency is reported, but the large stock of yearling available will check any great advance in value; this article is still very cheap, and should be considerably used as an economical and never-failing crop.

TREFOIL.—The English crop is below an average, but a large quantity of good yearling seed has been held over. The Continental crops may be called an average.

LUCERNE.—The American crop is an average one, but the French crop is short; the fine Provence samples will command higher prices than last year.

SAINFOIN.—English Giant is a very small crop, but English Common is above an average. French Giant is below an average in yield, but of finer character than usual. Hungarian is offered freely, but we do not advocate its use; much disappointment to farmers has resulted from this being substituted for French.

ITALIAN RYEGRASS.—The French crop is not so large as last year; fine Mayenne seed being cheap will supply the bulk of the demand. The Irish crop is large and good in quality. The English is an average one.

PERENNIAL RYEGRASSES.—Another large crop from a great acreage has brought the prices down to almost the lowest on record. The finest cleaned samples should be sought for, as even these are at most moderate prices.

NATURAL GRASSES vary considerably in supply. Cocksfoot, Crested Dogstail, Poa trivialis, and Meadow Foxtail are the scarcest articles. America

has no Cocksfoot to send us this season. Meadow Fescue and Timothy are below the average in value.

WHITE MUSTARD.—The English crop is below an average. Some fine samples have already arrived from California, and pale coloured inferior seeds are being offered pretty freely from the Continent.

RAPE.—A small crop is reported, considerably below the average.

SPRING TARES.—Reported as an under average crop.—*Hurst & Son, Offices and Sample Rooms, 152, Houndsditch, London, E.*

OBITUARY.

MR. FRANCIS FELL.—It is with much regret that we intimate the untimely death of this promising and industrious nurseryman, on the 27th ult., after much illness. He had been associated with Mr. T. S. Ware, of the Hale Farm Nurseries, Tottenham, for a considerable number of years, and when the latter retired from business, Mr. Fell took it over and continued it on much the same lines as far as hardy herbaceous and alpine plants were concerned; but he also developed other branches, for which he gained considerable reputation.

The bulb department was extended, particularly in the case of Daffodils, of which a large area of the more popular and useful varieties was planted. Tuberous Begonias had been greatly improved, and their cultivation carried on upon an extensive scale. At first a house was devoted to them at the Hale Farm Nurseries, but this soon became inadequate, and a piece of ground was taken in the neighbourhood of Crook Lodge, Bexley Heath, and later on a better piece on the other side of the main thoroughfare from London to Dartford, for the cultivation of Begonias in the open air. A number of glasshouses behind Crook Lodge accommodated the pot plants, and the propagating operations. Carnations were also extensively cultivated in the open air at the Hale Farm establishment, where florists' flowers generally received considerable attention. Dahlias were so extensively cultivated as to be quite a speciality of the firm. All sections were well represented, and many fine novelties were introduced from time to time in the different departments of the firm. Mr. Fell is a member of the Hexham family of nurserymen, and though he was only an occasional visitor to the London shows, he was a frequent exhibitor, and his loss will be mourned by a wide circle of friends.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Double White Rocket.—*T. Lee*: The flowers are so perfectly double that we have never known the plant produce any seed, and doubt very much whether it has the power of doing so. It is readily enough propagated, however, by means of cuttings which form round the crown of the plant after the flowering season is over and the stems have died down or have been cut away. The cuttings are as a rule very short, being little else than a tuft of leaves held together by a small portion of tissue from the crown of the plant, or a heel of the wood as some would term it. If you take them off in September when there is plenty of moisture in the ground they root very freely, especially if dibbled firmly into sandy soil in thumb pots. Plunge the latter in a frame for the winter, and put the plants in their permanent quarters in March, or not later than the first week of April, to give them time to get established.

Names of Plants.—*R. J.*: 1, Luculia gratissima; 2, Choisya ternata; 3, Aglaonema pictum; 4, Eupatorium riparium; 5, Ruellia macrantha; 6, Strobilanthes issophyllus.—*J. Fentie*: 1, Todea superba; 2, Nephrodium aristatum; 3, Acacia Drummondi; 4, Woodwardia radicans.—*H. J.*: 1, Begonia haageana; 2, Fittonia argyroneura; 3, Cyperus laxus variegatus; 4, Odontoglossum Insleayi; 5, Selaginella emiliana.—*B. W.*: 1, Oncidium praetextum; 2, Oncidium Forbesii.

Examination in Horticulture.—*Chris. Leeson*; The list of books you send us shows that you are fairly well supplied, except in the matter of physiology. We are not acquainted with "Vegetable Physiology," in Chambers' Science Series, but judging from the date (1878) it would be a little behind the advancement of the present day. There are numerous recent books on the subject, including "Structural Botany," Part I., by Dr. D. H. Scott, price 3s. 6d., and published by Messrs. Adam and Charles Black, Edinburgh. Another good work is "Elementary Botany," by Prantl and Vines, published by Messrs. Swan Sonnenschein & Co., London. An excellent standard work is "Elementary Course of Botany," by Henfrey and Masters, 4th edition, published by Messrs. Gurney & Jackson, Paternoster Row, London, who took over the stock of the late Van Voorst. This is the largest of the three books we mention, and costs 15s. By dint of good application to study, either of the above books would enable you to pass the examination in horticulture.

Manner of feeding of the Vine Weevil.—*W. P.*: The Black Vine Weevil, or, for the matter of that, any other weevil feeds quite differently from an aphis. The latter has a proboscis or beak, it is true, and sucks the juices by inserting this organ in the leaf or other soft tissue of the plant or plants on which it usually feeds. A weevil on the contrary has a small mouth, furnished with horny maxillae or jaws at the end of its long snout or rostrum, which is practically a prolongation of the head. The eyes are situated at the base of this beak, and the antennae about the middle. The weevil gnaws the foliage or stems on which it feeds by means of the jaws at the tip of the beak.

Are Moles of any use?—*J. A. C.*: Yes, certainly. They feed entirely on insects, including wireworms, and other larvae which they meet with in their burrows; so that in this respect they must do a considerable amount of good. Whether they do a sufficient amount of good to compensate for the harm they effect in a seed bed or on a well kept lawn is quite another matter, and one for you to decide.

Tall Palm in Conservatory.—*North*: Palms generally are rather impatient of disturbance at the root, and though we have seen and helped to transplant a good many tall or old Palms, we have never seen them to thrive well afterwards if they were naturally of a tall growing character. Cutting the roots about to any great extent is detrimental to their welfare, so that to root your tree afresh some way up the stem, and then cut the lower portion away below these new roots, would be a crucial test to the vitality of even Chamaerops excelsa. We have never heard of its being done, and doubt very much if it could be successfully carried out. However, as you will be obliged to cut it down or give it away before long, the operation might be tried. We should be pleased to hear the results of it. By tying down the leaves away from the glass, you would be able to preserve the tree in its position for some time longer. Your letter was wrongly addressed and late in reaching us. The paper has never reached us at all. The address is 1, Clement's Inn, Strand, London.

Communications Received.—J. Mayne.—Sutton & Sons.—St. Lawrence.—John Battersby.—J. H. White.—G. J. Ingram.—R.E.B.—H S.—A.D.W.—H.K.—A.B.—T.N.—L.H.—George Crabbe (next week)—Q.—S., Hendon.—Scottie.—F.O.B.—T.T. Beta.

TRADE CATALOGUES RECEIVED.

ROBERT VEITCH & SON, 54, High Street, Exeter.—Catalogue of Kitchen Garden and Flower Seeds.

FIDLER & SONS, Reading.—Catalogue of Vegetable Seeds and Seed Potatos.

CHARLES SHARPE & CO., LTD., Sleaford, Lincolnshire.—Seed List, 1897.

ROBERT SYDENHAM, Tenby Street, Birmingham.—Unique List of the Best Vegetable and Flower Seeds.

DICKSONS & CO., 1, Waterloo Place, Edinburgh.—Dicksons' Garden Seeds.

WM. CUTBUSH & SON, Highgate, London, and Barnet, Herts—Descriptive Catalogue of Flower, Vegetable, Farm Seeds, &c.

JOHN LAING & SONS, Forest Hill, London, S.E.—Vegetable and Flower Seeds, Begonias, Novelties, &c.

F. C. HEINEMANN, Erfurt, Germany.—General Seed Catalogue.

W. DRUMMOND & SONS, LTD., Stirling.—Seed Catalogue.

DAVID W. THOMSON, 24, Frederick Street, Edinburgh.—Seed List, 1897.

JOHN SHARPE & SON, Bardney, Lincoln.—Guide to Practical Gardening.

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Red „ ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Coh Nuts and Filberts, per 100 lbs.	35 0	
Grapes, per lh	0 6	1 6
Pine-apples, —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawherries, per lh.		
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
ArtichokesGlobe doz.	2 0	3 0
Asparagus, per hnndle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cahhages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per hundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, hundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. hasket	1 0	1 6
Onions.....per hnnch	0 4	0 6
Parsley ... per hunch	0 3	
Radishes... per dozen	1 6	
Seakale...per hasket		
Smallsaladlng, punnet	0 4	
Spinach per hushel	2 0	2 3
Tomatos..... per lh.	0 3	0 4
Turnips .....per hnn.	3 0	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, hun.	1 6	3 0
Azalea, doz. sprays...	0 6	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	2 6
Chrysanthemums, doz. blooms	1 0	6 0
Chrysanthemums, doz. hnches.	3 0	6 0
Euoharis ...per doz	3 0	4 0
Gardenias ...per doz.	2 0	4 0
Geranium, scarlet, doz. hunches	6 0	9 0
Hyacinths (Roman) doz. sprays	0 9	1 0
Lilium longiflorum per doz.	4 0	8 0
Lilac, White (French) per bnch.	4 0	5 0
Lily of the Valley doz. sprays	0 9	1 6
Marguerites, 12 bnn.	2 0	4 0
Maidenhair Fern, 12 hs.	4 0	8 0
Mimosa, per hnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 hun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	0 6	1 6
„ Tea, white, doz.	1 0	2 0
„ Niels	6 0	9 0
„ Safrano	1 0	2 0
„ (English), Red Roses, doz.	1 0	1 6
Pink Roses, doz.	2 0	3 0
Smilax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms ...	0 6	1 0
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz hlms.	6 0	12 0
Violets (French) per doz. hnches.	1 6	2 0
Violets (English) per doz. hnches.	1 6	2 6
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per hunch.	2 0	3 0

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
„ specimen	3 0	5 0
Azalea, per plant.....	2 0	3 6
Chrysanthemums, per doz.	4 0	9 0
„ per pot	1 0	2 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena virldis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, lnvar. doz	6 0	24 0
Erica Hymalis, per doz.	12 0	15 0
Erica, per doz.	9 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	12 0	15 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	12 0	18 0
Solanums, per doz.	12 0	15 0
Tulips, doz. pots.....	8 0	12 0

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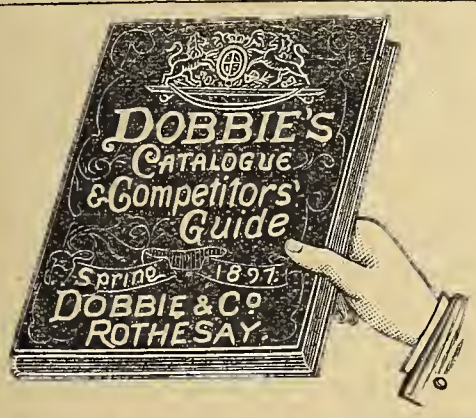

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, JANUARY 16th, 1897.

FRUIT-CULTURE FOR AMATEURS.*—The plea for this new book, modestly put forward by its author in his preface, is that there has been frequent complaint of late years that books on fruit culture are beyond the reach of amateurs, both on account of their expense and their elaborate or technical character. While admitting that good books on the subject are generally both elaborate and relatively expensive, we are pleased that this concise and useful manual has not been written by an amateur cultivator; for, however successful the latter may be in his practical work, when he takes to book-writing on the subject he is often a failure. Even if such were to give his experiences in well-worded language, he has only his own resources to fall back upon, and results obtained, it may be, under one set of conditions. Those who try to follow in his footsteps, must of necessity fail where the conditions and circumstances under which they labour are widely different. It takes a wide and lengthy experience to enable one to write a good book even for amateurs. By the latter we mean those who take up the culture of fruits, flowers or vegetables for the love of the thing, making of it a delightful pursuit or hobby as it were. Private gentlemen are often styled amateurs for the above reason, but they employ professional help. The book under notice is not intended for such, although many of them even would be able to glean some useful hints from its pages, especially in the case of the select lists of useful varieties, and in the means of combating insect and other enemies of garden and orchard.

The Apple is rightly put forward as the most important of all the hardy British fruits, and our readers will agree with Mr. Wright when he says that, although the Apple is one of the easiest of trees to cultivate, there are comparatively few homes having an adequate supply of fruit for their requirements. Large standard trees, he says, will produce astonishing quantities of Apples with a minimum of trouble, pro-

*FRUIT-CULTURE FOR AMATEURS:—An Illustrated Practical Handbook on the Growing of Fruits in the Open and Under Glass. By S. T. Wright, superintendent of the Royal Horticultural Gardens, Chiswick. With an Appendix on Insect and other Pests Injurious to Fruit Trees &c. By W. D. Drury. London: L. Upcott Gill 170, Strand, W.C, 1897. Price 3s. 6d.

viding the soil is fairly good and an occasional mulch of manure is applied. Even professionals do not always recognise this fact, or at all events they do not act up to it. In the case of agriculture, good landlords prohibit the carting away of certain products from the land, while allowing the grain to be sold. This is largely on the assumption that the fertility of the land must of necessity be kept up by the return to it of the straw and leaves in the form of farmyard manure. In the case of fruit trees, it is true that the fruits and prunings only are taken away from the land, unless, indeed, vegetables are grown underneath the trees. It must be remembered, however, that fruits contain a large proportion of the useful mineral and other elements withdrawn from the soil by means of the roots; and that these substances must be returned to the land in greater or less quantity in order to maintain its fertility. Selections of varieties of Apples are made for various purposes showing that the author has a wide personal experience with the peculiarities and characteristics of many varieties, and knows what advantages they have to offer.

Amateurs need not now hesitate to plant Pears on account of the old notion that it takes a lifetime for them to reach a bearing condition. Success depends largely upon soil and the particular stock on which the trees are grafted. On shallow sandy soils the author recommends the Pear stock, because the roots penetrate more deeply and escape the evils of a hot and dry summer to a much greater extent than they would upon the Quince. The latter is the best stock for deep and heavy soils. The trees come into bearing upon such a stock in the course of two or three years from the time of planting. No manure should be incorporated with the soil at the time of planting as it tends to foster rank and coarse growth that does not get properly lignified or ripened before the advent of frost. Fruits of some of the more useful Pears are represented by woodcut illustrations. Numerous figures are also given of the ten best methods of training Plum trees on walls, and of growing them in the open. Peaches and Nectarines are dealt with in fairly exhaustive detail, the author giving encouragement to the amateur not to be frightened from attempting their culture on the supposition that they require specially favoured and warm districts to ensure success. He considers that south of the Trent there are thousands of homesteads at which the cultivation of these luscious fruits may be attempted with reasonable hope of success. They may be grown upon south, east and west walls, but where gardens are unfortunate in not possessing such aids to fruit culture, the trees may be planted against the walls of the homestead itself including outbuildings, provided always that they are simply protected from cattle. He recommends fruit trees in place of the merely ornamental climbers that are often employed. Any porous and fairly well drained soil will be suitable, though a moderately strong loam is the best. Speaking from many years' experience, Mr. Wright is strongly in favour of autumn pruning for Peaches and Nectarines, immediately after the crops are gathered. We are aware that if pruning, nailing and other necessary operations are long deferred, there is a liability of many of the flower buds being destroyed, especially through careless handling. Shoots about the thickness of slate-pencil are sufficiently strong for bearing purposes, and anything more gross in the way of young and bearing wood should be removed, if a healthy and well balanced, fruit-producing tree is to be maintained.

Other stone fruits are also dealt with in the same straight-forward and earnest way. The first and most important thing in connection with the planting of Apricots is the thorough drainage of the soil, and an adequate supply of lime in the shape of old mortar rubble or plaster, the latter containing another fertiliser in the shape of hair containing nitrogen. Where success is not at first attained the author recommends experiments with superphosphates, potash, kainit, bone meal, silica &c. Judging from observations we were under the impression that Figs in the open air gave the most successful results where lime or chalk entered largely into the composition of the soil; and on turning to the chapter on Figs we find this view pretty well corroborated, for the author recommends a "well drained border containing plenty of lime refuse, and the whole made thoroughly firm." Under these conditions the trees are not liable to be injured by frost in winter. The end of March or the beginning of April is the best time for planting operations, as the trees get well established before the advent of winter. No manure either in a solid or liquid form should be given to Fig trees in the open border, till they are well-established and bearing heavy crops of fruit. The obvious reason is that gross, sappy growth should on no account be encouraged, otherwise Fig culture in the open will be a failure.

There are also chapters on Gooseberries, Currants, Raspberries, Strawberries, Cobnuts, Filberts, Walnuts, Medlars &c. The second section of the book is devoted to culture under glass, including Grapes, Peaches, Figs, Melons, Strawberries and orchard houses. Then follow miscellaneous chapters on grafting, budding, manures, storing fruit packing and marketing fruit, all of which are useful in their respective ways to amateurs who would undertake the cultivation of fruit. The chapter on manures is an interesting one which may safely be acted upon as the result of experience on the part of the author, who says that if fruit trees are supplied with nutriment equal to their requirements, heavy crops may be produced every successive year without impairing the vigour of the trees. The cultural part of the book runs to 139 pages and a lengthy appendix relating to insect pests, and prevention or cure, together with an index, augments that number to 244 pages. The insect article is as comprehensive as space will allow and the information reliable as far as it goes. The paper, printing and binding are excellent for the price charged, and numerous illustrations add greatly to the value of the book.

The present acreage of woodlands in Ireland is only 308,928 acres, a very small proportion of the uncultivated land suitable for planting.

Mr. Charles Bennett, for nearly six years foreman of the glass department, Bicton, has been appointed head gardener to Sir William Walrond, Bart., M.P., Bradfield, Cullompton, Devon.

Mr. Heath, late gardener to Sir W. Walrond, M.P., was lately presented with a walking stick and pipe by the members of the Uffculme Horticultural Society as a token of esteem on his leaving the neighbourhood.

Axminster Gardeners.—At the recent annual meeting of this Improvement Society the Rev. A. Newman and Mr. W. E. Pitfield Chapple were elected president and hon. secretary respectively. It was arranged to hold the meetings every two months in future.

Railway Station Gardens.—Mr. Baker, station-master at Ashley Hill, G.W.R., has been awarded a special prize by the G.W.R. Company for the best station garden in the South Wales line. Mr. Tummy, station-master at Symond's Yat, has received a similar prize for the prettiest station garden in his district.

The Search After Light is responsible for the great growth of climbers on the tops of trees that support them in tropical forests.

Prehistoric Corn is the name of a "new novelty" in the farm seed line, whose introducer says among other things in speaking of its discovery, fifteen feet underground in a sealed pottery vessel says, "Here it has lain in a perefect state of preservation while the thousands of years rolled by!"—*American Florist*

Russian Tea from the Caucasus.—Another large party of Chinese have arrived at Odessa on their way to the Caucasus to superintend the cultivation of the tea plant. Considerable success has already attended tea-planting in the Caucasus by the Russian Government; and private enterprise is now taking the matter up.

The Apple Crop of the United States is rather under than over the average as some people would have it. In 1895 it was 60,500,000 barrels. Last season's crop is stated to be 59,000,000 barrels. Michigan stands pre-eminent, however, inasmuch as the last year's crop was the heaviest and finest ever harvested there.

Rainfall in Devon.—Mr. J. Mayne writes us that November 1895 was the wet month for that year, as 6·92 in. of rain fell. There is a deficiency of about 6 in. for the year that is just closed. December was the wet month, as 6·86 in. fell. The weather still continues mild and showery. A rain gauge is fixed up in the garden at Bicton and Mr. Mayne keeps a regular record of the rainfall.

Syndical Chamber of Belgian horticulturists.—At the monthly meeting of this society held in the Casino, Ghent, Belgium, on the 3rd inst., Certificates of Merit were awarded to M. Jules Hye for Odontoglossum crispum macrospylum, Odontoglossum crispum regale, O. crispum album, a group of new Odontoglossums, Odontoglossum crispum Petersii and Odontoglossum wilckeanum albens. A similar award was accorded to M. Jules de Cock for Cattleya chocoensis. Mr. Jules Hye also received a certificate for culture and flowering for a fine specimen of Cypripedium Sallieri hyeanum.

Botany in Ancient Egypt.—At a meeting of the Victoria Institute in the rooms at Adelphi Terrace, the Rev. F. A. Walker, F.L.S. brought forward the subject of "Botany in Egypt in Ancient Times." He discussed the extent to which it was known, and how far that knowledge was made use of in medicine and the various relations of life as described in the papyri and on the monuments. He quoted the evidence of Homer, Pliny, Herodotus, and other writers to illustrate his remarks. He pointed out also that the soil of Egypt used to bear three crops a year, and with our modern advantages combined with a resumption of the ancient careful system of cultivation, Egypt would become of even greater value in these than she was in past days.

Worcester and District Auxiliary Gardeners' Royal Benevolent Institution.—The balance sheet of this admirable provincial auxiliary of the Gardeners' Royal Benevolent Institution is to hand and shows what valuable work it is effecting. The total receipts were £175 9s. 6d. and of this sum £164 15s. has been sent to the parent institution for the benefit of the pensioners. The working expenses have, therefore, been remarkably small. They have really only been £7 10s, the small remaining sum being a balance left in the treasurer's hands. The total amount collected has mostly been from donations, life members, and annual subscribers of one guinea. The donations consisted of one sum of 25 gs., one of £20, 4 of 10 gs. each, and one guinea. There are four life members subscribing 10 gs. each, and the balance sheet shows a list of 29 annual subscribers of one guinea each, several of whom have paid their subscriptions which will appear in next balance sheet. Mr. J. Hill White, the hon. secretary and treasurer, 51, Broad Street, Worcester, informs us that 13 new guinea subscribers have been added. The Right Hon. Earl Beauchamp, Madresfield Court, Worcester, showed an excellent example that might well be followed by others. In April last he allowed his beautiful gardens to be thrown open to the public at a small charge for admission, and the sum of £13 14s. 6d. was collected as a result, and handed to the local auxiliary by his gardener Mr. William Crump.

The manufacture of Paper in Finland is now one of the most important industries in the country. There are 20 wood pulp and pasteboard factories, 13 paper mills, 7 chemical pulp, and 3 straw pulp factories, together employing about 5,000 workmen.

The Tobacco Plant a Perennial.—Hitherto the Tobacco plant has been regarded as an annual. Herr Dorocze has made a discovery in Hungary that it is a perennial. This, it is believed, will have the effect of cheapening tobacco. There are several species of Tobacco plants, some of which we have long proved to be perennial, but which species Herr Dorocze refers to is not quite clear.

Horticultural pocket book and Diary.—A sample of a substantial and useful article has reached us from Messrs. J. Weeks & Co , King's Road, Chelsea, S.W. This consists of a pocket book and diary combined. The former is of strong leather and contains two pockets for cards, letters &c. The diary contains a calendar, tables for weights and measurers spaces for note-taking each day, and various other matters.

Lecture at St. Agnes, Cornwall.—On the 6th inst., Mr. Ilott, lecturer to the Cornwall County Council, practically demonstrated the art of pruning fruit trees and Vines in several gardens at St. Agnes, Cornwall. In the evening he lectured in the Board Schools, on "Fruit Culture," dealing with the planting and pruning of the most prolific and profitable varieties of Apples, Pears, Plums, Strawberries, Gooseberries, Currants, &c. The lecture was listened to with rapt attention by a small audience.

A Hedge v. Iron Railings.—A deputation of householders waited upon the Town Council of Richmond, Surrey, on the 12th inst., to protest against the renewed attempt to replace a hedge of Holly and Thorn, which divides the famous terrace from the grassy slopes leading down to the river Thames, by iron railings. The householders describe the attempt as an act of petty vandalism. Some of the inhabitants look upon iron railings as a row of "hairpins"; and to set them up instead of the living hedge, over which generations of Londoners have gazed upon one of the most beautiful and typical of English landscapes, is altogether unjustifiable, except on the score of absolute necessity, which does not appear to exist.

An Important appeal, affecting the position of market gardeners under the Agricultural Rates Bill of last Sessions, was recently heard at West Sussex Session. At Worthing there are about sixty market gardeners, who grow Tomatos, Grapes, &c., under glass. The Overseers had returned these holdings as market gardens, and therefore subject under the Act to a deduction of half the rates. The local Surveyor of Taxes declined to accept them as market gardens, and the Union Assessment Committee upheld him, on which the appeal was lodged. The appeal was opposed by the Board of Inland Revenue, on whose behalf Counsel contended that the Agricultural Rates Act, which was passed for the benefit of distressed agriculture, expressly exempted agricultural buildings from its operation, and that the glasshouses in which the Appellants' fruit was grown were buildings within the meaning of the Act, and therefore not liable to any relief from taxation. The Court, however, upheld the appeal with costs, thereby giving the Market Gardeners the relief which the Agricultural Rates Bill intended them to have.

Royal Gardeners' Orphan Fund —The annual general meeting of the subscribers to this institution is fixed to take place at Anderton's Hotel, Fleet Street, E.C., on Friday, February 19th, at 4 p m., when the committee will recommend, that the whole of the thirteen candidates be placed on the fund without the trouble of an election by ballot, in commemoration of the record reign of Her Majesty, and to mark the successful termination of the first decade of the Fund's existence. The annual festival will take place at the Hotel Cecil, on April 30th, with Sir J. Whittaker Ellis, Bart., as president of the day. Recent special contributions to the Fund have included £30 10s. from the Altrincham Gardeners' Mutual Improvement Society; £10 15s. from Mr. H. J Jones, Ryecroft Nursery, Lewisham, collected at his Chrysanthemum show; £5 5s. from the Scottish Horticultural Association; £5 5s. moiety of receipts from the sale of flowers at the Bristol Chrysanthemum Show; £1 9s. 5d. from Mr. J. B. Stevenson, Chine Gardens, Bournemouth (box); and £1 1s. from Mr. J. Day, Galloway, Garlieston, N.B. (box).

Tuberous Begonias flowered with exceptional freedom upon the Continent during the past season, so that they are likely to be grown in increased quantities during the coming summer.

Sermons and Grass.—The Rev. Dr. Hall said every blade of grass was a sermon. The next day he was amusing himself by clipping his lawn, when a parishioner said "That's right, doctor; cut your sermons short."—*People's Journal.*

Death of Mr. James Webber.—It is with much regret that we announce the death of this eminent representative of Covent Garden Market, and active supporter of the Gardening Charities, which took place on the 4th inst. at his residence, 6, Torrington Square, W.C. Mr. Webber's commodious premises in the Central Avenue was a rendezvous for lovers of good fruits. In addition to managing a big business Mr. Webber's capabilities enabled him to act as hon. secretary to the Covent Garden Lifeboat Fund, a member of the committee of the Gardeners' Royal Benevolent Institution, an active supporter of the Royal Gardeners' Orphan Fund, a regular weekly contributor to this and other horticultural papers, and a generous contributor to and adviser in matters appertaining to the parishes in which he worked and lived.

Devon and Exeter Gardeners' Association.—The show of Hyacinths and other spring-flowering plants by the members of this association is arranged to be held on the 17th March, and a lengthy list of prizes is offered. The spring programme of the session for 1897 shows that Mr. R. Hodder, gardener to Mrs. Trevor Barclay, Ponsonby, Torquay, is to read a paper on "manures for garden soils." Mr. J. Mayne, gr., to the Hon. Mark Rolle, Bicton, will read a paper on "the forcing of Seakale, Asparagus, and other vegetables." "Orchids and their cultivation" will be read by Mr. Thos. Brockbank, late Orchid foreman at the Earl of Rosebery's, Mentmore. Mr. J. Weeks, gr., to E. A. Sanders, Esqr., Stoke House, will deal with "Cinerarias and Primulas." Mr. Fred. C. Smale, hon. sec., of the Torquay District Gardeners' Association, will read a paper on "flower shows, past, present and future." There is evidently a great amount of vitality in this thriving gardeners' association.

French Horticultural Society of London.—On Saturday evening last the members of this Society held their eighth annual dinner at the Imperial Restaurant Strand, Mr. George Nicholson, curator of Kew Gardens being in the chair. The gathering was somewhat larger than usual, and a most successful one in every particular. English horticulture was represented by Messrs. George Gordon, E. T. Cook, G. S. Addison, Harman Payne, May, J. H. Laing, Osman and others. Dr. Masters, Mr. Herbert Cutbush, Mr. H. J. Jones and several other gentlemen were unable to be present, and sent letters of regret at their inability to form part of the company. Speeches were made by Mr. George Schneider, the president of the society, Mr. Nicholson, Mr. Harman Payne, Mr. May and Mr. Gaehelin; and the whole of the proceedings were of the most enjoyable nature, and of course in French. Songs and recitations by the members were freely rendered and the evening's entertainment closed after the singing of the French, Belgian, Swiss and English National Anthems.

The Dundee Horticultural Association opened its new session by a lecture from Mr. Alexander Hutton on the "Clouds of Heaven." The lecturer began by saying that the different departments of knowledge could not properly be taught without a systematic study of them in their relation to each other as parts of one organic whole. In dealing with the science of meteorology, reference was made to the various kinds of clouds, and the various forms assumed by them. The formation of dew and rain was also discussed, and it was stated that Britain was a healthy country because of the number of its rainy days. Wet seasons were proverbially healthy, whilst in continued bright weather the air became filled with impurities. The nature of the atmospheric currents was next explained, and the benefits derived from wind and gentle breezes enumerated. One of these benefits was the distribution of seeds and fruits, many of which were specially provided for by nature with appendages to assist in their dispersal. A cordial vote of thanks to Mr. Hutton brought the proceedings to a close.

An undergrowth of plants is a characteristic feature of British woods, whereas in tropical countries an overgrowth on the top of the trees is the leading feature.

Open Spaces in London.—There are some vacant pieces of land at the Cattle Market, Caledonian Road, West Islington, for the purchase of which £16,000 were necessary. According to arrangement and agreement the Islington Vestry authorised the payment of half this sum to the City Corporation on the 10th inst. The London County Council, it is generally believed, will advance the other half. The Islington Vestry purpose raising their half by means of a loan.

Orchids at the Sale Rooms.—Some fine things turned up at the Central Sale Rooms of Messrs. Protheroe & Morris, on the 8th inst., and in spite of the continuous downpour of rain, a considerable number of buyers turned up to secure the cream of the flowering and other plants. Lycaste Skinneri alba fetched 4 gs. The white Laelia anceps alba went at prices ranging from 18s. to £2 15s. according to the size of the plants. L. a. sanderiana sold at various prices ranging from 18s. to £1 17s.; but the beautiful dark variety named L. a. protheroeana was run up to 4½ gs. Some plants of the hybrid Cypripedium warnhamense sold at from 18s. to 35s. apiece. Hybrid Dendrobiums are not yet so numerous as Cypripediums, and the very distinct D. pitcherianum superbum caused a lively bidding till it was run up to 6 gs. The parents of this hybrid were D. primulinum and D. nobile nobilius, the latter being the pollen bearer. Cattleya andreana, raised from C. velutina crossed with C. Loddigesii, was knocked down at 4½ gs. The uncommon Brassavola digbyana, with its huge and curiously fringed lip was secured for £1 17s. 6d. Plants of Odontoglossum crispum in the flowering stage secured from 15s. to 37s. 6d. apiece, according to size and quality. O. Pescatorei and O. triumphans, consisting of imported samples in mixture ranged from 2s. 6d. to 21s. each.

Royal Horticultural Society of Ireland.—The sixty-sixth annual report and schedule of prizes for 1897 has already been sent to the various members of this society. In order to enable the work to be expedited, the annual general meeting was held in December instead of January as heretofore. Increased progress has been made, and the balance sheet is a favourable one. The entries for 1896 were 960 in excess of those for the previous year. The balance sheet shows that the receipts were nearly £100 greater than in the previous year. The list of special prizes was a lengthy one showing that the society has friends in England and Scotland, as well as in Ireland. The "Code of Rules," drawn up and published by the Royal Horticultural Society, has been adopted by the sister society in Ireland, and this in itself will help forward that uniformity in judging which is so much to be desired. The spring show for the present year is to be held on April 1st, and has had some additions made to the number of classes. The boxes for the display of vegetables are to be limited to one uniform size to give all an equal chance. The summer show will be held on July 1st, and deserves the title of "cup show," for no less than five are offered—four of them for the first time for various subjects including Begonias. Carnations are to be exhibited at the July show, instead of in August as formerly. A challenge cup (value £10) is offered for twenty-four bunches of Carnations; and a cup valued at £5, for twelve bunches. The autumn exhibition is to be held on August 27th; and the winter or Chrysanthemum show on November 3rd and 4th.

ACACIA AND CALANTHE VEITCHI.

Last week we received a box containing a spray of Acacia dealbata and two long racemes of Calanthe Veitchi from Mr. J. Mayne, gardener to the Hon. Mark Rolle, Bicton, Devon. We arranged them in a glass filled with water, and at once concluded that they made an admirable and tasteful combination. Then, on reading his letter, we noted that our discovery was not original, for Mr. Mayne says, "I am sending you a spray of Acacia dealbata, the Mimosa of the Riviera, from a plant growing on the roof of our Orangery. What a charming thing it is; flowering at this time of year makes it doubly valuable. In fact, it is the second time it has flowered under ten months. Perhaps, the tropical

summer had a little to do with this. I put two spikes of Calanthe Veitchi just for you to see how the two things combine when arranged in a glass. I myself think the combination perfect."

The Acacia is always very abundant in the London markets at this season of the year, the present being no exception. It may be used for decorative purposes long after it is dry and dead, for the graceful tassels of flowers look fresh for months, although the leaves close up like those of the Sensitive Plant. The long sprays are packed in boxes and sent from the Riviera and other districts in the South of Europe. The racemes of Calanthe Veitchi were excellent examples of cultivation, being about 20 in. and 24 in. long, and carrying 30 and 37 flowers respectively. Our readers will remember that Mr. Mayne gave the details of his method of cultivating Calanthes on p. 247, and the specimens sent show that he understands the likings of this popular Orchid. He has had as many as 50 flowers on a raceme, but surely 30 to 37 should satisfy the most fastidious and exacting. The flowers sent were of good or even large size, and the rich colour left nothing to be desired. We have seen samples under the name of C. Veitchi superba that were not more highly coloured. The atmosphere of Devon is highly surcharged with moisture in winter but the light is good, and the air clear and wholesome. We are afraid the fogs have mostly settled the Calanthes in the vicinity of London.

WEBBS' SPRING CATALOGUE.

The high class standard of this annual is still maintained and the beauty of the illustrations is largely due to the advance made in photography. Most of the larger pictures consist of photographic reproductions. There are, however, three full page coloured plates representing a great variety of popular flowers indispensable to a well kept garden.

Here, as in other cases already mentioned, vegetables come in for a large share of attention, and Potatos, if anything, are more effectively reproduced than any other subject. A dish of boiled Potatos is the first attempt of the kind we remember being reproduced by photography or any other process. We cannot say that the picture is such a success as the uncooked samples, but we are aware of the difficulty of photographing white or uncoloured masses whose outline has been broken and rendered indistinct by boiling. Possibly they were hot while the operation was effected. Webbs' new Potatos Record and Progress have come out with wonderful distinctness. The same may be said of Renown, Industry, Goldfinder and Yeoman, which are beautifully executed. Cauliflowers, Cabbages, Broccoli, Melons, Savoys, Lettuces, Onions, Turnips, and Tomatos all give a good conception of their peculiarities or characteristics. Usually the fruits of Tomatos come out almost of a solid black as photographic reproductions. but Webb's Sensation Tomato, represented on p. 40 is a wonderful combination of light and shade.

Flowers also come in for a fair share of attention, but a large number of the illustrations consist of wood blocks. A bouquet of Webbs' White Queen Aster, from a photograph has been very well represented, notwithstanding the massive and solid character of the original. Chinese Primulas also come out well, but the massive character of the flowers of Stocks and their colours do not readily lend themselves to the photographic art. There is no doubt, however, but that horticulture is faithfully represented by photography.

RHODODENDRON NOBLEANUM.

Early flowering hybrid Rhododendrons are generally considered tender with respect to the flowers, because liable to be destroyed by late spring frosts. We are all the more agreeably surprised, therefore, to find them in full bloom at mid-winter. We are in receipt of a box of perfectly fresh trusses of bloom of Rhododendron nobleanum from Mr. John Simons, The Gardens, Glendoune, Girvan, Ayrshire, showing the relative mildness of the Carrick district. The plant has been in bloom since November, and this is usually the case with one plant which opens its blooms earlier or later every year, according to the state of the weather from November onwards. There are still hundreds of blossoms on the plant yet to open. Other specimens of the same variety in the gardens do not open till March and onwards through April and May. The flowering plant is the dwarfest in the bed, and faces due east. It is sheltered by its taller companions, and also by a high bank which begins to rise about ten yards away. The west of Scotland, including Ayrshire, joys a milder winter than the east coast. On Christmas eve the temperature of Fifeshire was rather low, and severe frost was threatening; by new year's eve, however, the temperature became as high as it had previously been low. The Rhododendron in question has doubtless been highly favoured by this unwonted mildness. The flowers are scarlet, shaded with rose in the centre, and very effective at this season of the year, either in the garden or in the cut state. Some people pot up the plants belonging to this early-flowering race in the autumn, and shelter them in a greenhouse or conservatory, thereby getting the full advantage of their flowers without risk of their being destroyed by frost. Both flowers and leaves of this variety show that the Himalayan R. arboreum was one of the parents. It is remarkable, therefore, that the varieties of R. nobleanum should be so dwarf seeing that R. arboreum forms a tree of 20 ft. to 25 ft. in height. The narrow leaves of R. nobleanum are dark green above and cinnamon beneath.

GOOD AND BAD SEEDS.

After the usual routine of business had been got through connected with the Chislehurst Gardeners' Mutual Improvement Association on Tuesday, the 5th inst., Mr. H. Cannell, of Swanley, gave a long and exceedingly interesting lecture on "Seeds," showing by diagrams why Cabbages run prematurely to seed, a behaviour commonly known as "bolting," which has been very prevalent of late years. It was generally admitted much of it has been caused by cheap foreign seeds. Several questions were asked, and in answering them Mr. Cannell entered very deeply and exhaustively into the very earliest history of the use of the Cabbage, and proved that its failing to produce eatable hearts was the result of weakness generally, caused by drought, either when the seeds were in the course of formation or after transplanting. Another cause of weakness was the storing of seeds for a long time in paper or wood, both of which absorb the oil, sugar, and other important properties on which the young plant would live during and between the time of germination and their deriving nourishment from the soil. He showed unmistakably and plainly how necessary it is to have the finest possible seeds, which naturally contain all the properties and strength, so that every plant may have a robust constitution to send out strong roots to search for food in all directions. From these a branching habit was to follow, so that in the case of Peas, for example, only half the usual quantity of seed was needed to ensure a heavy crop. He gave many instances of the productiveness of the county of Kent, its natural advantages and other very important matters. The diagrams showed a well developed root system, and a stout stem from which a good head of Cabbage had been cut; and a long weak, crooked stem, with few roots attached, and which had "bolted" in spring, that is, ran to flowers and seed. He rivetted the closest attention of a large roomful of practical gardeners for more than an hour, when an enthusiastic vote of thanks was accorded him. One and all wished him long life and prosperity, hoping to hear him many more times in St. Mary's Rooms, at Chislehurst. They then sent him home in the smartest fly they could find.

THE PLANT HOUSES.

The Stove.

Work will soon begin to multiply apace in this department, and all the regular winter's work, such as cleaning, pruning, etc., should be seen to as soon as possible, in order that when the season for potting has arrived, the whole strength can be set to work.

Aquatics.—The present is a favourable opportunity to operate upon these. The tank, first of all, should be well cleaned out, for rubbish is pretty sure to accumulate in the course of a twelvemonth, and this is the only time at which a good cleaning can be given with safety.

Nymphaeas may then be turned out of their pots and repotted. The soil should have been prepared some time previously by stacking good turfy loam in alternate layers with cow manure. This makes capital stuff for Nymphaeas, and they thrive amazingly in it. Failing a compost of this kind, good loam should be procured, and mixed, as far as possible, with a fourth part of fresh cow manure. The operation of mixing is somewhat difficult, as it is almost impossible to get the manure evenly distributed throughout the body of loam.

Cyperus papyrus.—In roomy houses where the tank is of fair size, a clump of this noble Cyperus growing in the tank, produces a magnificent effect. On a foundation of clinkers, a bed should be made up so as to rise about 8 in. above the highest level of the water in the tank. Soil similar to that given to the Nymphaeas may be employed. Before shifting the roots of the Cyperus to their new quarters, the heads should be looked over for mealy bug. Should they be very dirty, it will be the best plan to cut them down and allow the plants to throw up fresh ones. This may seem drastic treatment, and there is no doubt that it weakens the plants greatly for a time, but they soon begin to pick up again, and ere the season has far advanced will be as strong as ever.

Anthuriums.—Included in this genus are some very useful stove plants, and some that are well worthy of the little extra attention they need if they are to do really well. The month of January is the best part of the year in which to pot them, as they may then be shifted with less fear of their receiving injury than at any other time. Where it is decided to increase the stock, bulky plants may be divided up. This operation should not be entrusted to anybody, however, for injury to the roots must be avoided at all costs. Other plants which have grown long and lanky may have their tops taken off and put in to make fresh plants, whilst the old ones, if kept syringed, will soon make fresh breaks. For compost, good turfy loam should be obtained. This must be chopped up roughly and pulled to pieces by hand, the small stuff being shaken out meanwhile. To the loam may be added fibrous peat, such as that used for Orchids in equal quantities. A handful of nodules of charcoal and plenty of sand, with a little sphagnum moss will also be necessary. After having been pulled about, the plants will require to be coddled a little. There will not be enough heat in the larger stove for them, and the atmosphere there will likewise be rather too dry. They should, therefore, be removed to a close pit where a temperature of not less than 65° Fahr. by night, with a proportionate rise by day can be given. Here they may be kept syringed, and will soon start growing.

Temperature.—About the end of the next week a slight increase of temperature may be effected with advantage in the stove. Throughout the winter, a temperature of about 60° Fahr. has been maintained at night, but at the time specified a rise of 2° may be given.

Pits and Frames.

With the lengthening of the days, things will soon become very busy in this department. There are so many things to be thought about in order to keep the show houses well furnished.

Tuberous Begonias.—The seed saved from last year, or purchased from the seedsman, should be overhauled without delay. It is desirable to have as long a season of growth as possible for the seedlings, both with a view to the formation of good tubers, as well as to discover what kind of varieties they are. Often enough the first flowers thrown are not a true test of the value of the variety, and in doubles particularly, this is to be observed. Make up some seed pans, draining them well, and filling them to within ¾ in. of the top of the rims with light sandy soil The soil should be watered carefully with a fine rose can, and the seed may then be distributed thinly over the surface. Cover it with a slight sprinkling of fine soil or sand. A piece of glass should be laid over the pans, as this will assist germination by keeping the soil and the atmosphere in direct contact with the seed moist. A temperature of about 65° will be required, and even then germination is sometimes very irregular.

Caladiums.—It is now high time that a few of these were started, as they come in very useful for decorative purposes early in the summer. The tubers may be started very readily if they are laid in shallow boxes, and covered with light soil or cocoa-nut fibre refuse. Those cultivators who have especially rare or valuable varieties, however, may not care to entrust them to a box amongst other varieties, and such tubers may well be placed singly

in small pots, and started thus. A night temperature of from 60° to 65° will be required, but it is not desirable to give too much heat, or the plants will become weakened thereby. Sprinkle them over at least twice a day with a syringe, and they will not be long in starting into growth. The remainder of the tubers may be allowed to rest on for the present, as they will be all the better for the respite, and will then form a good succession to the earlier plants.

Gloxinias.—In addition to the old plants it will be necessary to make several sowings in order to keep a constant succession of these charming plants throughout the year. A sowing should be made at once, and the seed pans placed under similar conditions to those given the Begonias. The plants resulting will come into flower towards the end of June and the beginning of July.

Cyclamens.—It is often desirable to provide a succession to those plants obtained from the autumn sowing. A little seed may, therefore, be put in now to effect this purpose. An equable temperature of about 60° will assist in obviating the rather slow and irregular way in which Cyclamen seed not infrequently germinates. The young plants from the autumn sowing should be kept steadily moving. Do not coddle them, but avoid draughts, and give them all the light possible. A place on a shelf near the glass suits them capitally. Considerable care will be needed in watering, for the plants are rather touchy in the earlier stages. Once let the soil get sour and sodden, and the plants absolutely refuse to grow, and never produce good stuff, for the check seems to last throughout the year.

Fuchsias.—Small plants are always handy, as they are so useful, not only for conservatory decoration, but for the filling of small ornamental baskets and stands within the mansion. A quantity of cuttings should be struck early in the year, and these turn into nice stuff in 48's and 32's before the end of the summer. A few of the old plants should be taken out of their retirement, slightly pruned, shortening the branches about half-way, and placed in heat. A house or pit in which the forcing of Lilacs, Deutzias, Spiraeas, etc., is going on will answer admirably. As soon as the growths are a couple of inches in length, they may be taken off with a small heel, inserted five or six in a large thumb-pot, and plunged in a propagating frame to root.—*A. S. G.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Laelia anceps norwoodensis.—The special feature of this variety is its rich colouring. In form it does not differ from the type, but nevertheless leaves nothing to be desired on the score of size. The sepals are of a warm rose fading almost to white at the very base only. The narrowly elliptic petals are a shade or two darker, the colouring becoming more decidedly intensified towards the tip. The lip, however, is the richest and most conspicuous organ of the flower, the terminal and side lobes being of an intense carmine-crimson, and appearing even more brilliant under artificial light. The interior of the tube is heavily and closely striped with dark crimson-purple on a white ground. The varietal name has been given to distinguish the variety from the more common and less richly coloured forms of the species in the collection of T. McMeekin, Esq., Falkland Park, South Norwood Hill.

Phalaenopsis Esmeralda. — The variations amongst the foliage of individuals of an importation of this species are remarkable. One would almost take them to be different varieties, or even species in some instances. The leaves of some plants are narrow and either green or heavily tinted with purple, while in other cases they are so broad as to resemble those of P. violacea or others of that type. The flowers themselves do vary to some extent, but chiefly in the matter of colour. The flower spikes are upright, slender, and bear the flowers towards the apex. The above variations we noted in the collection of Messrs. J. Veitch & Sons, Chelsea.

Odontoglossum Pescatorei flowering at the apex of the pseudobulbs.—This peculiarity we have noted in the case of O. crispum; but do not recollect a similar instance occurring in this species. At present there is a plant in the cool Orchid house at Falkland Park, South Norwood Hill, bearing a panicle of flowers from the axil of the most recently produced pseudobulb. On the same plant a pseudobulb, which is a twelvemonth older than that above mentioned, carries a raceme of flowers at the apex and between the apical pair of leaves. Surely this must denote healthy vigour and suitable treatment to make the old or "back-bulbs" flower a second time from an unwonted position.

Cypripedium Zeno.—This secondary hybrid first appeared in public at a meeting of the Royal Horticultural Society, on December 11th, 1894, when it was exhibited by Messrs. J. Veitch & Sons, Chelsea. It was raised from C. nitens, as the seed bearer, crossed with C. insigne Chantini, two very beautiful forms. The female parent, C. nitens was the resulting progeny of C. villosum crossed with the pollen of C. insigne Maulei, the latter of which gave it the beautiful spotting for which it was noted. The secondary crossing, which resulted in that named C. Zeno, has given rise to a considerable amount of variation, some of the seedlings leaning strongly to C. nitens, while others favour C. villosum. Amongst the seedlings we recently noted one that favoured the atter parent, or might be regarded as indicating the variety C. villosum Boxallii. The dorsal sepal was of a dark shining brown or nearly black with a white margin. The rest of the flower was of a glittering brown. Another variety had the dorsal sepal heavily blotched after the manner of C. nitens, yet neither of these were like the originals. All are comprehended under the name of Zeno, just as the various types of C. lathamianum are classed under that heading, and vary considerably in quality.

Dendrobium Phalaenopsis nobilius. — The flowers of this beautiful and highly coloured variety are moderate in size and recall those of D. bigibbum to some extent, but the petals are different in form, being broadly lozenge-shaped, and suddenly narrowed to an acute tip. They are of a rich rosy carmine fading to the base. The sepals are several shades paler, being pink with rosy tips. The lip, on the contrary, is wholly of a rich crimson. Even in the cut state the flowers are very durable, lasting in water for ten days to a fortnight in very presentable condition. The sprays are graceful and suitable for mixing with cut flowers of various kinds. Flowers were furnished us by Mr. Wright, gardener to T. McMeekin, Esq., Falkland Park, South Norwood Hill. The importation of D. Phalaenopsis in quantity to gardens a few years ago was an event of the greatest importance, and an occurrence that all too seldom happens.

Gleanings from the World of Science.

Nitragin.—This is a name proposed by Dr. Nobbe to include all the bacteria to be found in the nodules of plants belonging to the Pea family, and which are now generally considered to be instrumental in the fixation of the free nitrogen of the atmosphere in the roots of those plants, resulting in great advantage not only to them but to other crops that may be made to follow them in the same ground. Dr. Nobbe has isolated about twenty species of these bacteria from the roots of various plants. A point of the argument is that a crop of Peas, Clover, Beans, or other allied subject may be raised and harvested off a piece of ground, and if nothing else except the roots are left, the ground will be richer in nitrogen than it was previous to the planting or sowing of the said crop. The ground is richer in combined nitrogen than the ordinary supply brought down from the atmosphere by means of rain will account for, plus that which the long or deeply penetrating roots are able to draw from the subsoil and store in roots near the surface. The question arises, whence came the additional nitrogen? For many years past experiments have been carried on by various scientific men with the view of determining whence this extra supply of nitrogen in the combined form which plants are able to collect and assimilate is derived. It is well recognised that the higher plants generally are unable of themselves to combinenitrogen with any other element so that they can utilise it. The results of many experiments go to prove that the bacteria, or micro-organisms in the roots of various members of the Pea family, are able to do that.

Bacillus radicicola.—An important paper on this microbe has been contributed to a German bacteriological journal showing that this organism is capable, under different conditions, to live upon more than one host plant. Bateria were isolated from the roots of Lucerne (Medicago sativa), and cultivated in infusions derived from Lucerne and White Mustard (Brassica alba) respectively. The microbes in question flourished abundantly in the Lucerne gelatine from first to last of the experiments. In that of White Mustard, however, they gradually declined in vigour, showing that they could not readily adapt themselves to the new kind of food. The microbes from the nodules of Lucerne were next tried by gradually accustoming them to the White Mustard infusion, and during six months of this training it was proved that they could, by gradual degrees, be made to live and flourish in this (to them) unnatural and new food. At the end of that time the bacteria took readily to the White Mustard infusion in a pure state. Even after this training, however, they readily accepted their original food of Lucerne, so that their acquired taste had in no way impaired their appetite for the last-named.

Symbiosis.—The bacteria in the nodules of the Pea family live upon their respective host plants, drawing upon them, presumably, for all the other food they require, with the exception of nitrogen. On the other hand the rich and abundant supply of nitrogen with which they furnish their host plants, enables the latter to make such vigorous growth that they do not feel at all burdened in supporting the bacteria. Both the leguminous plants and the bacteria are, therefore, of mutual advantage to one another, and in both cases would get on but poorly if separated from one another. This combined method of living together for mutual advantage is spoken of as symbiosis. There are many instances of it in nature, and probably many other cases and forms of it will yet be discovered in the near future.

Practical advantages to the gardener.—It is an old notion that science and scientific questions are merely theory—a term that is usually synonymous with hypothesis, but wrongly so—and therefore of no practical value to a gardener. A gardener's time need not be wasted in scientific experiments of the above nature, as such trials are best left to men whose duty it is to carry them out, and who, alone, are most competent to deal with them. It will be sufficient for the practical man to adopt any plan of cultivation when it has been clearly demonstrated that some practical result will accrue from it. At the present state of the science it will be quite sufficient for the gardener to know that all cultivated leguminous plants are able to collect of their own accord all the nitrogen that is necessary for their welfare. In such cases it would be a waste of resources and needless expense to apply nitrogen as a separate manure to Peas, Beans, Scarlet Runners &c. On the other hand it would be of the highest importance economically to observe a rotation of vegetable cropping that would make such plants follow leguminous crops that, under ordinary conditions, require a considerable supply of nitrogen to enable them to produce a heavy crop. The valuable nitrogen thus stored up in the surface soil by the Pea crop of the previous year, could be utilised to great advantage, thereby rendering the application of a complete and expensive manure unnecessary. Due allowance would have to be made for the natural poverty of thin and gravelly soils, not forgetting the absolute necessity for water.

Eelworms and Onions.—We are already only too familiar with the pests known as eelworms in Carnations, Phloxes, Cucumbers, Hyacinths and various other cultivated plants. There are several species of eelworm, of various sizes, but all agreeing in being quite microscopical in their dimensions, and invisible to the naked eye. We have, however, been able to detect them in the stems of late flowering Phloxes by the use of a simple lens. The widely spread Tylenchus radicicola, otherwise known as T. devastatrix seems likely to give us greater trouble in the near future by attacking Onion crops. The worms get into the leaves, causing them to become unduly inflated in the middle, and should the attack be a bad one, as it usually is in individual plants or even large quantities of them growing in proximity, then the plants put on a sickly yellow appearance, and soon after die outright, especially if the plants are attacked while yet quite young. The pest gets into the interior of the plants, disorganising their tissues completely. The only way of combating eelworms in Onions is to dig up the affected Onions carefully and burn them. Fresh ground at some distance should be selected for the next season's crop.

HINTS FOR AMATEURS.

SEASONABLE FLOWERS.

UNLESS we are favoured with a protracted spell of frosty weather our outside gardens are not long entirely destitute of flowers, for horticulture has given us what Nature has denied, and our gardens contain all sorts of beautiful strangers, whose only essential qualifications have to be their ability to withstand the rigours and caprices of our climate. Up to the present the winter of 1896-7 has been remarkable for its great mildness, and the result of this is apparent when we hear of Primroses, Violas, Lilacs, and gold-laced Polyanthuses bursting into bloom in various parts of the country. The ubiquitous Daisy is striving, and with considerable success, to assert itself, and its starry flowers have made their appearance in some places. The wild Broom and the Gorse are also in flower, and several of the passengers alighting from a train at one of our London termini last week might have been seen carrying bunches of the bright yellow blooms of the former. All these, however, are casuals, and their precocity is due to the abnormality of the season. Hence, they cannot in any way be described as being seasonable.

There are several subjects, on the other hand, that may fairly be described as seasonable, inasmuch that they make their appearance about this time of the year unless the weather is exceedingly severe. Several of these are not only possessed of a considerable share of beauty, but they are also easy enough to grow, and hence may be taken up by amateurs with every hope of success.

Christmas Roses.—The popular name of Rose, like that of Lily, is very indefinite in its meaning, and the looseness with which it is applied is as great as its indefiniteness. Now the Christmas Rose and the "Rose of Summer" are very widely separated, and serve admirably to show upon what diverse types of plant life the popular name of Rose is bestowed.

Helleborus niger and its varieties are the special Christmas Roses. The species commences to bloom in a favourable season just before the winter festival, and keeps up a display with its varieties until the so-called Lenten Roses come in. Several species of the genus Hellebore are grouped under the latter title, and carry on the credit of their kind until the spring has well advanced. These, however, are taller in habit and of much more bushy growth. We thus see that the genus Hellebore covers a considerable period of time, and its members are on the whole exceedingly useful.

In order to prevent the flowers of H niger from being splashed and disfigured with mud, washed up by heavy rains, it is necessary to cover the plants with handlights. Where this has not been done the heavy rains which marked the close of December and the beginning of January have entirely spoiled the flowers. The lights should be taken off as soon as possible, for the plant does not like being coddled. The undermentioned are varieties of H. niger that are well worthy a place in the garden:—H. n. maximus, or H. n. altifolius as it is sometimes called, has very large white flowers, slightly tinted with rose, but pure white if opened under glass, and measuring sometimes 4 in. or 5 in. in diameter. The leaves are very large and dark green. It flowers in favourable seasons from the end of October or the beginning of November until January. H. n. augustifolius has smaller leaves and flowers than the type, but commences to bloom earlier. The flowers are white tinted externally with rose. This variety is sometimes met with under the name of H. n. minor. H. n. caucasicus has fragrant white flowers suffused with rose, and is well worth a trial.

Hellebores will succeed in almost any ordinary garden soil. The position should be sheltered and the soil well drained. Planted in snug nooks in thin shrubberies they do very well, and we have seen them do well when growing in a semi-naturalised state upon grassy banks facing the north or east. Shady corners in the rockery may also be utilised for them with advantage.

Topdressing.—After the plants have finished flowering a good topdressing should be given. Not only is the nutriment thus conveyed to them of great value, but the roots are kept cool and moist and the evil effects of drought are obviated. If the season is very dry an occasional soaking of water will be very beneficial.

Propagation is easily conducted by division of the roots soon after flowering. The divisions should be laid in shallow boxes, covered with rich soil, and given the shelter of a cold frame, afterwards planting them out in the positions that are to be assigned to them. Only the healthiest and most vigorous roots should be subjected to the division, or the stock will be weakly and will require some time before they get to be really useful stuff.

Plants for Forcing.—Although Christmas Roses may be grown under glass, and thus induced to flower earlier than their relatives outside, they must not be subjected to hard forcing or the flowers will be poor and the plants will be almost ruined by the experience. When lifting roots in the autumn for growing under glass there is sure to be some check given. In order to avoid this when dividing up the old plants some of the divisions may be potted up and grown on in pots instead of planting them outside.

CHRYSANTHEMUMS.

AFTER they have been cut down the old plants are anything but ornamental in appearance, and hence they may be removed to a cold frame out of the way. Here they will throw up their cuttings almost as well as they would in the greenhouse, and as long as the weather keeps mild and open they can be got at easily enough. The pots may be stood quite close together. Air should be given whenever the weather is mild, as coddling will only produce weakly cuttings that are thus handicapped at the start of their existence. Any varieties that are shy of producing good cuttings in sufficient quantity may be left in the greenhouse.

Weeding out varieties.—At this season of the year it behoves the cultivator to take stock of his collection of 'Mums. Space is a matter of vital moment to most people, but more especially to the amateur, who, by virtue of his straitened circumstances, is pinned down to the cultivation of only a few varieties. Now a good plant takes no more room to grow than an inferior one, and will yield infinitely better and more satisfactory results. Year by year sees scores of additions to a list of Chrysanthemums that is already of colossal proportions, and as it is manifest that no one can grow anything like the half of them, a good deal of discretion must be exercised to see that no matter how small the collection it shall at least contain some of the leading varieties. The above remarks are naturally intended for those who purpose coming out as exhibitors next year. Others of our readers who are not drawn into the vortex of exhibition will grow just what they fancy most, whilst the exhibitor has practically no voice in the matter. If he is to be successful he must grow sorts that have the best show record.

To discard old varieties is always a most difficult task; indeed, to those who love their plants it seems like cutting old friends. It must be done, however, for no man can grow two good plants where there is only room for one. It will be advisable to make a list of varieties to be grown, as this will enable the cultivator to make his collection as representative as possible, and to avoid having several varieties of the same colour, or that approach each other very closely in other respects. If only half a dozen varieties can be grown it would be out of proportion to have three whites, even although they should each be first quality, unless, of course, it is intended to compete in a class for white varieties only. The same principles must be applied all round.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Aralia Veitchii.—Both Aralia reticulata and A. Guilfoylei may be used for grafting A. Veitchii upon, *Q.* The former is the one generally used. We have never heard of a single authentic case in which a cutting of A. Veitchii has been successfully rooted.

Begonia Seed.—I saved some seed of the tuberous Begonias last year. When shall I sow it, and under what conditions shall I place the seed pans? Will they do in a greenhouse?—*S. Hendon.*

Some of the big Begonia growers have already sown their seed, but you need not be in such a hurry as that unless you specially wish to get a good show of bloom this year from the seedlings. The first or second week in February should do for you well enough. Sow the seed thinly, and cover it only slightly. Place a sheet of glass over the seed pans, as this prevents rapid evaporation of water from the soil, and does away with the need for much watering. The greenhouse will not be sufficiently warm to insure speedy germination. A temperature of at least 60° Fahr. by night will be required.

Azalea amoena is the plant to which you refer, *T. T.* It is easily grown, and flowers freely each year. The bright rosy-purple blooms, though small, are very effective in the mass, and the plant is most useful for early blooming, and is naturally of neat and compact habit. It is a native of China.

Ferns in Greenhouse.—*Beta* wishes to know if Ferns would grow under the plant stages in his greenhouse? He says a fair amount of light comes through the gratings.

Ferns may be grown under the stage near to the edge of the path, certainly, but they would not do well further underneath, and it would be very little use planting them there. A ridge of stones and clinkers should be formed, and placed so as to form pockets which may be filled up with good soil. It is useless to expect the majority of Ferns to grow on stone without any soil. The latter should consist of equal parts of peat and loam with sand.

Moss on Apple Trees.—Please tell me how to get rid of moss from Apple trees.—*Scottie.*

Moss on old Apple trees is usually a sign of decrepitude. On younger ones it is pretty sure evidence that the ground is in a bad condition, either from poverty, bad drainage, or both. In such a case the cause should first be dealt with. Various methods of removing the moss are practised. A careful scraping of the trunk and larger branches is given, and a scrubbing follows. The washing solution may be made of ½ lb. of common salt or washing soda in a gallon of water with or without a little soft soap. A wineglassful of petroleum mixed with one gallon of warm water is also recommended, but this latter solution needs to be carefully used.

Cocoanut fibre refuse.—This may be used for mixing with the potting soil used for small Ferns or other plants that will not be long in the same pots, *F. O B.*, but it must not be used for plants that have to stay for six months in the same pots.

Lapagerias.—I have a small glasshouse with a northern aspect, in which I propose to grow Lapagerias. How shall I make the bed or border, and what soil shall I give?—*W. Bacon.*

The plants do not require a great deal of root-run. We have seen them grown very successfully in borders not more than a foot in depth. Drain the border well, and make it so that there is from a foot to fifteen inches of soil. The soil should consist of peat with plenty of sand, and a few handfuls of charcoal. You may proceed with the construction of your border at once, so as to get the plants in at the earliest possible date.

Lygodium japonicum will do in a greenhouse very well, *Peter N.* It may be grown in pots, and trained over a balloon-shape, but such a position does not show off the natural beauty and gracefulness of the plant. The better way is to train it to wires or string, when it produces a singularly fine effect.

Diseased Pelargoniums.—*George Crabbe* sends us samples of leaves of Zonal Pelargoniums spotted with white. He says, "I have had the plants for several years and the disease appears every winter. They grow through it in the spring only to appear again the next winter. They are well drained, and growing in soil composed of two parts loam, with leaf-mould, sand, and a little mortar rubbish. They stand with about ninety others in my greenhouse, and none of them get it. Can you tell me of a cure?

We have carefully examined under the microscope the leaves sent, and find that the spots or blotches indicate areas in which there is no chlorophyll or green colouring matter. We see no traces of any fungus, and do not think these spots are attributable to insect attacks. Want of light is

probably the cause, and the disease is variegation on a small and irregular scale, engendered by the weakness resulting from the lack of light; the reason why the other plants are not affected being that they possess greater strength of constitution. This view is strengthened by the fact that the disease disappears as the spring comes on. Meanwhile, give your plants as much light as you possibly can, and be careful not to overwater, for at this time of the year this has a very prejudicial effect.

ARAUCARIA IMBRICATA.

As will be seen from the accompanying illustrations the Araucaria is not always dioecious, as has been stated by some writers on Conifers, but frequently produces both male and female cones on one and the same specimen—sometimes on the same branch. The tree here illustrated is growing on the Earl of Derby's property, Cudham Hall, in Kent, the photographs having been taken in March, 1891, when the Duke of Argyll expressed doubts regarding the monoecious character of the Araucaria. In acknowledging the receipt of specimens from the abovementioned tree His Grace wrote to me that he always understood that the male and female cones were produced on different trees, but the samples sent clearly proved otherwise.

The Cudham tree, which is one of two growing in the flower garden, was planted in commemoration of the building of the Crystal Palace, and would therefore be 40 to 45 years old. As far as general contour is concerned it is a perfect specimen, being thickly branched to ground level, and with the brightest and freshest of foliage. Both male and female cones have been produced for at least eight years, many of the former remains being distinctly traceable on the branches for fully that period of growth. They are often produced thickly—sometimes a dozen occurring on the same twig, are usually pendant, cylindrical in shape, and about 3 in. long by an inch in diameter throughout. The female or seed-bearing cones are likewise abundant, they being fully 6 ins. in diameter, spherical in shape, with thickly-arranged bract-like appendages, each an inch long, and standing almost erect, thus imparting a curious hedgehog-like appearance to the full grown fruit.

Generally the Araucaria has not succeeded well as an ornamental tree in this country, although it would be folly to deny that there are not numerous well-formed healthy specimens in many parts of the British Isles, particularly maritime and well-sheltered districts. Rough, long-blowing winds it cannot stand, soon becoming under such circumstances about one of the most miserable and wretched of coniferous trees.—*A. D. Webster.*

Araucaria imbricata at Cudham Hall.

NEPENTHES AT CHELSEA.

The Pitcher plant house of Messrs. J. Veitch & Sons, Ltd., Chelsea, is an interesting feature of the establishment at all times of the year, more particularly in the depth of winter when flowers are relatively scarce, and have been largely cut for various decorative purposes at Christmas. Judging by the excellent results always obtained here in the culture of Pitcher plants, they are admirably adapted for cultivation in smoky districts and towns, where Orchids for instance are liable to suffer from fog and smoke.

The house at Chelsea is a span-roofed structure of no great height; and the plants are grown in baskets, suspended from the roof, almost the whole of which is thus occupied so that the visitor walks beneath a canopy of Pitcher plants, the pitchers of which are thus effectively brought under the eye. This plan of arrangement might well be adopted in private establishments, so that a house practically devoid of flowers could be made very interesting even in winter, or for the matter of that, at any other time. The species, hybrids, and varieties at Chelsea are very numerous, but we noted only a few of the finer ones.

Araucaria imbricata.

Branch showing female (upper) and male (lower) cones.

The pitchers of Nepenthes mixta are freely produced and are very effective on account of their size and rich colour, being heavily blotched and striped with crimson, and the blotches well outlined though irregular in form. The pitchers of the hybrid N. dicksoniana attain a length of 10 in. or 12 in. and are of a light green, splashed and spotted with light red. Seldom are the pitchers uniform in colour, except those that are green. In N. Morganiae, however, we have pitchers of a uniform and rich crimson-red; and they attain a much larger size here than those we usually see. Amongst short and wide pitchers, those of N. hookeriana are telling and effective, so that they have no difficulty in holding their own in a collection. They are boldly blotched with crimson-red on a green ground. A handsome companion to this and of which it was one of the parents, is N. Chelsoni. The pitchers are similarly large, sometimes even larger under good treatment, and much of the same shape, but blotched with crimson on a very pale green ground.

Amongst the species of more recent introduction, N. Burkei takes a prominent place on account of its peculiar form, and the large annulus or collar surrounding the mouth of the pitcher and hanging over its sides. This collar is of a rich orange-brown and beautifully ridged transversely in close, parallel lines. The pitcher is constricted in the middle, bulging out to either end. N. B. excellens is much more heavily blotched with crimson than the type. A new and very striking species is N. Wittei, on account of its long and narrowly cylindrical form. It measures 8 in. in length from the base to the insertion of the operculum or lid. The ground colour is pale green, irregularly blotched and netted with crimson. The shape may yet prove variable under different conditions of cultivation as in the case of so many other species and hybrids at different stages of the growth of the plant. N. mastersiana continues to hold its own and will do for many years by reason of the slow growth, unusually dwarf habit, and the freedom with which the pitchers are produced. This hybrid is peculiar in lacking the toothed wings characteristic of most other pitchers and in varying from a pale red to a dark crimson red. This the best form sometimes passes under the name of N. m. rubra, but the Messrs. Veitch grow it in quantity and give it no special name.

TRINITY ROAD NURSERIES, WANDSWORTH.

There are very few nurserymen who have contributed so largely to the beautifying of our smoky London as Mr. Robert Neal. The nurseries at Trinity Road, Wandsworth, are the source from which the vestries of most of the metropolitan parishes draw their supplies of trees and shrubs to furnish and decorate the streets, squares, and open spaces under their control. Added to all this, Mr. Neal has many customers in other parts of the United Kingdom, and the Trinity Road and Garrat Lane Nurseries are thus an exceedingly busy corner of the suburban metropolis.

The Deciduous Element is largely catered for, as is evidenced by the large breaks of trees and shrubs in immense variety, and in all stages of growth, that are to be seen, and the sight of which, in themselves, amply repays a visit. For town planting, of course, the Plane is unrivalled, and this has given rise to a vast industry upon the Continent to supply the demand. It has been found by experience, however, that these imported plants do not do nearly so well as home-grown ones, and we were informed that in giving orders for Planes various vestries had stipulated that the trees should be home-grown. Of the foreign material, that coming from Belgium and the South of France is regarded as being the most serviceable.

The Robinias or False Acacias are likewise excellent town trees, and Mr. Neal has a large stock of them in variety. R. Pseudacacia is the most commonly seen in the streets. Ailantus glandulosa, or, as the Chinese call it, the Tree of Heaven, stands the smoke well, and is being utilised for street planting to a great extent. The huge leaves are at once distinct and ornamental, and as the plant is perfectly hardy it can scarcely be overpraised. Catalpa syringaefolia, or as it is sometimes called, C. bignonioides, is certainly one of the handsomest trees that N. America has given us with its large branching panicles of Bignonia-like flowers.

Kolreuteria paniculata is another very fine hardy plant that is not only handsome when in flower, but also when it is covered with its large bladder-like capsules in the autumn. At the latter season the foliage turns a bright yellow—another attraction.

A great feature of that part of the nursery devoted to hardy trees were the large breaks of Lilacs, for there were thousands of plants to be seen, varying from 3 ft. to 7 ft. in height, and all in first-class condition. The popularity of this flowering shrub is really remarkable, although not a whit more than its merits deserve. One might travel a long way, however, to see a stock of plants to equal Mr. Neal's. Cerasus Padus, commonly known as the Bird Cherry, is well worthy of attention. It is a variable species, moreover, and several of its varieties are very handsome.

In addition to the foregoing, a walk round the nursery under the guidance of Mr. Boxall, the genial foreman, revealed quantities of Laburnums and Thorns in variety, Almonds, Weeping Willows, Poplars, and Elms in great profusion, all illustrating what a wealth of variety the lover of hardy trees can now command.

Evergreens.

In this section also there was much to see and much to call forth our admiration. Naturally enough the Coniferae were represented in great force. Cedrus Deodara, and C. atlantica are too well known to require other description. Pinus excelsa is a great favourite, and stands the smoke better than any of its congeners, with, perhaps, the single exception of P. austriaca. Cupressus macrocarpa is possessed of very neat growth, and is admirably adapted for the filling of ornamental vases and window boxes. It is exceedingly handsome in a young state. The same may be said of C. goveniana, which has long, slender, and drooping branches. Both plants are natives of California. We were informed that there is a great demand for small plants of these in seaside towns, and the supply was before our eyes in the shape of extensive batches of well-grown little plants in 48 pots. Aucuba japonica was represented in its thousands, and there were numbers of frames filled with cuttings, of which, judging from appearances, a heavy percentage would strike.

The merits of the Cotoneasters are hardly estimated at their true value, we think. Whether for town or country planting they are alike a success, and the bright red berries add much to the ornamentation of the pleasure grounds in winter. C. frigida is a very vigorous species, and we saw some young specimens at Wandsworth with shoots 3 ft. or 4 ft. long, formed during the past season. C. affinis comes very close to this species, although its ovate leaves make it easy to distinguish between them. Both are handsome trees, and both are very hardy.

Ligustrums are grown in great quantity, including both L. sinense and L. ovalifolium. Of the latter, Mr. Neal has fully three acres of splendid material just fit for planting hedges. Several kinds of Buxus are grown in quantity, of which B. handsworthiana appears to be the favourite. Amongst the members of the genus Euonymus there are many pretty and useful subjects. E. japonicus is a very variable species, and some of its varieties, as E. j. ovatus aureus variegatus and E. j. latifolius aureus variegatus, are grown in great numbers. E. radicans is a very distinct and pretty little shrub, suitable for planting on rockwork, as is also its variety E. r. viridis, which is rather more vigorous in habit.

Fruit Trees of all sorts are a great line with Mr. Neal, and during our walk round we covered acres of first-class samples of Apples, Pears, Peaches, Nectarines, Cherries, etc., in first-class condition, and all awaiting transport. Dwarf pyramidal Apples are largely dealt in, and many of the trees were models of symmetry, some of the larger ones being well set with fruit buds.

Climbers.—A big trade is done in these. Ampelopsis Veitchii and A. hederacea were represented in tremendous force, a large quantity being accommodated in 48 pots, in which they would travel to their destination. Jasmines, again, are great favourites with the public. J. nudiflorum, J. revolutum, J. officinale, and J. o. grandiflorum find the readiest sale. Of Clematises, too, a large stock in small pots is on hand. These plants include all the latest and best varieties true to name.

Ivies, likewise, are a strong feature, upwards of forty forms being catalogued. Amongst this host may be found a wonderful range in size, cutting, and shape of the leave, as well as in the variegation. Surely there is no longer an excuse for bare walls, when they may be beautified at so small a cost and with such a small amount of trouble.

SPECIMEN CHRYSANTHEMUMS.

Perfection is a thing desired by many, but alas, how seldom it is attained! One may see oftimes a subject in which it would be deemed impossible to excel, but presently in another direction you find material head and shoulders above the first, and yet both may be good. I certainly think that the idea of perfection should be left out. It is a well-known fact that what pleases one judge may in a sense poison another, and herein lies much that is of importance to learn. The cultivator must pay attention to the kind of men he has to please in his particular country.

If, as "Mum" says (p. 294), one is allowed to put any number of plants into a pot, then he knows what to do; but of all specimen culture this deserves the cake or putty medal, and should be condemned as bad. Of all things against good specimen culture one cannot speak too strongly on this practice. The growing is practically done away with. As for excess in height, if the variety is naturally tall, and the other points are good, and the plants to as near perfection as possible, there is not much to talk about, notwithstanding the fact that the dwarfer specimens should stand first if they equalled the taller ones in other points.

The rule for a good specimen plant should read as follows:—"All plants to show a clean stem of so many inches (4 in. to 6 in., is the usual measurement given round here)."

Pre-eminent must stand quantity of flower combined with freshness and size. I don't in any way agree with "Mum" that a specimen carrying, we would say, fifty blooms, should come within any distance of exhibition blooms. This is asking too much. Neither size nor depth could be obtained by the flowers on a plant bearing so much. Of course I am speaking of the single plant, and not a quantity bundled together.

If possible the classes should be divided into two for specimen Chrysanthemums. First, plants with flowers taken on crown buds, first or second; and second, plants naturally grown, a slight disbudding allowed. And good growers know that you cannot compare the two. A two or three year old plant of W. H. Lincoln, Viviand Morel, and plenty of others well grown and their proper buds taken, with fifteen to twenty blooms on each plant, will form a formidable antagonist against a plant of the same kind grown in any other way, we will say for decorative purposes, although you may pay every attention to both subjects. By the former method one gets foliage six times the size of the latter, also dwarfness, size, and colour. By the latter method just the opposite. As I said above, if two classes are not drawn up the schedule should state definitely what is required.

In conclusion, I well remember the nearest approach to a perfect exemplification of the subject in question; the variety was one that is now an old one, then it had only been out a short time, viz., Val D'Andorre, with twenty-five splendid blooms taken on late crown buds, and with foliage that had a beauty of its own. It also had another good quality—no stakes. If it ever had any, they had been taken out. I have two plants in my eye yet, and have not seen their equal since. It was at York exhibition.—*J. G. Pettinger, Strawberry Dale Nursery, Harrogate.*

GARDEN FOES.

(*Continued from p.* 301.)

We will now turn our attention to Hemiptera. This order is divided by some entomologists into two sections, Hemiptera Homoptera and Hemiptera Heteroptera, The first includes the Aphis, scale, American Blight, and other insects. The latter contains the Froth Fly and other plant bugs. We will first examine the former, as they have for a long time attracted the attention, not only of the naturalist, but of the gardener and farmer also. There are many different species, one attacking the Rose, another the Cherry, while even the Bean and Pea have their own particular kinds. These little creatures subsist on the juices of the plants; being suctorial they choose the young tender shoots and leaves, as these are much softer for them to thrust their haustellum or sucker into; and when they appear in great numbers, which they soon will do if not checked at the first, they cause great destruction. When we come to consider with what marvellous rapidity they increase, one cannot be astonished that the trees should in so short a time present the appearance as if the insects had fallen from the heavens.

Let us take the simple statement of one of our great naturalists, who paid special attention to the habits of the Aphis, and we shall find that by a few experiments that he made, which I will give in detail, that one single female Aphis is capable of producing a multitude in the course of a few days, as fresh generations succeed each others so quickly, that in the space of about six weeks, one insect, with its successive broods, will produce something like four hundred million millions. In the autumn the female lays her eggs on the shoots or buds of the plants, and these being hatched in the spring, male and female Aphides are produced; but from that time till the autumn these are viviparous, and this goes on for about eight successive generations. Charles Bonnet was, I believe, the first to prove this, for he went to no little pains and trouble to watch their movements. He shut one up by itself. "My plant louse," he goes on to relate, "changed its skin four times; on the 23rd in the evening; on the 26th at two in the afternoon; on the 29th at seven in the morning; and on the 31st at seven in the evening. On the first of June it gave birth to another, and from that day up to the 20th she produced 95 little ones. Between then and August 18th no less than five generations were produced.

Having given you an idea of the rapidity with which they multiply, let us now turn our attention to their destruction. As a warm, dry atmosphere is favourable to their increase, so the opposite will be a means by which they are to be destroyed. Aphides cannot thrive long in a moist atmosphere, though this will not kill them outright, some of the species being much more tenacious of life than others; for instance, the black fly on the Cherry is much more difficult to destroy than the green fly on the Rose; but both may be got rid of by washing with a solution of quassia water and soft soap, or by fumigating, but in either case care must be taken not to injure the plants. American Blight, Schizoneura lanigera is a terrible pest in some places to the Apple trees,

and should be destroyed by frequent washings in winter, with strong solutions of soft soap and sulphur, lime water, etc.

Everyone has seen the froth-like substance on plants, which, if examined, will be found to contain a small insect, Aphrophora spumaria, a plant bug or froth fly. These little creatures do considerable damage to choice plants, and should therefore be destroyed, the best means of which is hand picking. Of mealy bug, there are several species, the most destructive being Dactylopius adonidum. All who have had anything to do with stove plants will know how difficult it is to keep them free from this pest; but by patient perseverance, and a frequent use of the syringe, even the most persistent attacks may be got under. Scale of various kinds also trouble the gardener, a good wash for which consists of soft soap and sulphur, to which a little lime may be added, or the trees may be washed with any well-known insecticide. The second section includes the plant bugs, most of which do not damage our garden crops to any considerable extent.

We next come to the most interesting order in the whole class of insects, namely the Lepidoptera or scale winged. Here we have insects of various sizes, from those with wings, when fully expanded, that do not reach for more than a quarter of an inch, to others of very large size. It is to this order that butterflies and moths belong. The habits of some of the species are very familiar to many of us; there are others, however, whose earlier stages of existence have baffled even the most zealous entomologists. This order is divided into two sections, the Rhopalocera or Butterflies, and Heterocera or Moths. The first contains only a few species that do serious damage to the gardener, the worst of which is Pieris Brassicae or large Cabbage Butterfly. This is so well known that it needs no description, the diagram before us being a faithful illustration. To the gardener it is a terrible foe, for, being double brooded, it is on the wing during April and July, and the caterpillars may be found in June and August. The latter brood, however, is the more numerous in individuals, and therefore does the greater damage. It is only in the caterpillar state that these do us harm; for then they are so voracious that in one day they will consume more than double their own weight of food. Hand picking is the best remedy.

We next come to the second section, and here we shall find some of the prettiest, and at the same time most destructive, of all the enemies the gardener has to contend against. Who would have any idea that the delicate Clear Wing Sphinx Moth (by which the entomologist sets such store) played such havoc with our Currant bushes. There are about a dozen species of Trochilium, all of which feed on the pith of trees. T. tipuliformis is, perhaps, the best known to the gardener in this district, the larvae of which feed on the pith of the Red Currants. The perfect insect makes its appearance early in June, when the female deposits her eggs in the crevices of the bark. When the caterpillars are hatched they burrow into the centre, and feed on the pith till full grown. They then change into the pupa state, emerging in the following June. To rid the trees of these pests, when the foliage shows signs of drooping, the branches should be cut off. If these are opened the caterpillars will be found. The moth is a very pretty creature, and worth preserving. There are many others of the Sphinx tribe, but none do any serious damage to the fruit trees.

There are, however, others of this extensive order to which may be traced much of the mischief done to our garden crops, they being amongst the most destructive of our foes. The Goat Moth, Cossus ligniperda, the larvae of which feed under the bark of the Elm, and other trees, sometimes does considerable damage. It is in search of these that we so often hear the woodpecker tapping at the trees. On one occasion I took no less than 94 larvae of this moth from one tree. They had completely eaten the inner bark for the greater distance round the trunk, leaving a cavity. When they are so numerous, if left to themselves, they will soon kill the largest trees. The larvae should therefore be destroyed when they make their first appearance.

The Ghost Moth, Hepialus Humuli.—In some districts the larvae of this species do considerable damage to the roots of various crops, especially the Carrot. People residing in the country may often have seen the perfect insect hovering over the meadows just at twilight. The male, which is about two and a half inches across the wing, is of a snow white colour; hence the name Ghost Moth. The female is of a dull yellow, with irregular markings. The best of all preventives is deep cultivation; for during the autumn when the larvae are at work they may be turned under at the time of digging to a sufficient depth to prevent any harm being done, as they cannot live long at such a distance from the surface.

The Wood Leopard, Zeuzera Aesculi.—The larvae of this, like that of the Goat Moth, feed on various trees, but, instead of being content with feeding between the two barks, they eat holes into the trunks. They may, however, be destroyed in the same way as recommended for the Goat Moth caterpillars.

The Buff Tip, Pygaera bucephala.—The larvae of this species feed gregariously on the leaves of various trees, sometimes doing considerable damage. They can easily be distinguished, as they clear everything before them. If the boughs are shaken they at once let themselves down by a thread, which, if broken, causes them to fall to the ground, when they may be destroyed.

The Lackey Moth, Clisiocampa neustria.—The larvae of this moth are very pretty creatures. They, however, do considerable damage to the Apple trees. Like the preceding they live in companies, and if frightened at once let themselves down by means of a thread, when they may be destroyed.

The larvae of the Figure-of-eight Moth, Diloba caeruleocephala, also do considerable damage to the foliage of the Apple and other fruit trees. They may be got rid of in the same way as before described. None of these, however, are to be compared to those of the smaller species in their work of devastation, such, for example, as the Codlin Moth Carpocapsa pomonella. The larvae of this moth cause what are called worm eaten Apples, which, falling before they are ripe, will, if examined, be found to contain a small hole from which the caterpillar has emerged. The moth lays her eggs in the eye of the Apple when it is very small. When hatched, the caterpillar eats its way into the pulp, and when fully grown, attacks the core, causing the fruit to fall to the ground, many of the finest specimens being thus destroyed. All fruit that has fallen should be picked up as soon as possible, not that this will materially lessen their number, for most of the larvae will have escaped to find a convenient place to spin their cocoons. Some, however, may still be left, and these will be destroyed. The stems of the trees should also be besmeared with some sticky substance to prevent the caterpillars from crawling up them again.

When the larvae of the small Ermine Moth, Hyponomeuta padella attack the trees severely, hand picking is the best remedy, as they feed in companies under a web, and are therefore difficult to reach with any insecticide.

The Winter Moth, Cheimatobia brumata, which does such damage to the foliage of our orchard trees, ought not to be given any quarter. Every means should be employed to rid the country of this pest. Many are the modes adopted, but none seem to be effectual. So numerous are the larvae in some seasons that they destroy everything before them. As a means for their destruction the ground beneath the trees should be dug soon after the caterpillars have gone to the earth to spin up their cocoon; and any system that will prevent the wingless females from creeping up the stems of the trees, should be adopted.

The Mottled Umber Moth, Hybernia defoliaria is also another very destructive little creature, and should be treated in the same manner as recommended for the preceding.

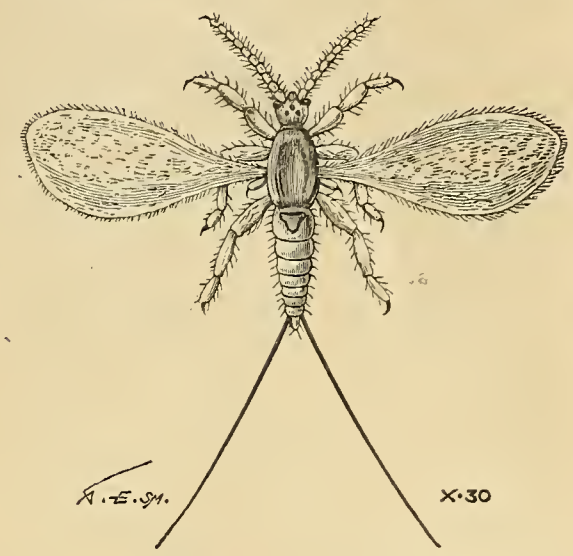
Magpie Moth, Abraxas grossulariata.—This moth is widely distributed, being found from the north of Scotland to the south of England, the caterpillar feeding on the Gooseberry, the Currant, and various other plants. The larvae of this are often mistaken for those of the Saw-fly. In some parts of the country the species is very common; but I have never experienced any difficulty in keeping the larvae under, as they are never so numerous as those of the Saw-fly.

Dart Moths, Agrotis segetum and Agrotis exclamationis.—The eggs of these are laid early in the summer close to the roots of small plants, and when the caterpillars are hatched they feed on the plants near the surface, but as they get older they go deeper into the soil, only coming up to feed at night. They burrow into Turnips, sometimes as many as a dozen being found in one root.

Yellow Underwing, Triphaena Pronuba.—This moth, like the preceding, feeds near the surface on various plants, often doing considerable damage to young Cabbage and Lettuce plants, also to Strawberries.

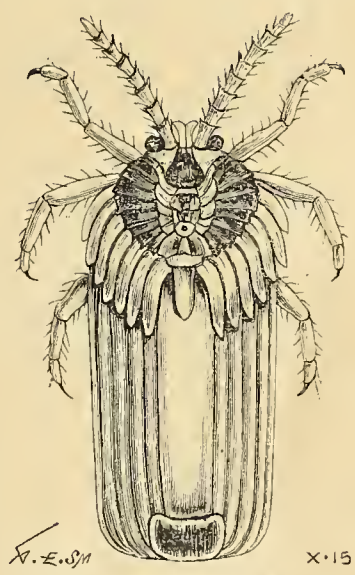
FUMIGATING WITH HYDROCYANIC ACID GAS.

The practical utility of this gas for greenhouse work is no longer a matter of experiment. A good



ORTHESIA INSIGNIS.—MALE.

and novel method was recently used in fumigating 30,000 coleus cuttings infested with the white-tailed mealy bug (Orthesia insignis). The cuttings, as they were brought from the stock plants in the parks, were placed in trays before trimming up. The trays were provided with wire-mesh bottoms, so as to allow a thorough diffusion of the gas. They were then placed in a box one above the other, and the top fastened down as nearly airtight as possible, so that no gas could escape. After this a small dish, containing equal parts of water and commercial sulphuric acid was placed under the trays through the small door, provided for the purpose, and then potassium cyanide (98 per cent. pure) was added at the rate of 1·10 gm. per cubic foot of space and the door quickly closed. The cuttings were allowed to remain exposed to the gas for twenty minutes. They were then removed, trimmed up, and placed in the cutting bed. Treating the cuttings in this way cleaned them completely.



ORTHESIA INSIGNIS.—FEMALE.

The gas has also been successfully used in fumigating Violet cuttings to kill black aphis. In one case 10,000 cuttings in sand were treated. All the insects were killed and no injury resulted to the plants. We have used the gas with marked success in fumigating Violets in flower. The work has been done in three houses, two of which are each 12 by 60 feet and the other 20 by 50. No injury whatever has resulted to the plants, while fully 95 per cent. of the black aphides were killed. The advantages and

disadvantages of the gas for greenhouse work may be summarised respectively as follows :

(1) Effectiveness with which it works.

(2) Ease of application.

(3) Leaves no objectionable odour, the flowers being as sweet immediately after treatment as before.

(4) A decrease in the number of applications necessary during the season.

(5) Its quick action and quick diffusion.

The principal disadvantages are :

(1) Its deadly poisonous nature to man and beast, which, however, amounts to little when care is exercised.

(2) It must be used at night and only on nights when the temperature is sufficiently high outside to allow of thorough ventilation of the houses for thirty minutes.

The gas cannot be used indiscriminately upon all plants. Some, like the Violet, will stand strong doses for twenty-five minutes, while the young growing shoots of the Rose and Tomato are very sensitive and easily killed by it. It is necessary to determine for each species of plant and stage of growth what it will stand. When these points are all actually determined by careful experiments we can see no good reason why it should not come into general use for greenhouse work.—*P. H. Dorsett, in the* "Florists' Exchange."

[In calling attention to this little known method of fumigating to destroy the insect pests of stove and greenhouse, we supply illustrations of the remarkable insect known entomologically as Orthesla insignis. The specimens from which the blocks were prepared were taken upon stove plants in this country, some of which they infest very badly when allowed to once get established. The females are very numerous, but the males very scarce and difficult to detect. The true shape of the female insect is very much masked by a remarkable and curiously shaped structure formed by a waxy exudation from the insect itself, The pest is spoken of by gardeners who make its acquaintance as a new kind of mealy bug. The Orthesia is quite distinct from the mealy bug, but like that is endowed with the power of movement all through its life, though sluggish. In any case it is a pest that cannot too soon be got rid of when it makes its appearance on stove plants. —Ed.]

NOTICES OF BOOKS.

My Garden Diary for 1897. Publishers, Sutton & Sons, Reading. Price 1s.

This little work is a diary extending to twenty-eight pages, with a cover adorned with an artistic garden scene. When spread open the left hand page is seen to contain calendarial directions for one or other of each of the twelve months of the year, while at the bottom is a variety of information on a great number of topics of which it is necessary to be reminded. The right-hand page, in like manner, contains the days of the month and week, and the rising and setting of the sun and moon, after the style of an old almanack. More than half of this page is left blank, for the use of the owner in making notes and memoranda.

The calender of garden operations will be found most useful to amateur and even professional gardeners. It is quite surprising the amount of information relating to the monthly operations, both under glass and in the open, that has been crammed into each page. The details are neccessarily brief, but this affords all the more space for variety of topic. We quote one paragraph for the month of January to show the nature of the information and its concise wording :—"Many beautiful flowers for adorning conservatories and for bedding out in the summer months may be raised from seed. Such fine subjects as Antirrhinum, Canna, Gesnera, Grevillea, Gloxinia, Hollyhock, Petunia, Verbena, and others, will, if sown now, be of immense service later in the year." There are ten of such paragraphs for the month of January, independently of the miscellaneous information at the bottom, and that, too, in a month of the year when little is supposed to require doing in a garden beyond digging, trenching, manuring, pruning, and forcing subjects under glass. Flowers and vegetables thus receive a great amount of attention, and as the days lengthen and the year opens out, the notes become more interesting, and the execution of the work indicated more urgent. The motto of the diary is, "Doing things in good time is the main secret of successful gardening," which is taken from "The Garden that I Love," by the Poet Laureate. The printing is neatly executed, and the letterpress quaint and attractive. The work has been distributed to Messrs. Sutton's customers, but a few copies remain for sale.

The Journal of the Royal Horticultural Society.

The second part of the twentieth volume of the Journal of the Royal Horticultural Society is an interesting one, since it contains a great variety of useful information. The history of the society, as read at Chester by the president, Sir Trevor Lawrence, Bart., will interest a great many into whose hands this volume may fall. Many of the Fellows would previously have had but a vague idea of the long history and vicissitudes of the society till brought into a concise form like the present, and laid before them.

As a piece of literature, and interesting reading on the subject of horticulture, "Garden Craft," by the Very Rev. S. Reynolds Hole, Dean of Rochester, will be read with pleasure by a large number who were unable to be present at Chester, where the paper was read. The Dean, according to his wont, makes numerous quotations, both in prose and verse, from his predecessors who loved their gardens. This is how he describes what is meant by garden craft :—"The art, surely, of obtaining the greatest possible enjoyment from our garden by making it a place which shall refresh our spirit with its restful quietude, and delight our senses with its graceful outlines, its varied colours, sweet fragrance, and singing birds. It should be a place of reverent admiration, cheerful exercise, happy intercourse, tender memories, immortal hope." He discusses and compares horticulture and architecture, and horticulture and agriculture, indicating their relationships. "Garden Literature" is taken in hand by Mr. F. W. Burbidge, M.A., F.L.S., who gives a condensed account of the subject from the earliest of recorded times to the present. He also deals with "Reference Books on English Gardening Literature," etc.

An account is also given in this volume of the great fruit show at the Crystal Palace, together with papers read at the conference held during the show. "The Importance of British Fruit Growing from a Food Point of View" is taken in hand by Mr. Edmund J. Baillie, F.L.S. While dealing with fruit as food he gives various opinions of different writers, one of whom, tersely summing it up in one sentence:—"Give me good bread and pure water, and I have the necessaries of life, and an Apple, and I have its luxuries." This same man had lived on a few pence a day for months, to show the poverty-stricken people of the East End of London, how little was really necessary to maintain life. Numerous statistics about food are also given in a classified form.

This number of the Journal will also prove interesting as containing a full account of the trials conducted at Chiswick during 1896, and which will be handy for reference at any time, as showing the relative value of those fruits, flowers, and vegetables, which were placed under suitable and similar conditions, so as to assist the committees in coming to a decision as to the merit of any particular variety. Each of the latter is briefly described. and the marks attached to them indicate their garden value as it appeared in the trials at Chiswick.

GRAND YORKSHIRE GALA.

The annual meeting of the guarantors and life members of the Grand Yorkshire Gala was held at Harker's Hotel, York, on the 8th inst. In the absence of Ald. Sir Joseph Terry, J.P. (the chairman of the council), the Lord Mayor (president of the gala) took the chair, and there was a good attendance. A letter was read from Mr. Matthew Cooper regretting his inability to be present.—The president regretted the enforced absence of Sir Joseph Terry through illness, but thought they would all be glad to hear that he was recovering. Upon the result of last year's gala, he said that those associated with the fête had every reason to congratulate themselves. It had proved one of their most successful ventures. Had the weather been fine on the opening day, the gala might have been a record one. As it was there had been some extraordinary expenses, so that a most favourable balance had been somewhat diminished.

They were, however, prepared with a schedule of of £750 for the ensuing year, which amount he believed was as large as that offered by any horticultural society in the country.—Ald. Border proposed the re-election of Sir Joseph Terry as chairman of the council for the ensuing year, and alluded to his long connection with the fête.—Mr. George Kirby seconded the proposition, which was unanimously agreed to.

The president moved the election of Ald. Border as vice-chairman, expressing regret that Mr. Edward Rooke's health prevented him from being further identified with the gala, he being practically unable to leave the house.—Mr. T. M. Lambert suggested that his lordship should allow himself to be nominated, but the Lord Mayor declined, remarking that if elected it would be quite impossible for him to discharge his duties.—Mr. Henry Scott seconded the election of Ald. Border, which was assented to *nem. con.*—The president announced that satisfactory arrangements had been made with the Bootham Asylum authorities for the holding of the fête in June next, whilst he again consented to act as president, and the City Sheriff (Ald. Dodsworth) had agreed to become a life member.—Mr. Joseph Wilkinson was re-elected treasurer; Mr. C. W. Simmons, secretary; and Messrs. Pearson and Taylor, auditors. The council was appointed as follows:—Messrs. R. Anderson, G. Balmford, J. Blenkin, J. Biscomb, Ald. Clayton, J. W. Craven, M. Cooper, H. C. Day, G. C. Dennis, Ald. Dale, Councillor L. Foster, G. Garbutt, T. G. Hodgson, J. J. Hunt, Councillor A. Jones, G. Kirby, E. B. Kendall, T. M. Lambert, Ald. Purnell, E. S. Robinson, H. Scott, W. S. Sharp, and J. B. Sampson.

The following grants were made :—Floral, £700, and a special prize of £50 in celebration of the 60th year of her Majesty's reign; music, £200; fireworks, £130; balloon ascents, £60; amusements, £175. The Sheriff of York was unanimously elected as a life member, and a vote of thanks to the Lord Mayor for presiding concluded the meeting.—His Lordship, in replying, alluded to the valuable aid which the gala had afforded to the local charieties, and said he did not think that there was anything in the country to equal the fête.

PRUNING GOOSEBERRIES.

Neither at p. 297 nor in preceding issues do your correspondents seem to have taken any notice of Gooseberries pruned on the spur system as practised more or less in the northern counties. The ruling idea seems to be how to get the biggest possible crop from any given number of bushes. I do not seek to minimise the utility and praiseworthiness of such a plan; but I do not forget than an outcry but too often arises during the berry season, when the crops in various market and other gardens are so heavy that the picking of them becomes an unremunerative occupation owing to the temporary glut in the sale market.

Now the method advocated by "Brightspade," "Rex," and Mr. Benjamin G. Berry, enables the cultivator to obtain a heavy crop and fill the centre of the bush with shoots in such a way as to shield the berries from the hot sunshine of the south. All the same the pruning given and the excessive crop obtained in fruitful seasons, tends to wear out the bushes at a much earlier stage than happens to spur-pruned plantations. Supposing, for argument's sake, that quick returns pay best, which they would do provided the grower were unable to sell his entire crop at a paying price; you must not forget that dry summers shorten the berry harvest and wet ones spoil the fruits, especially when gathered in a wet state and sent even to local markets in large quantities. Would it not be better to encourage moderate cropping by spur-pruning some plantations at least, in those districts where the climate favours this plan? Gooseberry bushes, whether upright or drooping in habit, may be pruned precisely as you would a Red Currant so that I need not give any details of a process that is well known. My argument is that Gooseberries pruned on the spur-system and planted in good holding soil will last twice as long as those on which the shoots are left at their full length, and consequently overburdened with fruit. If the crop is lighter on spurred bushes (which is open to doubt), compensation would result from their being longer lived, thus saving the expense of renewing the plantation after ten years or so. These remarks would apply to market and private gardens as well as to those of the amateur grower.—*Pruner.*

GARDENING MISCELLANY.

KALANCHOE GRANDIFLORA.

For winter blooming this is a pretty and useful subject, and certainly very much the best of the Kalanchoes. The flowers are produced in terminal cymes, and last over a considerable period of time. A plant that we came across when visiting Messrs. John Laing & Sons, at Forest Hill, at the beginning of the month, had been blooming continuously since September, and had then two or three flowers open. The bright orange yellow of the flowers, which are fully 2½ in. in diameter, is most conspicuous amid the gloom of a mid-winter day. The slightly fimbriated edges of the petals add still further to the appearance of the flower. The stems are succulent, and the leaves much less succulent, glaucous, 2 to 3 in. in length, and ovate in shape. They are, moreover, produced in pairs, and sessile. The plant, which was introduced from India about the year 1865, usually runs from 18 in. to 2 ft. in height. It will do very well in a warm greenhouse, but during the winter months, the flowers open better if it is placed in an intermediate stove.

FRUIT AT COVENT GARDEN.

The imports of Apples, as was confidently prophesied at the beginning of the season, have been enormously heavy this year and consequently there is no lack of the popular fruit. The total yield of Apples in the American district falls just under 177,000,000 bush., as against 181,500,000 bush. in 1895, and 171,000,000 bush. in 1894. Some time ago we were informed that 1,500,000 barrels of Apples were awaiting transport from Canada alone, and there is no doubt that a goodly percentage of them have arrived. It is not by numbers alone, however, that we must reckon, in comparing home-grown produce with foreign imports; quality has to be reckoned with, and in this our British Apple has no rival. Thus, while the foreign fruit has been fetching from 3s. to 4s. a bushel, such popular varieties of our own production as Cox's Orange Pippin, Newtown Pippin, and Beauty of Kent, will fetch from 8s. to 10s. for ordinary fruit, whilst picked samples often run much higher, sometimes up to a price equal to 30s., 40s., or even 50s. per bush.

Tomatos, year by year, are growing in favour with the general public, and the demand is exceedingly brisk at this season. Home-grown ones will fetch 10d. or 1s. a lb. easily enough, but the foreigners can be had for 2d. per lb.; indeed, this is the average price at which thousands of boxes change hands. The Canary Islands are heavy contributors, and it is estimated that 3,000 tons of good fruit came from this source last year.

English Grapes hold their own with ease. Gros Colmar is, of course, the staple variety. There is no mistaking, its huge deeply coloured berries, and it is everywhere looked upon as the very best late market variety. The weight of it in tons that passes through the market must be something enormous. It has been selling at prices varying from 1s. 3d. to 1s. 9d. per lb., a wondrous change from the high prices that used to rule only a comparatively few years ago. Alicante is also in fair demand, although very few Lady Downe's are to be seen.

Oranges bid fair to be more plentiful than they have ever been before. Jaffa, Lisbon, Valencia, and Malaga, ship tremendous quantities to our shores; indeed, it may almost be said that they have had the monopoly of this part of the season's trade up to the present. Quite lately, however, the Australians have entered into the competition. A trial cargo has been sent over and has exceeded expectations. Some of the prices were as high as 25s. per box of 160 fruits. It is rumoured that our colonial friends are so pleased with the success of the venture that over 100,000 boxes of Oranges will probably find their way here from them next year. It is estimated that no fewer than 100,000 cases of fruit were marketed during the week preceding Christmas. As this represents a total of about 40,000,000 fruits it is manifest that other people besides children are in love with the golden Apple, as it is believed that this is the largest quantity that has ever passed through the market in one week before.

Other fruits of foreign production are to be had in proportionate quantities. Pineapples from St. Michael, Lemons from Sicily and Spain, Pears from California, Pomegranates from Germany, Figs from Smyrna, Dates from the East Indies and Asiatic Turkey, as well as a miscellaneous assortment of nuts, dried and tinned fruits of all descriptions add to the stock, and promise flavour to suit each and every taste.

SOCIETIES.

ROYAL HORTICULTURAL.—*Jan. 12th.*

The exhibits at the Drill Hall, on Tuesday last, were more numerous and extensive than could have been expected at this time of the year. The mild weather no doubt favoured the bringing out of the flowers. Orchids were particularly prominent and numerous. Freesias, Chinese Primulas, and Cyclamens, were also exhibited in quantity.

A floriferous group of Orchids was exhibited by Messrs. J. Veitch & Sons, Ltd., Chelsea, who had fine pieces of the showy Laeliocattleya Pallas, L. Ingrami, Oncidium varicosum Rogersii, Cypripedium Creon, C. Oenone, C. leanum, C. insigne Chantini, and various other beautiful hybrids. Dendrobium glomeratum, with its rosy flowers and scarlet lip seems perpetually in flower. Allied to this is D. subclausum with smaller orange-scarlet flowers. The group was highly interesting on account of its great variety (Silver Flora Medal).

Baron Schroder (gardener Mr. H. Ballantine), The Dell, Egham, staged a small group of choice and valuable Orchids, including a piece of Odontoglossum crispum Stevensii, bearing a magnificent raceme of of bloom. Cattleya Loddigesii superba exhibited extraordinary vigour and bore a spike of eight flowers and a bud of remarkable size. Very fine also were the plants and flowers of Odontoglossum crispum Evelina, a yellow hybrid of the same genus, Cypripedium insigne Sanderae, C. Madame de Courte and C. leeanum superbum, all well-grown. (Silver Flora Medal).

Messrs. F. Sander & Co., St. Albans, exhibited a group of Orchids consisting largely of Odontoglossums, Cattleyas, Dendrobiums, and Cypripediums. Very choice were Laelia anceps schroderiana, L. A. Hillii, Odontoglossum Worscewiczii, Stenorhynchus speciosa major, Cattleya chocoensis major, Odontoglossum naevium majus excellens, O. harryanum and O. Rossii majus. Exceedingly pretty and interesting is the rare Oncidium pulchellum. Paphinia Randii is a peculiar looking species, with a brush of white hairs on the dark lip. A Silver Flora Medal was awarded to F. A. Bevan, Esq. (gardener, Mr. W. H. Lees), Trent Park, Barnet, for a large group of Odontoglossums set up with Asparagus and Maidenhair Ferns. The varieties of Odontoglossum crispum were numerous, and both those and O. Pescatorei were notable for the huge panicles of bloom. Some forms of O. luteo-purpureum accompanied the rest. The huge pan of C. insigne was also an admirable sample of cultivation, showing that Mr. Lees can grow Orchids as well as Chrysanthemums.

Messrs. Hugh Low & Co., Upper Clapton, also staged a mixed group of Orchids, including some fine pieces of Angraecum sesquipedale, Odontoglossum crispum, Cypripedium leeanum superbum, C. Madame Georges Truffaut and others. They also had a fine piece of the rare Phalaenopsis brymeriana, with a rich crimson lip. The whole were set up with Asparagus and small plants of Cocos weddeliana. (Silver Flora Medal).

Cypripedium germinyanum superbum was exhibited by Fred. Hardy, Esq. (gardener, Mr. F. Stafford), Ashton-on-Mersey. He also had Cypripedium Sanderae, Dendrobium Schneiderianum, Laelia anceps Dawsoni, and various others. Sir F. Wigan (gardener, Mr. W. H. Young), Clare Lawn, East Sheen, exhibited the rare Cymbidium grandiflorum, bearing five of its huge flowers, also Laelia autumnalis var. and L. a. atroruhens. Laelia anceps Mrs. de B. Crawshay was exhibited by De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks.

Chas. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming, exhibited Laelia Lucy Ingram, L. Exquisita, L. amoena, Laeliocattleya Regina, Laeliocattleya Venus, all of which were hybrids raised at Elstead House. Some hybrid Cypripediums were exhibited by Edwin Stanley Clark, Esq. (gardener, Mr. Edwards), Oak Alyn, Wrexham. Phalaenopsis stuartiana Woodlands var., some Cypripediums, and Laelia anceps Gemma were exhibited by Messrs. F. Sander & Co. Messrs. J. Veitch & Sons, Ltd., exhibited the new hybrid Cattleya Miranda and Cypripedium Prospero, the latter being raised from C. spicerianum crossed with C. insigne Sanderae. A Cultural Commendation was accorded to Messrs. Linden, L'Horticulture Internationale, Brussels, for a piece of Mesospinidium vulcanicum maximum, with a splendid raceme of large flowers of good substance and colour. They also staged M. v. grandiflorum, M. miniatum, Odontoglossum crispum aurosum and Cypripedinm insigne in a great number of varieties. Some of the richly blotched and finer forms were C. i. maximum, C. i. Warburtoni, C. i. delectum, C. i. rubiginosum, C. i. illustre, and C. i. aureo-spicum.

Messrs. Wm. Cutbush & Son, Highgate, N., set up a group of plants including Cyclamen persicum, Cutbush's strain, and Erica hyemalis superba and E. melanthera. The two latter subjects especially were in grand condition, we have seldom seen such well-grown and well-flowered plants. Kentias formed an appropriate background to the group, and an edging was furnished by Isolepsis gracilis in 48-sized pots (Silver Flora Medal).

A basket filled with small plants of the Wych Hazel, Hamamelis arborea was sent by Messrs. Thos. Cripps & Son, The Tunbridge Wells Nurseries. Samples of the pretty purple single Violet Admiral Avellow were also submitted by the same firm.

A splendid group of Cyclamen was contributed by Mr. John May, Gordon Nursery, St. Margaret's, Twickenham. The plants were growing in forty-eight pots, and were exceedingly dwarf and sturdy specimens of their kind. The foliage was vigorous and substantial, and the mottling more than usually well marked. The plants were very floriferous, and the individual flowers were of great size and merit. A great variety of shades was represented, from purest white to bright rose and deep crimson (Silver Flora Medal).

Cyclamens were also shown in quantity by Mr. Thorne, gardener to Major Joicey, Sunningdale Park, Ascott. The plants were larger than those of the preceding exhibitors, but although very full of flower they were somewhat straggling in growth as if they had been subjected to too much heat. Apart from this the plants were of great commendation (Silver Flora Medal).

One of the most interesting exhibits in the hall was a batch of hybrid Senecios sent by Mr. R. Irwin Lynch, the Botanic Gardens, Cambridge. They were hybrids between the garden Cineraria and Senecio multiflorus, the latter being the female parent of them all with one exception. The whole of the forms strongly exemplified the prepotency of the male parent. One or two of the forms approached very near to C. cruenta in habit, and in the form of the flowers.

A splendid group of Freesias came from Mr. Sturt, gardener to N. L. Cohen, Esq., Englefield Green. Although the plants were only in 48-sized pots, the vigour of habit and size and abundance of the flowers were remarkable. Mr. Sturt is evidently a master of the art of growing Freesias (Silver Flora Medal).

Messrs Barr & Son, King Street, Covent Garden, had several pans of the pretty little Narcissus Corbularia monophylla, the delicate flowers of which are not unlike a hoop petticoat. At one side of the hall appeared a finely-berried pyramidally trained specimen of Crataegus Carrieri from Messrs. Wm. Paul & Son, Waltham Cross, Herts. It was between 9 ft. and 10 ft. in height, and fully 5 ft. in diameter at its widest part.

A very nice batch of Chinese Primulas came from Messrs. H. Cannell & Sons, Swanley, Kent. Messrs. Cannell's strain of this popular flower is far-famed, and certainly the examples shown fully sustained the reputation, although the plants were young, and had not nearly attained their zenith of beauty. Such named varieties as White Swan, Her Majesty, Eynsford Yellow, Cannell's White, Cannell's Pink, Pink Perfection, Defiance, and Swanley Blue were exceedingly fine, the flowers being large and of excellent form (Silver Flora Medal).

Messrs. J. Veitch & Sons, Ltd., Chelsea, exhibited a boxful of cut blooms of the now famous hybrid Rhododendrons of the Javanico-jasminiflorum section. Amabile, Multicolor Neptune, Delicatum, Imogene, Princess Beatrice, Rose Perfection, Cloth of Gold, Luteo-roseum, Multicolor Ruby, balsminaeflorum

Rajah, b. album, and b. aureum were the varieties shown.

Mr. de Langhe, Rue de Constantinople, Brussels; showed a peculiar strain of Cyclamen, in which the edges of the petals were all delicately fimbriated. The petals in most cases were quite rotund in form, and the general aspect of the flowers was very quaint. Mr. W. Wells, Earlswood Nurseries, Redhill, Surrey, sent some blooms of Chrysanthemum Queen Victoria, a very valuable late white variety.

The Fruit Committee had to consider the merits of some very fine collections of hardy Fruit.

Messrs. George Bunyard & Co., Maidstone, staged a hundred dishes of Apples in superb preservation. Most of the leading varieties of both the culinary and dessert sections were represented, and by fruit that was a marvel of bright colouring. Belle Pontoise, Lady Henniker, Cox's Pomona, Mere de Menage, Peasgood's Nonsuch, Hoary Morning, Golden Noble, Emperor Alexander, Newton Wonder, Claygate Pearmain, Cox's Orange Pippin, Allington Pippin, Bow-Hill and American Mother are a few of the most conspicuous varieties. Pears Doyenné d'Alencon, Uvedale's St. Germain, and Bellisime d'Hiver were also shown. A Silver-gilt Knightian Medal was deservedly awarded for this fine display.

Upwards of 80 dishes of Apples and Pears, principally the former, were contributed by Messrs. Jas. Veitch & Sons, Ltd. Apples, Lane's Prince Albert, Newton Wonder, Bismarck, Annie Elizabeth, King of Tomkin's County, Gloria Mundi, King of the Pippins, the Queen, Cox's Orange Pippin, Baumann's Red Reinette; and Pears, Bergamotte d'Esperen, Marie Benoist, and Beurré Rance, were among some of the best fruit seen. A dish of Tomato Frogmore Selected was included. Silver-gilt Banksian Medal.

There was again a very brisk competition for the Veitch Memorial Prizes for the best flavoured Apple and Pear. There were 21 dishes of Apples submitted. Mr. J. Powell, gardener to Col. Brymer, M.P., was placed first with Cox's Orange Pippin. Mr. Woodward, gardener to Rodger Leigh, Esq., Barham Court, was second with Blenheim Orange. There were 16 dishes of Pears shown. Mr. Woodward was first here with Winter Nelis, and Mr. Owen Thomas, gardener to H. M. The Queen, second, with Ne Plus Meuris.

Mr. George Wythes, gardener to Earl Percy, Syon House, Brentford, received a Cultural Commendation for Tomato Syon Prolific.

Messrs. H. Cannell & Sons were awarded a Silver Banksian Medal for a collection of Potatos comprising between sixty and seventy dishes, in as many varieties. The tubers were large and clean samples. Field Marshal, Gold Finder, Perfection, Col. Long, Duke of Albany, Imperator, Beauty, Schoolmaster, Early Puritan, and Abundance, were some of the most noteworthy samples.

Messrs. A. W. Young & Co., Holmesdale Nurseries, Stevenage, Herts, showed a collection of Potatos, and three dishes of the fine new Tomato Young's Eclipse.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

How to Propagate Cerastium tomentosum.—*Cerastium*: The plant is of the very easiest propagation. We used to get the garden shears, sometime about the month of April, and cut off the tops of the old plants even and level, both for the purpose of getting an even, young, and dwarf growth upon the old plants, and for securing cuttings to make edgings, panels, etc. There were no roots whatever upon those cuttings, and we merely inserted them firmly in the soil where we wanted them to grow, either by taking out a shallow trench as if for box or by dibbling them into the prepared soil. This was, however, in a cool northern climate where the moisture was sufficient to keep the cuttings alive till they rooted, without artificial watering or very nearly. We fear that it would be necessary to have the cuttings rooted in your case so as to be fit for planting out in June, owing to the weather being hot and very often dry about that time. You had better put some compost consisting of sandy loam and leaf mould into a cold frame about the middle or end of March. Press the soil down firmly, and dibble the cuttings into it; water with a rosed watering pot and keep the frame close till the cuttings show signs of having rooted. Then they may be gradually ventilated and the frame finally removed altogether. Next year you could dibble the cuttings into prepared soil in a sheltered but not over-shaded border, in September. They would be rooted long before June.

Rhododendron leaves eaten.—*Brightspade*: The leaves have been eaten by some caterpillar when in a young and soft condition; but to say what caterpillar would be merely guess-work, beyond the fact that it was the caterpillar of some moth, in all probability. You should keep an eye upon the plants next June and July, when the plants are making their annual growth. Hand-picking would be the most effective remedy, if you find the culprits. Most likely the pupae will be laid up in the soil about the roots, and it might be worth while to fork over the soil lightly and keep an outlook for the pupae cases which should be destroyed, thereby preventing the moths reaching the perfect state and laying their eggs upon the plants.

Boxes for Palms and Orange trees.—*Omega*: Oak or Teak wood make the most durable tubs or boxes in which to grow large Palms, Orange trees, and similar subjects which have got too large for pots. Pitch pine, we should think, would answer the purpose admirably, if you can get it. Oak boards need not be very wide to answer the purpose. Failing any of the above, we believe that Elm wood is very durable, even when frequently exposed to wet and drought.

Coupons for Encyclopaedia.—*St. Lawrence*: Provided you get the requisite number of coupons for Ogilvie's Encyclopaedia, it does not matter whether they are quite recent or not. Those cut from any issue of THE GARDENING WORLD will be sufficient.

Hollies not bearing Berries—*Omega*: Some Holly trees are hermaphrodite, that is, they bear stamens and an ovary in the same flower. Others produce only male flowers and never can bear berries. A third set of trees might have imperfect flowers, and supposing there were perfect ovaries in them, they would not produce berries unless there were trees with perfect stamens within a reasonable distance. Examine the flowers when the trees are in bloom, and if you cannot make out what the flowers are, send some of them to us and we will help you. We cannot say why some of your trees do not flower, except that they are not old enough. If they are grafted trees they should flower early; but if they were raised from berries they take much longer time to reach the flowering stage. Examine the trees in June and July.

Tubes and boxes.—*St. Lawrence*: Several of our advertisers would be able to supply what you want, including Messrs. Wood & Son, Wood Green, N., and Messrs. Corry & Co., Finsbury Street, London, E.C.

Square Perches in a piece of Ground.—*Omega*: A piece of ground 80 ft. long, by 24 ft. wide, would contain 1,920 sq. ft., or 213⅓ sq. yards, or 7 perches, 5⅓ yards.

Names of Plants.—*Amateur*: 1, Cupressus pisifera plumosa aurea; 2, Cupressus pisifera squarrosa; 3, Cupressus pisifera plumosa; 4, Cupressus lawsoniana variegata.—*T. M.*: 1, Oplismenus Burmanni variegatus; 2, Erica wilmoreana; 3, Cytisus racemosus, not Genista; 4, Jasminum nudiflorum; 5, Erica carnea; 6, Coleonema album.—*A. M. B.*: 1, Senecio Kaempferi aurea maculata; 2, Adiantum decorum; 3, Adiantum Gheisbreghtii.—*A. C.*: 1, Oncidium lanceanum; 2, Odontoglossum cirrhosum; 3, Odontoglossum mirandum; 4, Cypripedium leeanum.

Communications received. — A. O. — A. P.—J. Vernon.—S. Gibson.—J. M.—A. L. S.—K.—R. E. —Memor.—J. Wilson.—Stevens.—W. Watt.—T. M. —P. — W. Enders. — G. Wilson. — Taro. — A. McPherson.—Graig.—Wat.—Reader.—N. M.

TRADE CATALOGUES RECEIVED.

A. W. YOUNG & Co., Stevenage, Herts.—Chrysanthemums, Dahlias, Begonias, Gloxinias, Paeonies, Pansies, Fruit Trees, Climbing Plants, &c.

JAMES CARTER & Co., High Holborn, London.—Abridged List of Carters' Tested Garden Seeds.

JAMES DICKSON & SONS, 32, Hanover Street, Edinburgh. — Garden Seeds, Sundries, Tools, Manures.

FISCHER, SON, & SIBRAY, LTD., Royal Nurseries, Handsworth, near Sheffield.—Catalogue of Vegetable and Flower Seeds and Horticultural Requisites.

H. CANNELL & SONS, Swanley, Kent.—Complete Seed Guide.

HERD BROS., Seed Merchants, Penrith, Cumberland, Herd's Garden Seeds.

JOHN DOWNIE, 144, Princes Street, Edinburgh.—Spring List of Garden Seeds.

W. J. GODFREY, F.R.H.S., F.N.C.S., Exmouth, Devon.—Catalogue of Choice Chrysanthemums.

LONDON SEED TRADE.

January 12, 1897.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a better demand for Clover and Grass seeds. Canadian Red Clover finds buyers at advancing rates. Alsike and White steady. Ryegrasses higher.

COVENT GARDEN MARKET.

January 13th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs.	50 0	
Grapes, per lb	0 6	1 6
Pine-apples.—St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	3 0	6 0
Asparagus Fern, bun.	1 6	3 0
Azalea, doz. sprays...	0 6	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 6	3 0
Chrysanthemums, doz. blooms	1 0	4 0
Chrysanthemums, doz. bnches.	3 0	6 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	4 0	6 0
Geranium, scarlet, doz. bunches	6 0	9 0
Hyacinths (Roman) doz. sprays	0 9	1 0
Lilium longiflorum per doz.	4 0	8 0
Lilac, White (French) per bnch.	4 0	5 0
Lily of the Valley doz. sprays	0 9	1 6
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Mimosa, per bnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (indoor), doz.	1 0	1 6
" Tea, white, doz.	1 0	2 0
" Niels	6 0	9 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	1 0	1 6
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms	1 0	1 6
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz blms.	4 0	9 0
Violets (French) per doz. bnches.	1 6	2 0
Violets (English) per doz. bnches.	1 6	2 6
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per bnch.	2 0	3 0

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Azalea, per plant.....	2 0	3 6
Chrysanthemums, per doz.	6 0	9 0
" per pot	1 0	2 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, Invar. doz	6 0	24 0
Erica Hymalis, per doz.	12 0	15 0
Erica, per doz.	9 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	12 0	15 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums. doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	9 0	18 0
Solanums, per doz.	9 0	12 0
Tulips, doz. pots.....	6 0	9 0

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PEA: WEBBS' ASTRONOMER.

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Valuable for exhibition and table use. Exceedingly crisp and sweet in flavour.
1/- per Packet, post free.

See Webbs' Spring Catalogue, post free, 1s.

WEBBS', Wordsley, STOURBRIDGE.

BEGONIAS, YOUNG'S PRIZE STRAIN SEEDS, 6d. and 1s. per packet to colour or mixed. Double Mixed 1s. and 1s. 6d. packet. Bulbs Mixed, grand strains, 25 for 3s. 6d. free. A. W. YOUNG & Co., The Nurseries, Stevenage.

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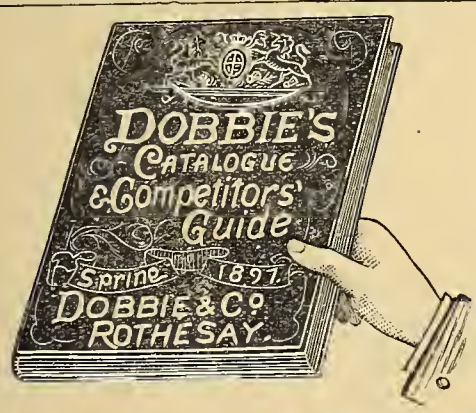
JOHN LAING & SONS, BEGONIA GROWERS, &c.
FOREST HILL, LONDON, S.E.



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"I have to thank you for sending me your excellent Catalogue, which is a model of what is wanted for the instruction of floral amateurs."—Dr. S., Chirnside.

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Seed Growers & Florists to the Queen, ROTHESAY.

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GOOD THINGS FOR THE GARDEN.

CARTERS HOLBORN EXHIBITION BRUSSELS SPROUTS.

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In Sealed Packets, price 1/9 per pint; 3/- per quart, post-free.

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This magnificent variety is more dwarf, considerably earlier, and altogether better than the old form.
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Still maintains its position as one of the best white Celeries in cultivation. A customer writes: "It was the only Celery we found good at the break-up of the intense frost."
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Many so-called new Cucumbers are brought forward every season, but little is heard of them afterwards. This fine variety still maintains its position as the handsomest in cultivation.
In Sealed Packets, price 2/6 and 3/6 each, post-free.

CARTERS HOLBORN MODEL LEEK.

Grand both for exhibition or table. A Welsh customer says: "They are the best we ever had."
In Sealed Packets, price 2/- each, post-free.

CARTERS RECORD ONION.

The largest Onion grown. A customer writes: "I cleared the whole roost in the Onion-competition with 'Record.'"
In Sealed Packets, price 2/- each, post-free.

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Mr. A. Pettigrew, Head Gardener to the Earl of Bute, writes: "The best Spinach in cultivation; quite distinct from all others." Award of Merit, R.H.S. trials, 1895.
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TEMPLE SHOW TO **WINDSOR CASTLE.**

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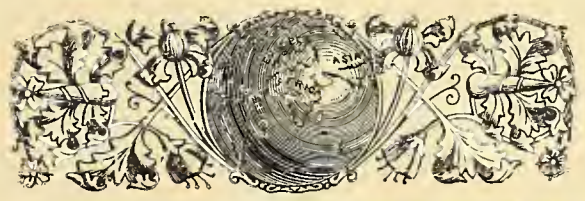


"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, JANUARY 23rd, 1897.

THE VICTORIAN ERA FUND.—The Gardeners' Royal Benevolent Institution, instituted in 1838, may be said to exhibit a vigorous youth, rather than a green old age, seeing that it is not only healthy and prosperous, but every now and then undergoes a fresh development in one direction or another for the benefit of its pensioners. The facts are well-established that the gardener's task is an arduous one; that to be in accordance with the times he has to devote a large amount of time in his early days, in order to qualify himself for any responsible position in the profession; that he more often than otherwise spends years in waiting for the position of a head gardener, or even a foreman in a large establishment; and that, after all, the emoluments attached to such positions are, in the majority of cases, altogether inadequate to meet his most carefully managed and necessary expenses, and at the same time allow him to make provisions for the proverbial rainy day, in whatever shape it may come. Under the conditions, by far too many gardeners are unable to provide against old age, to say nothing of the numerous

accidents to which they are liable. and the many ailments to which human flesh is heir. It is hard, very hard, for a gardener who has struggled all his life to maintain himself in a respectable position, to do his duty, and keep his head above water, to find in the decline of life that he is no longer able to continue the struggle, and that nothing remains to tide over the remainder of his natural term of existence, to say nothing of those, who by misfortune, have been placed in a similar position, it may be, comparatively early in life.

Taking these things into consideration it is not surprising that the various members of the craft should recognise the necessity of assisting one another by means of some organised body. This purpose the Gardeners' Royal Benevolent Institution has been striving to fulfil ever since it was inaugurated about fifty-nine years ago. To-day it is more alive to its responsibilities than ever, while at the same time recognising its inability to meet the numerous cases of hardship brought to its knowledge at the annual election of pensioners. The list of candidates for 1897 included forty-nine names of gardeners, or their widows, appealing for help. The election was held on the 14th inst., and a detailed account of it will be found in another column. The resources of the institution could only allow twenty to be placed on the pension list, so that the other twenty-nine must needs manage to eke out an existence as best they can for another year, perhaps longer. Ten applicants, having complied with the regulations of the Institution, were placed upon the pension list without the trouble or expense of election, while the other ten were elected in the usual way by the votes of the subscribers, from a list of thirty-nine. Of the latter number four had applied for help for the fifth time, and only one of them succeeded; six had applied for the fourth time; nine for the third time; eleven for the second time; and nine for the first time.

On behalf of the unsuccessful candidates, who, in addition to their necessities, have been subscribers to the Institution, a magnanimous effort is being made to raise a fund to be called "The Victorian Era Fund," the income from which is to be devoted to the purpose of affording them temporary relief till they succeed in being placed upon the pension list. This endeavour, excellent in itself, should also be specially gratifying to Her Majesty The Queen, who, through the Prince of Wales, recently expressed her wish that in whatever way her people should choose to commemmorate the happy event of the sixtieth year of her reign, they should remember the charities established for relieving the distress of the poor and the afflicted amongst her subjects. The executive of the Gardeners' Royal Benevolent Institution have identified themselves with this laudable endeavour to establish a special fund on behalf of the needy amongst their subscribers who may be waiting to be placed on the list of those receiving regular help. Something like 14,000 letters have been issued to gardeners and amateurs throughout the country, and we subjoin the text of the appeal in the form addressed to gardeners, together with a list of the sums promised on behalf of the fund previous to the election, but which has been materially augmented since then. Surely such a liberal nucleus, already materially augmented at the annual election of pensioners on the 14th inst., cannot fail to find the additional support required, the purpose of which is in itself the best recommendation. The text of the appeal is as follows:—

"The extraordinary event—unique in our country's history—of Her Majesty completing in June next, the sixtieth year of her beneficent reign, demands from us all, I venture to suggest, some special effort testifying to our deep thankfulness for the wonderful progress made in every way by our nation during the past sixty years, and for the many blessings we now so freely enjoy.

"Animated by this feeling the executive of the Gardeners' Royal Benevolent Institution (of which our beloved Queen has been the patroness for forty-five years) have determined to endeavour to celebrate so remarkable an occurrence by establishing a special fund to be called 'The Victorian Era Fund,' the income from which shall be devoted to affording temporary assistance to those applicants who are waiting to be placed on the pension list and who have been subscribers to the institution, every friend of which it is confidently felt may be relied upon to do their utmost to help raise a sufficient sum, the interest of which shall be devoted to the benefit of those, who, when in a position to do so by becoming subscribers, did what they could to assist others.

"The committee consider that a sum of at least £5,000 will be required to enable them to adequately carry out what they propose; and this, in addition to the amount required to meet the yearly outgoings of the institution which exceed £3,000 (the sum paid at the present time in pensions alone being £2,840), and I as chairman of the committee, appeal to every gardener in the country to aid us in raising this sum:—

1. By giving what he can himself and urging his brother gardeners to do the same.
2. By earnestly appealing to all lovers of gardens to contribute something to this object.

and I feel certain that if only every gardener will do what he can the proposal of the committee will be fully realised.

Any further information or details of the scheme will be most readily given, either by myself or by the secretary, Mr. George J. Ingram, 50, Parliament Street, S.W., London, who will also be pleased to forward to any applicant collecting cards or boxes.

Earnestly begging you to give the matter your warmest support."

I am, etc.,

HARRY J. VEITCH.

Chairman of Committee and Treasurer.

The Fifty-Eighth Anniversary Festival Dinner will be held at the Whitehall Rooms, Hôtel Métropole, on Wednesday, May 26th, 1897, when the Right Hon. Lord Rothschild will take the chair. The donations, etc., already promised, are as follows:—

	£	s.	d.
His Grace the Duke of Westminster, President	100	0	0
The Baron Schroder, Vice-President	200	0	0
C. Czarnikow	50	0	0
N. N. Sherwood, Trustee (In memory of Emma Sherwood)	200	0	0
Harry J. Veitch, Treasurer	250	0	0
W. Sherwood (In memory of Emma Sherwood)	100	0	0
E. Sherwood, ditto	100	0	0
May Sherwood, ditto	100	0	0
George Monro	100	0	0
James Veitch & Sons	250	0	0
Thames Bank Iron Company ..	21	0	0
A. Watkins	10	0	0
James Hudson	5	0	0
J. W Seden (Life Subscription) ..	10	10	0
J. Seden	2	2	0

The Free Distribution of Seeds by the American Government last year weighed over 230 tons, occupied thirty mail cars in transportation, and cost 70,000 dollars in carrying the same. Isn't it ridiculous?

Ireland must, in times gone by, have been very rich in colossal Yews, judging by the evidences of the peat bogs, in which remains of large trunks are often found.

The distribution of plants, says Dr. James Clark, is dependent upon climatic conditions, such as heat, moisture, and light, in varying degrees according to the species.

Early Potato.—A correspondent from Lymington, Enniscorthy, testifies to having dug Potatos on the 19th of May in the open air from tubers planted in February.

Amongst Agricultural Chemists an idea is more or less prevalent that cultures of the nitrifying bacteria of the soil will be made on an extensive scale for the use of farmers. This, of course, would be equally advantageous to gardeners. If scattered upon fermenting manure heaps, the idea is that these bacteria would fix the ammonia, and thereby prevent its loss from the manure. Seeding the ground with the bacteria would also bring about beneficial results.

The Silver Wedding of Mr. and Mrs. T. Whillans, Blenheim Palace Gardens, was celebrated in a very pleasant manner on January 6th, on which occasion His Grace, the Duke of Marlborough generously sanctioned the use of the capacious corridors of the new south block of greenhouses, which were prettily decorated, for the purpose of entertaining the many friends, including the principal domestics at the palace, who assembled in goodwill and amity to the hosts to honour the event. A most enjoyable evening was spent, and, for those who were present, will form a very pleasurable remembrance. Mr. and Mrs. Whillans were the recipients of numerous tokens of friendship and kindly congratulation; amongst others a handsome silver cake basket given by the garden employés, and which will, as we trust, for many years to come, be regarded as a most sincere expression of kindly sentiments.

Royal Botanic Society of London.—At a meeting of this society on the 9th inst., the secretary, Mr. J. B. Sowerby, showed stems of the Egyptian Papyrus cut from the plant in the Victoria regia house in the gardens. This plant made an exraordinary growth last year, forming a clump 7 ft. in diameter, and 14 ft. high. Some of the individual stems had a diameter of 2½ in. at the base. The ancient Egyptians made a paper of remarkable durability from these stems, simply by slicing the pith into flat strips and laying them together with their ends and edges overlapping until a piece of sufficient dimensions was obtained. By applying pressure these pieces adhered together, forming a smooth surface that could be written upon, rolled up, and laid away as we would a book. The secretary also showed paper made in this way from the garden specimen, and compared it with a specimen which Dr. Birch considered was 3,000 years old. The ancient Egyptian specimen was darker in colour, but otherwise similar to the home-made paper.

In Defence of the Sparrow.—In a recent issue the *Times* published a letter by Mr. Geo. L. Lepper, of Mark Lane, concerning the sparrow question. Mr. Lepper, says in effect, that the sparrow is a pest of the deepest dye. No more grievous error could possibly be made. I find in "Chambers' Encyclopaedia" that in Europe, "Sparrows devour vast numbers of insects and their larvae"; and that in France the destruction of sparrows was followed by an increase of caterpillars, vastly more injurious to crops than the sparrows. In Sussex, the home of the Sparrow Clubs, the destruction of small birds grows apace. Despite criticism and ridicule the clubs of Sussex pursue the even tenour of their way. A local bird destruction club recently boasted of having killed 5,922 sparrows and tomtits in twelve months, and a report to hand of the last periodical meeting of the Burwash Weals Rat and Sparrow Club states that the members present produced the heads of 173 birds, a total rather below the Burwash average. Small wonder that caterpillars were "very numerous and troublesome" in some of the fruit growing districts of the south last year! Michelet, the author of that wonderful book, "L'Oiseau," says: "If all the birds should die not a human being could live on the earth, for the insects on which the birds live would increase so enormously as to destroy all vegetation."—*Joseph Collinson, Woolsingham, Co. Durham.*

About 70 per cent. of plants like a high temperature to develop their seeds.

Solution of the Sparrow Question.—Scotch boy (just arrived in a western suburb of London): "Dae ye muzzle a' the dogs hereaboot?" English boy; "Yes; and we sometimes muzzle the cats!" Scotch boy; "Och, that's naething. In Scotland we muzzle the sparrows!" Collapse of the discussion.—*Fact.*

Birmingham Chrysanthemum Society.—Some time ago we recorded the fact that this society had practically outgrown the space where the Chrysanthemum shows have formerly been held, and that there was a proposal to secure the Bingley Hall, in which to hold their show next November. The Birmingham people have now decided to secure the Bingley Hall for their great autumn show.

Ipswich Horticultural Society.—At the annual meeting of the Ipswich Horticultural Society the accounts for the year were presented. The total receipts for 1896 were found to be £462 os. 6d, and the expenses for the same time came to £410 5s. 2d., leaving a balance at the bankers of £61 16s. 8d. In moving the adoption of the report Mr. H. Kerridge congratulated the committee upon the improved financial position of the society. Proceeding to the election of officers, Captain Pretyman, M.P., was re-elected president. The long list of vice-presidents was added to. On the motion of Mr. A. E. Stubbs, Mr. H. E. Archer was re-elected secretary. Mr. F. H. Fosdick presided.

Lilies of the Valley were very much to the fore at Canterbury the other week. It was a novel as well as a pretty scene that met the gaze in the Guildhall on Thursday evening of the 7th inst., when the Mayor received the Archbishop of Canterbury. The Mayoress presented Mrs. Temple with a huge bouquet of the charming flower, possibly the largest of the kind ever constructed, and the Mayor supplied each of his 200 guests with a "buttonhole" consisting of eight or ten sprays. All the florists' and fruiterers' shops wore a bridal aspect with similar nosegays; while on Friday, in the cathedral every other person and parson donned the flower of the day. The Lily of the Valley seems in some way to be associated with Becket, as is the Primrose with Beaconsfield.

International Horticultural Exhibition at Hamburgh.—A grand exhibition will be held in Hamburgh from May 1st to September 30th, 1897. It will be held under the presidency of the Burgomaster of Hamburgh. In addition to a general permanent exhibition, outdoor, and indoor, open throughout the summer, half-a-dozen special displays of plants have been projected. Entries for the permanent exhibition closed on November 1st, 1896, and applicants for space, providing their exhibits are accepted, will now have to pay a double rental. In the case of living plants, botanical objects, and garden plans, intending competitors must give notice by March 1st, 1897. All applications should be addressed to the offices of the exhibition, 3, Grosse Reichen-strassse, Hamburgh.

Reading Gardeners' Association.—The annual general meeting of the Reading and District Gardeners' Mutual Improvement Association, was held in the club room on Monday, January 11th. Mr. T. Neve, the chairman of the association, presided over a large gathering of members. After the report and balance-sheet, which were of a very satisfactory character, had been read and adopted, the following members were elected to fill the various offices during the ensuing year:—president, Mr. C. B. Stevens; chairman, Mr. T. Neve; vice-chairman, Mr. E. Dearlove; librarian, Mr. Jas. Martin; assistant librarian, Mr. E. Dore; treasurer, Mr. W. Phipps; secretary, Mr. J. Pound, Jun.; committee, Messrs. F. Bright, C. Burton, R. Butcher, R. Chamberlain, H. G. Cox, B. Dockerill, H. Farey, W. Goddard, R. Hearn, G. Hinton, J. Pound, G. Smith, W. Smith, T. Turton, H. Wilson, and J. Woolford. A hearty vote of thanks was passed to the retiring president, Mr. Arthur W. Sutton, for the great interest he had shown in the association during his term of office. A beautiful collection of Primula obconica was shown by Mr. Townsend, gardener to Sir William Farrer, Sandhurst Lodge, and was greatly admired.

Lilium auratum is stated by Mr. Alfred Parsons in his "Notes on Japan" to be a common wild flower in that country. He says also that the bulbs boiled in sugar form a favourite vegetable.

Shirley Horticultural Society.—The president of this society has for some years past annually entertained the officers and the members of the committee to dinner. This year proved no exception. The dinner was served at the usual place, the Shirley Hotel. After the usual loyal toasts had been honoured by the company at the invitation of the chairman, the vice-president, Mr. W. F. Mayoss proposed the health of Mr. Barlow. He spoke to the depth of their esteem for him, who had given so much for the benefit of others. They all had heard of his recent munificent gift to the institution which made the widow and the orphan their especial care, and they trusted that he might long be spared to them. The toast was received with the greatest enthusiasm. In replying, Mr. Barlow thanked them all very heartily for the way in which their kindness had expressed itself. These annual gatherings were a great pleasure to him, and he was glad to see so many bright faces around the table. He also spoke of the disinterested way in which the committee carried on the work of the society, and he was sure that good must come when things were done in such a proper spirit as they were in this case. With regard to the Orphan Asylum, he had allowed his name to appear in print because he thought that his example might be followed by others who were wealthy men. Mr. Barlow also said that they were honoured that evening by the presence of Mr. Harper, the president of the Chamber of Commerce, of Southampton, and he proposed his health with much pleasure. Mr. Harper responded at some length, saying that his life was devoted to the interests of Southampton. The health of Mr. Mayoss was drunk at the invitation of the chairman, and duly acknowledged. The speech-making was varied with songs and recitations in which Messrs. H. G. Thorne, Hardman, Marchant, Chalk, Barter, G. Harris, Rowbotham and Mayoss, took a prominent position. After singing "Auld Lang Syne," the company separated just before 11 p.m.

PEOPLE WE HAVE MET.

Gardening has many allurements, especially to the eyes and mind of the young. If the latter have an inclination for gardening, they receive a keener impetus and incentive to follow up the profession, when chance now and again throws the opportunity of seeing a fine garden in their way. Opportunity has in no way been wanting to Mr. Henry James Chapman, the subject of these notes, and gardener to R. I. Measures, Esq., Cambridge Lodge, Flodden Road, Camberwell; for he was born at the gardens, Olne Chase, Ashburton, Devon, where his father was gardener. He has, therefore practically lived in gardens all his life.

His gardening career, however, may be said to have commenced at Westbury Park, Petersfield, Hants, where his father was gardener to J. D. Lewis, Esq. Here he started as garden boy under his father, and continued his labours there for nearly five years, gaining an insight into outdoor gardening chiefly, in the fruit and kitchen gardens. Hardy trees and shrubs were well cared for at Westbury Park, Conifers being the speciality, furnishing many useful lessons of which Mr. Chapman senior and junior availed themselves.

After leaving Westbury Park, the subject of these notes went to the nurseries of Messrs. J. Veitch & Sons, Chelsea, in the various departments of which he spent nearly seven years, but made a speciality of the Orchids. It is to this firm that Mr. Chapman is indebted for his general experience in the profession, and to the foremen in the various departments, under whom he was employed, while being changed or promoted from one branch of the business to another. By this time his tastes and inclinations had become fixed upon the Orchids, which he has ever since made his peculiar care when circumstances favoured or permitted the same.

From Chelsea, Mr. Chapman went to Downside, Leatherhead, at a time when the grand collection of W. Charles Lee, Esq., was in the height of its fame. At that time Mr. Woolford was gardener, and Mr. Chapman continued his practical training under him. From this noted establishment he was transferred to Parkfield, Hallow, Worcester, the residence of C. W. Lea, Esq., where he took entire charge of the Orchids and acted as general foreman in the other departments. From Parkfield he returned to the nursery of Messrs. J. Veitch & Sons, for a time

Mr. Henry James Chapman.

Early in 1888 he went to Sandringham House, King's Lynn, Norfolk, as foreman under Mr. C. Penny, but left that establishment on the retirement of the latter. He next procured a situation with G. le Doux, Esq., whose collection came into prominence for a time under Mr. Chapman's care. From G. le Doux's establishment he was appointed to the care of the renowned collection of R. I. Measures, Esq., with whom he has ever since been employed.

Mr. Chapman now devotes the whole of his time to the cultivation of his favourite Orchids, so that we may be pardoned if we take it for granted that he has now reached the height of his ambition; but a second thought suggests that the height of any ambition can never be attained while a conquest remains to be made. We have on several occasions visited and noted the splendid collection at Cambridge Lodge, and have seen it growing year by year. It may be described as an excellent example of what can be done under the combined influence of fog and city smoke, which every now and again destroy the flowers that have taken a twelvemonth's care and labour to bring to a flowering condition. Cambridge Lodge is within a mile and a half of Charing Cross, as the crow flies, so that there is no question of the difficulties of growing Orchids under such unfavourable circumstances. The available part of the garden is mostly filled with Orchid houses, and completely surrounded by dwelling houses.

One of Mr. Chapman's most recent conquests is the getting of his Phalenopses into a vigorous and healthy condition, for they have been flowering for some time past, and will continue for a time if the flowers are not destroyed by dense fog, which they have hitherto escaped. For years past this class of Orchids has been very refractory, but all the species and varieties in the collection are now doing well. Masdevallias, Cypripediums, Cattleyas and Vandas are very numerous and all of them thrive admirably under Mr. Chapman's care. He knows a good Orchid and the value of it, and with his employer's liberality he is able to add a fresh treasure to the collection at frequent intervals notwithstanding the crowding of the houses. He also hybridises and raises new hybrid Cypripediums, some of which we have described in these columns. Under his employer's directions he has compiled lists of Masdevallias and Cypripediums for publication in book form. For some time past he has been a member of the Orchid Committee of the Royal Horticultural Society. We have much pleasure in presenting our readers with Mr. Chapman's portrait.

THE ROYAL HORTICULTURAL SOCIETY'S VICTORIA MEDAL.

In the report of the Council of this society for 1896-97, we note in the three concluding paragraphs that some communications have passed between Sir Trevor Lawrence, Bart., and the Queen, through the Rt. Hon. Sir Fleetwood J. Edwards, K.C.B., concerning a Victoria Medal of Horticulture, *honoris causa*. The proposal to strike a medal or medallion, bearing the above legend was submitted to Her Majesty, who "has no possible objection to raise," either to the proposal or the name to be given to the medal. The following are copies of the letters on the subject:—

Royal Horticultural Society,
117, Victoria Street, S.W.
December 18th, 1896.

Sir,—I am desired by the Council of the Royal Horticultural Society to ask you to lay before Her Gracious Majesty the Queen, Patron of the Society, a proposal which they beg leave to bring before their Fellows, for the establishment of a medal or medallion in celebration of the attainment, by Her Majesty, in 1897, of the 60th year of her happy, prosperous, and beneficent reign. With Her Majesty's gracious permission and approval, the Council wish to name their medal "The Royal Horticultural Society's Victoria Medal"; and their proposal is that it should be awarded by the society, *honoris causa*, to a certain number of persons distinguished for their services to horticulture, or eminent in the science and art of gardening. The Council express a confident belief that no such distinction exists at present, and that the institution of such a "Medal of Horticulture" would be received with marked favour by Her Majesty's garden-loving subjects. They, therefore, venture humbly to hope that their proposal may meet with Her Majesty's gracious consent and approval. I have the honour to be, your obedient servant,

(*Signed*) Trevor Lawrence,
President.

The Rt. Hon. Sir Fleetwood J. Edwards, K.C.B.

Osborne,
December 23rd, 1896.

Dear Sir,—In reply to your letter of the 18th inst., which I have laid before the Queen, I am commanded to express Her Majesty's regret that she can only refrain in this instance, as in all similar cases, from giving any personal opinion with reference to any specific proposal for the commemoration of the 60th anniversary of the reign.

At the same time, the Queen has no possible objection to raise to the establishment of the medal referred to, or to the name that it is proposed should be given to it, and they would appear to be points that rest with the Council of the Royal Horticultural Society. I am, dear Sir, yours faithfully,

(*Signed*) Fleetwood J. Edwards.

To Sir Trevor Lawrence, Bart.

WINTER-FLOWERING PLANTS AT WEST DEAN HOUSE, CHICHESTER.

Marvellous improvements have been made these last few years in the beautiful estate of W. D. James, Esq., West Dean House, Chichester, both inside and out. The grounds have been, in many respects, remodelled; some grand fruit and plant houses have been erected, and horticulture is being carried on in a spirited manner. At the present time there is a grand display of winter-flowering Carnations of all the leading kinds, beautifully grown and flowering freely. Many dozens of this now popular flower are cut daily. A house of Begonias Gloire de Sceaux and Gloire de Lorraine is now in perfection and worth a long journey to see. Calanthes and Poinsettias, are also extensively grown; and grand spikes of the former, and large bracts of the latter, are found most useful for decoration work.

A house of young Crotons, Palms, Dracaenas, etc., is worth special notice, for they are very clean, splendidly grown, and well coloured. A splendid new range of fruit houses will give a good account of themselves, for the Vines, Peach trees, Nectarines, and Figs have made splendid growth the past season—everything one could desire. A house of scarlet zonals in full blaze makes one forget it is winter. There is also a house of Cyclamen well grown and profusely flowered. All-round gardening is carried out in a thoroughly practical manner by Mr. W. H. Smith, the gardener, and it must be gratifying to his employer to see that his liberal encouragement is in good hands, for satisfactory results present themselves in every department.—*A. O.*

VEITCH MEMORIAL FUND.

The Veitch Memorial Trustees have decided to present, this year, their large Silver Medal for distinguished service to horticulture, to each of the following gentlemen:—

To Norman C. Cookson, Esq., of Oakwood, Wylam-on-Tyne, for his successful hybridisation of Orchids, extending over many years, by which a large number of new and beautiful forms have been added to this remarkable family of plants.

To Martin R. Smith, Esq., of Warren House, Hayes, an eminent amateur, who has been most successful in the raising of Carnations. By his efforts many new and beautiful varieties have been raised, especially in the Malmaison section, and among those which, on account of their hardihood and beauty, are adapted for culture in the open border.

To Professor L. H. Bailey, of Cornell University, Ithaca, N.Y., in recognition of his efforts, by means of his lectures and his writings, to place the cultivation of plants on a scientific basis; to promote the extension of horticultural education, and, by numerous trials and experiments, to improve and render more productive, plants grown for economic purposes.

To M. Charles Naudin, of Antibes, a distinguished French botanist and horticulturist, who, by his prolonged series of experiments and observations, has much advanced the theory and practice of hybridisation. M. Naudin has also been highly successful in introducing, cultivating, and distributing a large number of plants of great economic importance, and of thus enhancing the resources not only of his own, but of other countries.

To Herr Max Leichtlin, of Baden-Baden, as one who has rendered eminent service to horticulture by the introduction of a large number of interesting plants, and who has displayed equal sagacity and skill in their cultivation.

The Trustees have also decided upon placing a medal and prize of £5 at the disposal of the Shropshire Horticultural Society, to be competed for at their Great Commemorative Exhibition in August next; and have allotted a similar Medal and prize of £5 to the Trentham Horticultural Society.

ORCHID NOTES & GLEANINGS.

By The Editor.

A Valuable Odontoglot.—At the Central Sale Rooms of Messrs. Protheroe & Morris, Cheapside, considerable excitement was caused on Friday, the 15th inst., by the appearance, on the table, of an Odontoglossum, a supposed natural hybrid between O. crispum and O. luteo-purpureum. Bidding went on keenly until finally it was knocked down to H. T. Pitt, Esq., Rosslyn, Stamford Hill, for the sum of 105 gs. It is really as handsome as it is rare. The flowers measure 3 in. by 3 in., and are as round as those of a first-class form of O. crispum, after which it takes in form of bloom and the blotches, which, however, differ strongly in colour. The sepals are broadly elliptic, with one large, deep chestnut-brown blotch covering almost a third of the surface at the upper end, with a few smaller blotches run together in irregular masses on the lower portion. The ground colour is clear, bright yellow. The petals are elliptic-ovate, toothed at the edges about the middle, and crisped upwards. Towards the apex is a large horse-shoe-shaped, rich chestnut-brown blotch, with a few smaller ones down the sides, on a bright yellow ground. The lip is broadly oblong, obtuse, wavy, and crisped, with a large curved blotch around and in front of the crest, which has short teeth like those of O. crispum. The pseudobulbs are 3 in. to 3½ in. long. From the Sale Rooms, this valuable plant went into the hands of Mr. J. McBean, of Cooksbridge, Lewes, Sussex, who is an expert grower of Odontoglots, having a large collection of them amongst his other cultures. He is to grow it for H. T. Pitt, Esq., and acclimatise it, so to speak, or in other words accustom it to the treatment usually accorded to such cool house Orchids in this country.

Other good things turning up at the same sale were O crispum var., with large, round, pure white flowers, with the exception of a large rosy blotch on each sepal; Laeliocattleya Ino, and Laeliocattleya Cornelia, both bigeneric hybrids. These three were sold for 8 gs., 5 gs., and 4½ gs. respectively.

PLANTS RECENTLY CERTIFICATED.

The awards mentioned hereunder were made by the Royal Horticultural Society, on the 12th inst.

Orchid Committee.

Cattleya Loddigesii superba. *Nov. var.*—The plant of this new variety exhibited by Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, was an agreeable surprise to those who are familiar with the ordinary form. The stems were 2 ft. high, independently of the massive raceme of flowers which extended to another 9 in. The flowers individually were of magnificent proportions, and the spathulate sepals and obovate petals were warm pink, occasionally splashed with purple. The tip also was large and widely expanded, but notable for the shortness of its much crisped lamina, of a rosy pink at the apex, and round the edges of the lateral lobes as well. The disc or central area of the lip was creamy white. Altogether, the variety may be described as handsome indeed. Award of Merit.

Mormodes labium luteum.—The pseudobulbs of this variety are very vigorous, and 6 in. to 8 in. long. The sepals and petals are lanceolate, incurved, and wholly of a bright yellow. The lip is transversely oval or oblong, cuspidate, and similar in colour to the other organs. Well-flowered plants are conspicuous and highly ornamental on account of the decided colour of the flowers, and curious on account their form. Award of Merit. The Hon. Walter Rothschild (gardener, Mr. E. Hill), Tring Park, Tring.

Laelia Lucy Ingram. *Nov. hyb.*—The seed parent of this distinct and pretty hybrid was Laelia purpurata, and the pollen bearer L. Perrinii. The sepals are white, and the oblong-elliptic petals white, shaded with pale pink, especially on the veins. The tube of the lip is white externally, with a few short, purple lines near the base, and more numerous and longer purple lines on the white interior. The lamina of the lip is ovate, slightly crisped, and of an intense crimson. The flower is intermediate in size, form, and colour, between the parents; the lip, as far as size and shape are concerned, taking after L. Perrinii. Award of Merit. Chas. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming.

Cypripedium Lilian Greenwood. *Nov. hyb.*—The seed parent in this case was C. bellatulum, of which it bears the imprint pretty strongly; while the pollen parent, C. barbatum Warneri, has modified it considerably. The upper sepal is round and rosy-purple, with numerous crimson spots near the base, and a few scattered over the rest of the surface. The petals are oblong, somewhat deflexed, slightly twisted above the middle, and pink, thickly spotted with crimson all over. The laterally compressed lip is of a deep purple in front, and the staminode is pale purple. It is really a very handsome Cypripedium. Award of Merit. Hy. Greenwood, Esq., Highfield, Haslingden, Lancashire.

Cypripedium lebandyanum. *Nov. hyb.*—Here we have a beautiful hybrid of a type that is not particularly common. The seed parent, C. haynaldianum, was pollinated with C. philippinense, better known as C. laevigatum. The dorsal sepal is ovate and white, with rich crimson-purple spots on the lower third of its length, and heavy lines or bands of that colour on the upper two thirds. The petals are linear, pendant, twisted, and greenish yellow on the lower third of their length, blotched with brownish-purple, the rest being wholly brownish-purple. The lip is short and greenish-yellow, lightly suffused with

brown. In all these characters, the influence of both parents is observable, The markings of the dorsal sepal are handsome.

DENDROBIUM BANCROFTIANUM.—The flowers of this species are small but very numerous, and borne in subterminal racemes, 6 in. to 9 in. in length. The sepals and petals are linear and white. The small lip is spotted with purple. Botanical Certificate. Messrs. F. Sander & Co., St. Albans.

BULBOPHYLLUM DAYANUM.—Here we have a dwarf species with singular looking flowers arranged in clusters at the base of the short leathery leaves. The relatively large sepals are green, spotted with purple in lines and strongly fringed at the margin with gray hairs. The small oblong petals are deep red and shortly fringed. The lip is pale red. Botanical Certificate. The Hon. Walter Rothschild.

Floral Committee.

CYCLAMEN.—Several varieties of a new strain of Cyclamen were exhibited by M. de Langhe, Rue de Constantinople, Brussels. In some cases the segments of the flower were reflexed in the ordinary way, and in others they were horizontal. The special feature of the segments is that they have developed in such a way as to be roundly-obovate or quite orbicular, and crisped and plaited towards the margin. There are, already, varieties with pink, white rose, deep crimson, and rose flowers, the latter having white edges. Award of Merit for the strain.

Fruit and Vegetable Committee.

APPLE BELLE DE BOSKOOP.—The fruits of this variety in size and shape resemble those of Blenheim Orange, as well as in having a deeply sunk, open eye; but the flesh is more solid, and the fruit keeps in good condition for a longer period than that well-known Apple. The skin is yellow at this season, splashed with red and suffused with russet. The flesh is yellow, crisp, tender, juicy, pleasantly sweet, and otherwise excellent. Award of Merit. Messrs. James Veitch & Sons, Ltd., Chelsea.

APPLE STANDARD BEARER.—The fruits in this case are large, conical, obtusely five-angled, yellow, finely dotted with brown, and streaked with red on the sunny side. A large area round the stalk is evidently constantly covered with russet. It is a late Apple of excellent quality. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

VEGETABLE CALENDAR.

POTATOS.—Where a good stock of fermenting material has been sweetened by frequent turning, it will be in good condition for supplying a steady bottom heat in pits and frames intended for the production of early Potatos. A bed about 3 ft. in depth should be formed, and over this 1 ft. of light, rich soil should be placed. The tubers—previously started in gentle heat—should be well rooted, and with growths short and sturdy. Rather close planting is necessary to make the most of the space at command, and this must not be done before the heat in the bed has risen to 60°. Where leaves are plentiful, another bed may be formed outside for the production of a crop to succeed the frame produce. This bed should be at least 5 ft. to 6 ft. in depth, so as to maintain a gentle heat throughout the spring. The width may be from 8 ft. to 10 ft., and the length must be ruled by the amount of material available for forming the bed. Some 10-in. boards made secure around the edges of the bed, and filled with some light loam and leaf mould, will be ready for planting as soon as completed. For this bed, tubers showing the growing points prominently should be selected; and it will be necessary to form some kind of framework over the bed to carry protecting material in the shape of mats or tarred cloth.

PEAS.—Sowings of these should now be made on the first favourable occasion; and the position selected warm and sunny. Trenches should be formed at least 1 ft. in depth, and the bottom filled with long manure; and over this a few inches of well rotted dung may be placed, covering the whole with 6 in. of well pulverised soil. The long dung acts as drainage during the spring, and also tends to admit atmospheric warmth more freely, and encourages a quick root action and strong growth. The trenches should be about 4 ft, apart, as this allows room for taking an early crop of Spinach, Lettuce, or dwarf Beans between the rows; for Peas seldom give good crops when closely planted in the rows. In sowing at this season it is better to have the soil a little elevated over the trenches so as to receive the full benefit of the sun, drawing a little earth to the rows when the plants appear. William 1st, Gradus, and Day's Sunrise are all good quality Peas for early sowing. The latter is a little later, but gives a heavy crop.

ONIONS.—Where large bulbs are required for exhibition or special purposes, some seed of approved kinds such as Ailsa Craig, Excelsior, and Carters' Record may be sown in boxes under glass. A gentle heat only is required, and the young plants must be kept close to the light as soon as vegetation has taken place.

CARROTS.—A few lights of frames should be devoted to an early crop of the French Horn. A slight hot-bed is necessary at this season, and a light sandy soil will be an advantage in getting quickly grown roots. A small bed may also be sown on a south border.

LETTUCE.—A sowing of the best forms of Cos Lettuce in a cold frame will give a very useful crop to follow those sown in frames in the autumn. In sowing now, the soil should be raised to within a few inches of the glass, and the frame should be placed to receive the full benefit of the sun. The autumn-sown plants under frames will require careful watch-to prevent damping during the next few weeks, and may be dusted with burnt refuse occasionally, until planting time next month.—*J. R.*

THE ORCHID HOUSES.

THAT there is a diversity of opinion amongst the numerous growers of Orchids of the present day as to the treatment of many species goes without saying. Each one advances his pet system or theory as to how such and such a plant should be grown. But if we choose to differ in a few cultural details, there is one thing we are one and all agreed about, and that is, to grow Orchids for a number of years successfully, they must have assiduous attention, the present time being perhaps one of the most critical. Sometimes we get a spell of dull sunless weather, to be followed by bright days and sharp frosty nights, such as we are getting at the present time, requiring care and judgment in the use of the heating apparatus. Very hard firing always takes a lot out of the plants, no matter if you have plenty of piping; and anything that can be done to secure the plants from harm, and at the same time mitigate the effect of harsh heat which accrues from hard driving during severe weather, should be done. Mats or old blinds hung along the sides of the houses will help to do this. We adopt this plan as much as possible, and it is really surprising the difference it makes to the plants, to say nothing of the saving in the fuel, which is always a large item no matter how careful one may be.

GENERAL WORK. — Potting of Orchids during frosty weather should not be thought of, unless it be newly imported plants; but assistance may be afforded such plants that are making up their growths and pushing new roots from the base, by placing some fresh material for the roots to take hold of. This will sustain them until the days lengthen, and the weather is more congenial, when the potting can be carried out without fear of any check being given. This applies more to Cattleyas and Laelias; with Odontoglossums it is different, for where O. crispum is grown in great quantities you are always having some potting to do, as it is a very rare thing to be without some in flower all the year round, although the bulk of the plants flower in May and June, and are potted early in September.

ODONTOGLOSSUM WILCKEANUM.—This is a most beautiful natural hybrid between O. crispum and O. luteo-purpureum, and requires the same treatment as O. crispum. We have one at present in flower, beautifully marked with large blotches of red on a bright sulphur ground colour. This was imported in a mixed lot of O. crispum and O. luteo-purpureum from Colombia. The varieties of O. crispum, however, from this locality, are not to be compared with those from Pacho.

O. LUTEO-PURPUREUM, now pushing spikes, is a very desirable species, and a splendid grower, making fine bulbs and flowering well, if treated as advised for O. crispum. It likes a little more shade, and should be placed so that it gets it.—*C.*

FRUIT UNDER GLASS.

MELONS.—It is quite time now that some preparations were made for the earliest crop of these. Many good growers sow for their first crop about the middle of January. On an average, four months will elapse between the sowing of the seed and the ripening of the fruit. Some of the successful crops which are more favourably situated with regard to light in their earlier stages will reduce this to some extent, whilst on the other hand the earliest may take a little longer. The seeds should be sown singly in small thumbpots, using a compost of two parts loam to one of leaf soil, and must not be buried more than half an inch, otherwise they will rot. It is not advisable to sow more than one seed in a pot as the subsequent separation of the plants imposes a greater or less check upon them. A single plant can be shifted on into the larger sizes as more space becomes necessary with the minimum chance of a check.

To insure speedy germination the pots should be plunged in a bottom heat of from 70° to 80° Fahr., with an atmospheric temperature of not less than 70°. The pots may be stood quite close together, and thus enough of plants to fill a good-sized house can be obtained from a very small area.

VARIETIES.—There are numbers of good varieties, and probably every cultivator has an opinion of his own as to their respective merits. Scarlet-fleshed sorts, perhaps, are more in favour with his employers than white, or *vice versa*. The following varieties, however, are worthy of every one's consideration, for they have won golden opinions for themselves in many parts of the country; Sutton's A1, and Carter's Blenheim Orange, scarlet-fleshed; Sutton's Hero of Lockinge, white-fleshed, excellent for early work; and Carter's Earl's Favourite, one of the very best green-fleshed Melons in cultivation. Other good sorts might be mentioned, but the foregoing will be sufficient for ordinary cultivators. Of new sorts Sutton's Eureka, sent out in 1896, is very promising. The flesh is pale red, and the plants possess great vigour of constitution, and are very suitable for early crop.

CUCUMBERS.—A sowing of Cucumber seeds should be made at the same time as the Melons. Where the Melon houses are lean-to or three-quarter span-roofed erections facing south, the back of the house will do very well for Cucumbers, as they do not need so much light as Melons. Hence the difficulty of giving a sufficiency of heat will not be feared. Those growers who do not go in for very early Melons, and who have not the means of giving sufficient heat, will do better to wait a little longer. In order to be able to cut Cucumbers in March the plants must not be allowed to receive a check.

For an all-round Cucumber it would be very difficult to beat Rollison's Telegraph. Tender and True, Lockie's Perfection, and Sutton's A1, are all good sorts, the latter being of comparatively recent introduction. As a rule two varieties at most are enough for the needs of an ordinary establishment, and one good variety may be made to answer the majority of purposes.

PREPARING THE HOUSE.—Under glass space during the winter months is of great value, as there are so many plants demanding winter accommodation. Accordingly, all available space soon becomes filled, and it is not infrequently a matter of some difficulty to get houses cleared for forcing purposes. It will be advisable, therefore, to set about clearing a house for the Melons and Cucumbers without delay, so that it may receive a thorough cleansing preparatory to their advent. Let glass and woodwork be well washed. Any odd corners, either in the iron or woodwork that may serve as a harbourage for insect pests should be annointed with neat petroleum. All the walls should be lime washed. It is an excellent plan, where it can be managed, to give a fumigation of sulphur before the washing, but in cases where the house is only part of a range it is almost impossible to keep the fumes of the sulphur from penetrating into adjacent compartments to the peril of the plants they contain.—*A. S. G.*

A New Sweet Pea Classification has recently been offered by the Sunset Seed and Plant Co., San Francisco. Under it the varieties are grouped according to form, instead of colour, the size, and more or less orbicular character of the standard forming the main point.

HINTS FOR AMATEURS.

Narcissus monophyllus.—Narcissus Bulbocodium, the Hoop Petticoat Narcissus, is one of the prettiest plants for growing in pots in the cool greenhouse. It is a plant of many parts, however, and not content with the rich yellow of the normal type it has exhibited its energy by varying considerably. We have thus several intermediate shades of yellow, which finally merge into white. N. monophyllus is one of the finest white forms of N. Bulbocodium, or N. Corbularia, as it is sometimes called. The leaves are long, very narrow, and slender. They are usually solitary, as the varietal or sub-specific name suggests. The flowers are comparatively large, and the large corona, which has been fancifully likened to a hoop petticoat, from whence the popular name, is considerably longer than the segments of the perianth. The texture of the flowers is exceedingly delicate, although they last fairly well.

To amateurs who are on the look-out for plants to flower in a cool greenhouse early in the year the subject under notice may be warmly recommended. It may be coaxed into bloom early in January with very little trouble. Forwarding the plants in this way cannot be regarded as forcing, for the less artificial heat employed the better; indeed, it would be ruinous to the plants to put them in heat. All that is required is to shelter them during the autumn by placing them in cold frames, or by covering them with handlights in the autumn. Culture in pots or shallow pans may therefore be conducted with excellent results. Three to six bulbs may be placed in a 5-in. pot, or better still, shallow pans of from 6 in. to 10 in. in diameter may be employed. Both pots and pans must be well drained and light sandy soil should be used.

Planting the bulbs out in frames is practised by some cultivators. A bed of soil is then made up in the frame. The plants bloom well enough when treated thus, but here comes in the great objection to this system, they cannot be taken into the greenhouse when they are in bloom.

Black Currants are always in great demand in gardens, both small and large. The majority of cottagers grow them to a fair extent, for they not only make excellent fruit tarts, but the preserves form the basis for a decoction that is regarded by country people as being a safe and very effective remedy for coughs, colds, etc., during the winter months. In cases where the cottager is not able to consume the whole of his fruit he can generally find a ready market for it, particularly in the neighbourhood of large towns. In such cases the crop may be made a very remunerative one. The Black Currant is the offspring of Ribes nigrum, which, like R. rubrum, the parent of the Red and White Currants, is to be found wild in the British Isles, and the introduction of which, equally with the latter species, is surrounded with uncertainty.

Soil.—A rich, deep, and well drained soil suits the Black Currant, and if the garden does not boast of such a medium naturally, artificial aid must be brought to bear. Deep cultivation and heavy manuring will do wonders in improving a soil that is naturally poor and shallow. Bushes planted in cottagers' gardens have not often much to complain of with regard to the soil, as they are usually planted by the edges of quarters devoted to the culture of vegetables, and such quarters are well manured and deeply dug each year in the majority of cases The average cottager is generally pretty liberal with the manure to his ground, particularly where he is far enough away from the town to be able to keep a pig or two. The question of soil, however, is not the only one that should be considered, if the bushes are to bear plenty of good fruit. Not infrequently we come across bushes that have been given anything but proper treatment, with the result that they are merely thickets of wood, and the fruit is small and of little value. Black Currants on good soil invariably make a great deal of wood, and hence a little dressing with the knife is required.

Pruning is a very simple operation, but is entirely different to that recommended for Red and White Currants. Unlike the latter the fruit is produced on wood of the previous year. In dealing with the bushes, therefore, the old wood which is past bearing must be cut clean out, following it up right to the stool of the bush. Some of the old wood will, of course, be necessary to carry the young bearing growths, or to extend the spread of the bush, but all that is not required for these purposes must be taken out. The young growths must receive a judicious thinning out, as overcrowding must be guarded against. Light and air are both necessary to the proper ripening of both fruit and wood, and this will be seriously impeded by crowding. No shortening of the shoots should be practised, but those that remain after the thinning, must be left at their full length.

Varieties of Black Currants.—These are not sufficiently numerous to puzzle the amateur cultivator as to which to pick and choose. The undermentioned are sorts of long standing that have amply demonstrated their value and reliability. Either or all of them may be grown, and will be found capable of supplying all requirements. Lee's Prolific has very large berries, and is a most abundant bearer. The berries moreover possess a sweet and pleasant flavour, and will hang for a long time on the trees after they are ripe. Black Naples is also a very large fruited and prolific variety. It comes into leaf very early, and on that account is liable to be injured by severe late spring frosts, but on the whole it is excellent for general work. A third variety is Ogden's Black Grape. This is, perphaps, the best of any for planting in cold and exposed districts, or where the soil is wet and heavy.

Jasminum nudiflorum.—The hardiness of this well-known climber in flowering in the middle of winter is really extraordinary when we take all things into consideration. It is not to be wondered at, therefore, that it is such a great favourite amongst amateurs generally. In the districts around London one may see many villas with their walls covered by it, and judging by appearances it seems to resist the smoke pretty well. It is gifted with a good constitution and will thrive in any position and in any soil of fair depth and fertility. Another good point is it grows quickly and is not very long in covering a wall. The long, flexible, green branches clothed with the bright yellow flowers are very ornamental, and the absence of the leaves tends to show the flowers off more conspicuously. Those of our readers who are in search of a climber for covering a wall, a fence, or an arbour, cannot do better than invest in one of these Jasmines. We may mention, by the way, that we owe it to China, from whence it was introduced about the year 1844.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Bedding Calceolarias.—I made up a bed of soil in a cold frame early last autumn and put in a lot of cuttings of bedding Calceolarias, most of which have rooted. Owing to the mildness of the winter they have grown a good deal. Will it be necessary to take them up and replant them? Some of them have grown rather tall! Must I pinch the tops out of these? *G. Wilson.*

Unless the plants become very crowded there will be no need to take them up and replant them, and in any case it should not be done just now. Wait for another six weeks before you think of disturbing them. In the meantime you may pinch the tops out of those plants that are too tall and straggling. In two or three week's time the tops of the rest may be taken off. This will induce them to make side growths, and will develop a dwarf and bushy habit.

Worms in pots.—A very simple method of getting rid of these intruders from the soil in the pots, *N. M.*, is to water the plants with water heated to 123° Fahr. This will do no harm to the roots of the plants and will cause the worms to come to the surface, when they may be easily caught. Tapping the pots with a stick will often have the same effect, but is not always certain.

Aucuba japonica.—Will you tell me the way to propagate this plant, and whether I shall require heat to do so or no? *W. Enders.*

Aucuba japonica may be quickly and easily increased by cuttings, taken either in spring or autumn. Nurserymen favour the latter season. Make up a bed of light sandy soil in a cold frame, and put a layer of sand on the top of the soil. Into this the cuttings may be dibbled pretty thickly. Keep them quite cool. If you have not a frame to spare, in the manner suggested, choose a sheltered border under a wall. A frame is, of course, a great protection, inasmuch as it enables the cultivator to gauge better the conditions of moisture at the root.

Noisette Roses.—*Wat* asks for some information as to the origin of this class of Roses.

The Noisette Rose is of American origin. It was first produced by a cross between Rosa moschata, and R. indica, so that it is closely related to the Tea. The hybrid was sent to France and placed under the care of M. Noisette, of Paris, who propagated and sent the strangers out to commerce under the name of Noisettes.

Border Carnations in pots.—I have had a deal of ill-luck with regard to my Carnations for the last two years. The ground is infested with wireworms, and nothing I can do seems to lessen their numbers appreciably. In despair at doing any good by planting outdoors, I have bethought me of trying pot culture. Will you give me a few instructions as to how and when to pot?; also what soil to use? *McPherson.*

About the beginning of March will be the best time for you to pot the plants. Select the strongest, and put them singly into 7-in. pots. If the plants are small and rather weak, you might put three in an 8-in. pot. Take care not to bury the plants too deeply. For compost, use two parts of good turfy loam, chopped up with a spade, and one third of spent mushroom-bed manure. Rub the latter through a ½ in. mesh sieve. Add a good sprinkling of rough river sand. Do not pot too firmly, and be very careful over the subsequent watering. If the soil is fairly moist, the plants will not want any water for some little time after they have been potted. A cold frame will suit them very well until they grow too tall for it, when they must be shifted into more commodious quarters.

Fig, Brown Turkey.—You will find this a very hardy sort, *Y.*, and the best for your purpose. Planted against a south wall out of doors it will do well with you. Do not commit the mistake of making the border too large. Figs always fruit best when the root run is somewhat confined, otherwise the growth is gross and rank, and the fruit crop small.

Two good late Plums.—Will you tell me the two best late dessert Plums for planting against a north wall, *Reader.*

Coe's Golden Drop and Ickworth's Imperatrice are the two best.

Begonia semperflorens.—For flowering during the winter months, seed may be sown from the middle to the end of February in heat. There are no more useful plants, *T. T.*, for decoration of the conservatory in the dull months of the year than Begonia semperflorens and its varieties.

Raspberries.—A year ago I took possession of a house and garden, the latter being in a much neglected state. Amongst other things it contained was a couple of rows of Raspberries, but such Raspberries!—I am sure they did not produce such good fruit as the wild ones in the woods. I thought by manuring them well I should improve them, but the manure did not do much good last year. What would you advise me to do? *Subscriber.*

The probability is that the Raspberries are old, and not having been properly looked after, the ground in which they are growing has become terribly impoverished. It would be worse than useless to try and renovate this old plantation, and the best thing you can do is to root them up and make another plantation on a different site. Any spot that you may choose should be prepared by trenching and heavy manuring, and this work should be seen to with all speed. Plant a thoroughly reliable sort, such as Superlative, and you will be alright. This variety is certainly the best for general purposes.

Ficus repens.—Without doubt, the reason why your Ficus looks so unhappy, is that the wall is too dry for it, *Taro.* Houses which have a back wall with the stokehole behind, such as yours, must have the wall syringed at least once a day all through the

winter, and twice if the fire is kept going briskly. In the summer it will get the syringing in common with the rest of the plants.

Stacking loam.—The loam should be built into a stack with the grassy side of the turves downwards, *D., Bristol.* It will be as well to cover the top with a few boards, a sheet of galvanized iron, or anything calculated to throw off the rain.

CARTERS' STRINGLESS FRENCH BEAN CANADIAN GLORY.

CARTERS' STRINGLESS FRENCH BEAN.

THERE are several stringless Beans in cultivation, but a large proportion of them belong to the Waxpod or Butter Bean section, which is characterised by the uniformly pale or clear yellow colour of the pods. Carters' Stringless French Bean, Canadian Glory, will be the more likely to meet the taste of the British public because the pods are green. In addition to mere outward appearance, the pods recommend themselves on account of their fine flavour. The special character of this variety is that the fibro-vascular tissue is so much reduced as to be hardly perceptible in the cooked pods, which are therefore described as stringless. This quality they retain even when comparatively old, so that they require less preparation for use than the ordinary kind. The plant itself is dwarf and highly prolific; and what is even of greater importance in the presence of so many varieties in cultivation, the variety is very early. Some of those who have grown it, even go further and say that it is the earliest or quickest French Bean they have ever tried. This will be an advantage both for forcing purposes and for getting a good supply in the open air till the later French Beans come into use and after them the Scarlet Runners. It is well adapted for dry and poor soils, and, being naturally early, it is well adapted for such soils, which are always more profitably cropped before the drought of summer has dissipated their moisture. The qualities, therefore, that recommend Canadian Glory, are that the plant is dwarf, very early, prolific, and well suited for poor soils, and that the pods are large, smooth, green, stringless, and of excellent flavour when cooked. Messrs. J. Carter & Co., High Holborn, London, sent it out last year for the first time, so that it is still in its infancy and relatively little known, even although the stock of seeds was very soon all sold out last year. We are indebted to Messrs. Carter for an opportunity of laying this novelty before our readers.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

The fifty-eighth annual general meeting of this institution was held on the 14th inst. at "Simpson's," 101, Strand, London. The proceedings commenced at 3 p.m., when the chair was taken by Mr. Harry J. Veitch, who called upon the secretary, Mr. George J. Ingram, to read the minutes of the previous meeting, which were passed. The chairman then called upon him to read the minutes of the general annual meeting of last year, after which the report of the committee and the accounts of the institution for the present year were read as follows :—

REPORT OF THE COMMITTEE, 1896.

The committee have the greatest possible satisfaction in submitting their annual report for the year 1896, and, in doing so, they would express their sincere thankfulness that they are able to again congratulate the subscribers and friends of the Gardeners' Royal Benevolent Institution on its continued prosperity and ever increasing usefulness to those in adverse circumstances, for whose benefit it was established. It is with much pleasure the committee have to report that the annual festival dinner, held in May last, was one of the most successful in the history of the institution, and they take this opportunity of acknowledging their great indebtedness to the Right Hon. the Earl of Lathom, G.C.B., who so kindly presided on that occasion, and whose earnest appeal on behalf of the funds of the charity elicited such a generous and substantial response. The committee desire also to offer their most sincere thanks to those gentlemen who so kindly acted as stewards, and to all friends who in any way rendered assistance in contributing to the success of the anniversary.

In the past year eighteen pensioners have passed away, four of them leaving widows, three of whom, whose cases having been investigated and found to be deserving and eligible, have been placed on the pension list at £16 per annum, in succession to their late husbands, in accordance with Rule III., 13. The names of two pensioners have been removed from the list, their circumstances having altered whereby they are no longer eligible to receive aid from the funds. The committee are glad to announce that they have decided to recommend an increase of twenty pensioners to the number at present on the books, ten of whom having been accepted in conformity with Rule III., 5, they ask the subscribers to place on the funds without election. The remaining ten will be elected by the votes of the subscribers in the usual way, making a total number of pensioners of one hundred and sixty-one. It is a great pleasure to the committee to feel justified in thus increasing their liabilities, and to recommend to be placed on the pension list the largest number of candidates ever admitted at any one election since the establishment of the institution ; whilst, at the same time, they regret that with liabilities which it is impossible for them to accurately estimate, they are unable to render assistance to a greater number of those applicants who are appealing for aid.

It is gratifying to the committee to be able to report the formation of a new branch of the institution at Exeter, which was inaugurated after a most successful meeting held at that place, presided over by the Mayor of Exeter and addressed by the treasurer and secretary of the institution ; and the committee would express their hearty thanks to the promoters of the meeting, and especially to the hon. treasurer and secretary, for their assiduity and energy, which went far to ensure its success. They would also present their grateful thanks to the hon. treasurers and secretaries of the Worcester, the Bristol and Bath, the Wolverhampton, and the Birmingham Auxiliaries for their services and ungrudging labours in advancing the cause. In the past year a meeting was held at York, presided over by the Lord Mayor of that city, in furtherance of the objects of the institution, and from the success which attended it the committee believe that a greater interest will be taken in the charity in that part of the country. There have also been held a floral service at York Minster, a flower and fruit stall in connection with a floral exhibition at Exeter, presided over by county ladies, garden fêtes at Osberton, and Reigate, a fruit show at Reading, and concerts at Altrincham on behalf of the funds, to the organisers of which, and to the others friends in various parts of the country who have assisted the institution in any way, the committee would tender their very hearty thanks.

In drawing attention to the fact that the present year will witness an event which is unparalleled in the annals of this country, viz., the completion of the sixtieth year of our beloved Queen's beneficent reign, the committee beg to announce that they have determined to endeavour to commemorate so unique an occurrence by establishing a fund to be called "The Victorian Era Fund," the interest of which shall be devoted to the temporary assistance of those applicants who are waiting to be placed on the pension list, and who have been subscribers to the institution. This proposal has already met with hearty approval from His Grace the Duke of Westminster (president), Baron Schröder (vice-president), C. Czarnikow, Esq. (vice-president), N. N. Sherwood, Esq. (trustee), Harry J. Veitch, Esq. (treasurer)—to whom the committee are indebted for the proposal—and many other friends of the institution, who have also promised generous contributions towards this object. The committee would point out that Her Majesty has been patroness of the charity for forty-five years, and only last year evinced her continued interest in its welfare by contributing £25 to its funds, and they believe that, in attempting to celebrate the Diamond Jubilee of Queen Victoria in such a manner and with the purpose in view, they will receive the support and practical sympathy of all friends of the institution, as well as of those who take an interest in gardening and flowers. The committee have also resolved in honour of the event to send on June 21st next the sum of £5 to each unsuccessful candidate at the present election whose name is then on the applicants' list.

It is with feelings of deep regret that the committee have to record the decease of their valued colleague and friend, Mr. James Webber. From the year 1844 his family had been warm supporters of the institution, whilst for the past twenty-one years he himself had been a member of the committee, and had invariably done his utmost to promote the interests and further the objects of the institution, and his loss will be severely felt and his services greatly missed. The committee, in conclusion, have the privilege and the pleasure of announcing that the Right. Hon. Lord Rothschild has very kindly undertaken to preside at the fifty-eighth anniversary festival dinner, on Thursday, May 26th, 1897, at the Whitehall Rooms of the Hotel Métropole, and they confidently appeal to all those who are interested in the welfare of the charity to do their utmost to make the anniversary a marked success. The committee earnestly hope that the thankfulness expressed for the success attained in the past will be an incentive to further exertions, so that the good work which has been carried on by the institution for fifty-eight years may continue to grow and prosper.

BALANCE-SHEET.

DR.			
To Balance...			£905 15 5
„ Deposit...			1,265 0 0
„ Annual Subscriptions	£1,335 7 0		
„ Donations at and in consequence of annual dinner, including stewards' lists and collecting cards	2,492 1 11		
„ Return of income tax	22 19 10		
„ Advertisements in annual list of subscribers	47 11 0		
„ Dividends and interest on deposits	841 4 3		
			4,739 4 0
			£6,909 19 5
CR.			
By Pensions and gratuities			£2,787 18 0
„ Expenses of election and annual meeting			15 11 7
„ Secretary's salary	£250 0 0		
„ Office assistance	25 0 0		
„ Rent of office...	62 10 0		
			338 10 0
„ Printing, general, including annual reports and lists of subscribers, appeals, &c.	105 16 3		
„ Stationary, including new subscription books...	37 17 8		
„ New Rules	7 2 6		
„ Book of cheques	3 0 8		
„ Expenses of annual dinner	£170 18 0		
Less tickets sold	86 2 0		
	84 16 0		
„ Honorarium to J. S. Rowe	2 2 0		
„ Postage of appeals	14 15 5		
„ Postage of reports, lists of subscribers, voting papers, ordinary postage and incidental expenses...	54 19 10		
„ Deputation and travelling expenses	10 10 9		
„ Advertisement	2 2 0		
„ Bank charge	0 3 6		
			323 6 7
Investment of life subscriptions Midland Railway 3 per cent. Debentures			500 0 0
On deposit			2,015 0 0
Balance with treasurer			929 13 3
			£6,909 19 5

(Signed) THOMAS MANNING, THOMAS SWIFT, J. WILLARD
Auditors.

As no comment was offered by those present, Dr. M. T. Masters proposed, and Mr. A. Ontram seconded, that the report of the committee, as now read, be received and adopted. The resolution was carried unanimously. Mr. George Monro proposed that Mr. Harry J. Veitch be elected treasurer—a proposition which was seconded and carried. Mr. J. H. White proposed and Mr. A. Outram seconded that Messrs. W. Robinson, Arthur W. Sutton, and H. E. Tillman be elected to serve on the committee in place of Messrs. G. Bunyard and T. A. Dickson, who retire by rotation, and Mr. James Webber, deceased. This was also carried *nem con.* Messrs. T. Manning, T. Swift, and J. Willard were re-elected as auditors. Mr. William Denning proposed that ;—1, Richard Brimblecombe, of Exeter, aged 67, annual subscriber of £1 1s. for sixteen years ; 2, Henry Downing, of Hitchin, aged 61, subscriber of £1 1s., also life member for twenty years ; 3, Thomas Elsley, of Birmingham, aged 58, totally disabled, a life member for sixteen years, also contribnted £7 8s. ; 4, Alfred George, of Budleigh Salterton, aged 69, annual subscriber of £1 1s. for sixteen years ; 5, Oliver Goldsmith, of Bookham, aged 63, annnal subscriber of £1 1s. for twenty years ; 6, George James, of Binstead, Ryde, aged 67, annual subscriber of £1 1s. for twenty-eight years, also contributed £7 9s. ; 7, Richard Newman, of Putney, aged 63, annual subscriber of £1 1s. for sixteen years ; 8, Thomas Pyper, of West Kensington, aged 78, annual subscriber of £1 1s., also life member for twenty-one years ; 9, Robert Squibbs, of Sleaford, aged 72, annual subscriber of £1 1s. for thirty-seven years ; and 10, Elizabeth Woods, of Clapham, aged 63, widow of the late S. A. Woods, annual subscriber of £1 1s. for nineteen years, being in distress and having in every way complied with the regulations, these ten applicants be placed on the pension list without the trouble or expense of an election, in accordance with Rule III, 5. This resolution was seconded and carried unanimously.

Messrs. George Monro, S. M. Segar, and A. Outram were then appointed scrutineers of the ballot for an election from the candidates to fill the remaining ten vacancies on the pension list. The poll closed at 4 30 p.m. precisely.

Soon after that time the chairman resumed his seat, and the scrutineers duly read out the result of the poll for each of the thirty-nine candidates. The following ten having secured the highest numbers of votes, were declared duly elected :—1, Joseph Monk, 3,957 ; 2, Charles Smith, 3,762 ; 3, William Milne, 3,651 ; 4, Edmund Papworth, 3,395 ; 5, David Davis, 3,307 ; 6, George Ashby, 3,255 ; 7, William Lee, 3,190 ; 8, Eliza Webb, 3,107 ; 9, Thomas Sims, 2,930 ; and, 10, Rachel Jefferson, 2,802.

ANNUAL FRIENDLY SUPPER.

After the result of the poll was declared the meeting separated, but the members of the institution and their friends met again at 6 p.m around the festive board, in another room, to partake of what is termed "the annual friendly supper," under the presidency of H. E. Milner, Esq. Amongst the company present were Messrs. Harry J. Veitch, James H. Veitch, John G. Veitch, N. N. Sherwood, George Bunyard, Bunyard, jun., W. Y. Baker, Baker, jun., J. Laing, H. J. Laing, H. B. May, J. H. White, George and Alex Monro, H. Turner, Turner, jun., Owen Thomas (the Queen's Gardener), A. Outram, A. F. Barron, G. J. Ingram, W. Iceton, J. Ollerhead, George Wythes, James Hudson, Rudolph Barr, J. Barr, J. Willard, Thomas Glen, R. B. Gilson, W. J. Brewer, Drewett, S. M. Segar, &c.

After the usual loyal toasts had been proposed and duly rendered, the chairman proposed "Continued Prosperity to the Institution, and Success to the Victorian Era Fund." He referred in warm terms to the grand work the institution had accomplished in past years in providing for gardeners, market gardeners, nurserymen, seedsmen and others, thus showing the comprehensiveness of the institution, and its far-reading power for good. The disbursing of over £7,000 in aid of its pensioners was sufficient testimony in itself that the institution was deserving of continued and increased support. The proposed "Victorian Era Fund" was an excellent thing in itself, and he appealed to all concerned to support it liberally. He coupled with the toast the name of Mr. Harry J. Veitch.

The latter, in responding, referred in highly complimentary terms to the assistance rendered the

institution by the late Mr. James Webber during the many years he was associated with the institution; but he recommended his hearers not to regret the absence of their departed friend too much, but strive to follow his example. Mr. Veitch next spoke of the large sums that certain of the pensioners had drawn from the funds of the institution compared with the small original outlay that secured such a benefit. The result of the polling revealed that there were 82 unsigned, and therefore wasted papers, making a loss of 890 votes, and desired the voters to be more careful. He then drew marked attention to the "Victorian Era Fund" (particulars of which will be found in another column), and said that each subscriber to the institution, while waiting for election, would receive assistance in proportion to the amount he should have subscribed. Before resuming his seat he thanked all for past support, and appealed to them to do what they could in the future.

Mr. H. B. May proposed "The Committee," and spoke in highly complimentary terms to the excellent manner in which the members of it had accomplished their duties; and coupled with the toast the names of Messrs. S. M. Segar and James Hudson. Mr. Segar, in replying, said he was pleased to hear that the labours of the committee had been appreciated. Half of the working day was was occupied by every meeting attended, but the work was a labour of love, and they would continue to do their duty. Mr. Hudson appealed to gardeners and others to increase the receipts of the institution, for the deserving applicants were still far too numerous to get elected to the benefits of the pensions hitherto provided.

Mr. George Monro proposed "The Honorary Secretaries of Auxiliaries, and Country Friends," and spoke of various sums that had been collected by these useful provincial auxiliaries of the institution, referring to the £164 15s. collected by the Worcester Auxiliary during the first period of its existence. He coupled with the toast the name of Mr. J. H. White, of Worcester. The latter replied that they would do all they could at Worcester to support the institution, and hoped to get something for the "Victorian Era Fnnd." Mr. Drewett said that as a country member he had been accorded much attention and many kindnesses by various men of the gardening craft, for which he felt grateful. He was pleased that country members should have been represented through him on that occasion.

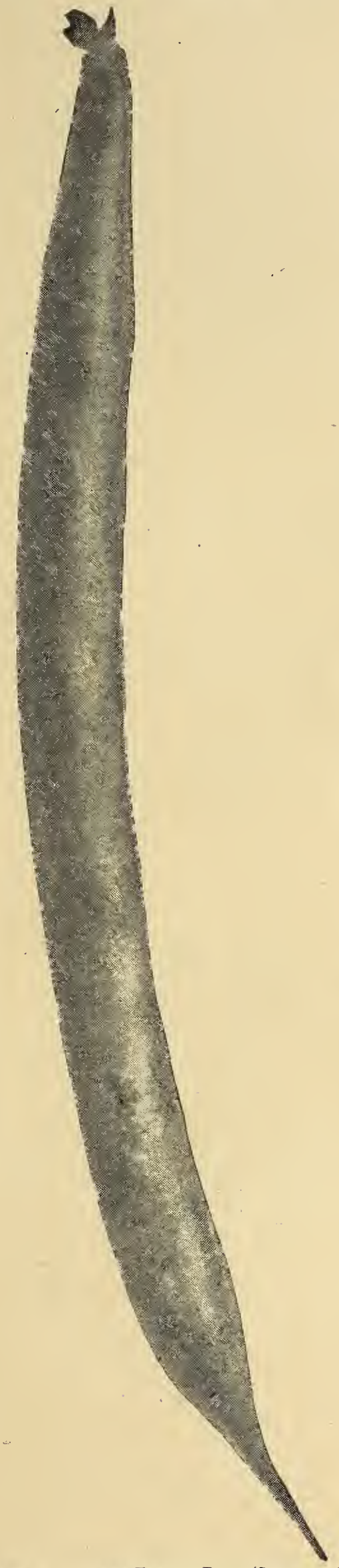
Mr. N. N. Sherwood proposed "Our Chairman," and said that he deserved their thanks for the way in which he had honoured them that evening. The chairman replied, and before resuming his seat said that the best thanks of the members of the institution were due to Mr. George J. Ingram for duties faithfully performed. Mr. Ingram suitably replied. Mr. Harry J. Veitch proposed a vote of thanks to Mr. Cathay, the managing director of "Simpson's, Ltd.," for the admirable way in which he had served them that evening.

Numerous songs and musical pieces on the piano and concertino were interspersed between the speeches during the evening, which passed off in a very enjoyable manner.

FLORAL ART AT MESSRS. PERKINS & SONS, COVENTRY.

The demand for floral decorations is increasing daily, and this world-renowed firm is keeping pace with the times, for their floral work is well known throughout the United Kingdom. At all our leading shows they are well represented, and when in competitions are always to the fore; for they have received during their business career upwards of 1,200 medals and first prizes.

Their nursery at Coventry is devoted to the culture of flowers and foliage suitable for their enormous requirements. Even the seventy houses there erected and specially designed for this purpose are hardly half sufficient to grow what they require. Here are houses of Orchids, including Dendrobiums, Coelogynes, Odontoglossums, Oncidiums, Cattleyas, and Laelias in great variety. Other houses are devoted to Eucharis, Pancratiums (probably the finest lot in the country, grown by the hundred). Stephanotis, Gardenias, Bouvardias, Tea Roses, double Primulas, Hoyas, Dipladenias, Lapagerias, and Azaleas, all of which are grown by the thousand. Foliage plants, such as various Crotons, Smilax, Caladiums, Asparagus tenuissimus and A. plumosus, Maidenhair Fern, and others suitable for decorative purposes are grown in enormous quantities. Upwards of 10,000 Chrysanthemums of various sorts most suitable, are also grown; in addition also are many acres of Roses of all the leading kinds. Their



Carters' Stringless French Bean (See p. 329).

success, also, in Rose culture is proved by the many leading prizes they take yearly. In addition to these, thousands of Lily of the Valley, Roman Hyacinths, Tuberoses, Liliums in various species, Tulips, and other Dutch bulbs are forced for winter work.

More than twenty young ladies are engaged in their establishment in the art of making floral designs; and the nimble way in which they handle and prepare the flowers for making up proves they are no novices at the work. Here are to be seen these cheerful young ladies engaged in the artistic work; some, as I say, begin preparing the flowers, whilst the more expert ones make up the floral designs, which are sent all over the United Kingdom. There are first the buttonholes and sprays, which average over 1,500 per week; bouquets average over 100 per week; and wreaths and crosses over 200 per week. In addition to these they do an immense trade in cut flowers for table decorations, also for house and church work. Besides their Coventry establishment, they have an immense stall in the centre arcade of the Birmingham Market Hall, which is always attractive. It is here where the youths and maidens wend their way to adorn themselves with these floral embellishments. Buttonholes, sprays, wreaths, and crosses find a ready sale here. In addition to this stall, they have a grand shop in the North Western Arcade, which is always attractive with floral designs and plants suitable for decorative purposes. At our leading flower shows they often exhibit, not for competition, making some of the finest display in floral art ever seen. Many a country lady and gentleman has undoubtedly learnt a lesson from their exhibits, which, for artistic work, cannot be beaten.—*A. O.*

GARDEN FOES.

(*Concluded from p.* 315.)

Time will not allow for more than a passing comment, so we must pass on to the next order, Orthoptera (straight winged) to which such insects as the cockroach, grasshopper, mole cricket, etc. belong. Earwigs were also formerly placed in this order, but they were made a separate one by Westwood and named Euplexoptera or tight-folded winged, and by Kirby into Dermoptera or skin-winged. Earwigs, as most people know, are very destructive, but how few of us are acquainted with their habits. How many know that they possess wings during their later stages of existence, which enable them to fly with advantage? These wings are folded up, so as to be scarcely preceptible, but when expanded they represent a fan. Forficula auricularia, the scientific name of these destructive little creatures is not taken as some ignorant people would have us believe on account of their getting into the ear, but from the tail being furnished with an instrument that much resembles those formerly used as ear-piercers. Earwigs, like all others of this class, avoid the light, therefore their habits are not so well known as some others. The female watches over her eggs with maternal solicitude, and carries them away elsewhere if they are touched; she also protects the larvae till strong enough to look after themselves. They may easily be trapped by the hollow stems of the Bean, or by moss placed in an inverted flower pot, as these form a good harbour for them to creep into away from the light after their nocturnal rambles. Unfortunately they can use their wings, and so travel in that way to fresh fields and pastures new.

The cockroach is a loathsome creature, which not only infests our houses, feeding on sweets and everything within its reach, but being omnivorous, plants and fruits of various kinds are a favourite food of it. Cockroaches may, however, be easily poisoned if followed up with perseverance. Crickets may also be got rid of in the same way. We next come to the order, Hymenoptera or membrane-winged, and in this the gardener will find some of his greatest friends as well as his most destructive foes. It is to this order that the bee, wasp, ant, and saw-fly belong. Most of this group live in companies and build houses. Of the bee we have little to say, except that it is and has been a friend to many.

The next, as every one knows, are a set of dangerous brigands, and exist, it would seem, only to do harm; but even in these there is something to be learned if we would only take a pattern by them. They are, however, like the generality of working men, and take no thought for the morrow; and when unable to find food they perish by hundreds. They are most indefatigable in their labours, working from early dawn till night fall, but lay up no store for the winter months, or when the time comes that they cannot work. We have two or three British species, and there seems to be several

varieties of the common wasp, Vespa vulgaris, some of which are much larger and darker than others. Vespa norvegica, the bush wasp, is not so plentiful, and Vespa Crabro, or the hornet, seems to have disappeared since the severe winter of 1890.

There are several species of ants, which are more or less troublesome to the gardener. They may, however, be got rid of in various ways, either by poisoned meat, boiling water, and such like, if the same be followed up persistently.

Sirex gigas, or the giant wood wasp, is another formidable looking creature belonging to this order. In the larvae state they are said to be capable of piercing lead to the depth of a quarter of an inch. No wonder then that they make such galleries in the Pine trees. The perfect insect lays its eggs in the living wood, and there the larvae exist for several years, feeding on the interior. The only specimen I ever saw alive was one taken in Buxted Park about ten years ago.

Another group belonging to this order is the saw-fly, of which we are unfortunately troubled with a large number. In some places the Gooseberry and Red Currant bushes are infested to such an extent that they denude them of their foliage in a very short time. They are often mistaken for the larvae of the Gooseberry Moth, Abraxas grossulariata. To rid the tree of them I know of nothing better than syringing early in the morning with clear lime water.

Pear Saw-Fly, Selandria aethiops.—Gardeners are sometimes annoyed at finding a slimy looking leach on the upper surface of the leaves, eating away the pulp. They are nearly black, and somewhat resemble a tadpole. If the slimy substance be removed you will observe a caterpillar with numerous feet. They usually turn to the pupa state in October, and come forth as the perfect insect or fly in June. There are also the Pine Saw-Fly (Lophyrus Pine) and many others.

Thysanoptera or fringed-winged.—There are not many species in this group that are injurious to the gardener, but what there are cannot fail to make themselves noticed. The thrip, as everyone knows, is a terrible pest, and most difficult to deal with. How often are the choice flowers of Orchids marred by them, to say nothing of fruit and other trees? They must be got rid of at all hazards if the cultivator is to do any good. The most effectual mode is either dipping or syringing with some insecticide.

Neuroptera or nerve-winged. In this order there are but few that do any damage to the gardener, the larvae mostly feeding on water plants. There is one, however, that ought to be considered his friend, namely, Chrysopa perla as the larvae of this feed on the aphis.

Coleoptera or case-winged.—Of all the orders of insects the gardener has to wage war against, none are more troublesome than this. From the tiny Turnip flea and Pea weevil to that of the cockchaffer and Rose beetle, all are foes, therefore we have many to describe. There are, however, even a few in this order that are his friends, the chief amongst the latter being the lady bird-beetle, of which there are several species; Coccinella bipunctata is the most common.

We will commence by first taking the Rose beetle (Cetonia aurata). This is of a beautiful green colour, shot with gold. It flies both by day and night, and may be taken by hundreds in some places. Here I have seen them on bright sunny days clinging in scores to the flowers of the Rhubarb, and when caught they pour out an objectionable foetid liquid. The larvae much resemble those of the cockchaffer, and are found feeding on the roots of Strawberries, Grasses, and other plants, often doing considerable damage.

The larvae of the cockchaffer (Melolontha vulgaris) may be found in the soil feeding on the roots of various plants at any time of the year. They take two or three years to grow to their full size, when they change to the pupa state, the perfect insect appearing in April and May, and continuing with us till the end of June. The beetles feed on the leaves of the Oak, Elm, and other trees, and when numerous strip them of their foliage.

There are several species of click beetle, that are troublesome to the gardener. It is, however, in the larvae state they are the most destructive. The wireworm, as it is usually called, is the larva of this beetle. It has six legs and a sucker foot, the former answering to those of the perfect insect, while the latter assists it in taking hold of anything. It is the mistaken notion of many people that the wireworm has numerous legs, this, however, is not so as you see. The eggs are usually laid in the earth close to the plant, so that when hatched the tiny creatures can commence to feed at once. They live in this state for three or four years, and usually feed near the surface. In the case of severe frost, they burrow to a considerable depth, going deeper as the frost increases, out of harm's way. When fully fed they descend deep into the soil, and change to the chrysalis, and in the course of time appear as the perfect insect. Of all the many remedies recommended for the destruction of these pests, by people who profess to be well acquainted with their habits, none is so effectual as good cultivation. As before remarked the larvae feed on the roots of plants. They go deep into the earth, and come up again at will, there to renew their work of spoliation; and while the farmer and gardener are asleep, their plants dwindle and die. I was much amused at a farmer who was always complaining about the pheasants doing him so much damage, because, when a brace was sent him, on opening their crops, he found nothing therein but wireworms. It is seldom on well cultivated land that these do serious damage; but if couch grass and weeds abound, then we may expect the wireworm to be prevalent. Having described the larvae, point them out to the men, when digging the ground, and when any are observable they should at once be destroyed. Before turf is used in gardens it should be thoroughly examined for these pests. Gas-lime, salt, and rape dust are also very useful for destroying them.

Turnip fly or flea.—This is a true beetle, Haltica memorum. The wing-cases are very pretty, having a sulphur yellow streak running down the middle nearly to the tips. It is generally supposed that these insects are hatched in spring. This, however, is a mistake, as there are several broods in a season.

The female lays her eggs on the underside of the leaves, from which the caterpillars are hatched in ten or twelve days. They at once gnaw their way into the pulp on which they feed. In six or eight days they turn to the chrysalis, from which in due course the perfect insect emerges, so that about every five weeks there is a fresh brood. It is the perfect insect in this case that does the most damage, for these lively little creatures gnaw holes through the leaves, or if pressed for food eat the plants entirely before they are well through the soil. The best known remedy is good cultivation. If the plants are kept growing by good tilth, and occasionally dusted with lime, the insects will not long survive such treatment.

Weevils are also insects belonging to this order. The Apple-blossom weevil (Anthonomus pomorum) is a destructive little creature which lays its eggs in the flower buds before they expand, causing them to wither up. If all such flowers were removed from the trees as soon as it is perceived, they are attacked, many of the larvae would be got rid of. The weevil usually falls to the ground on being alarmed; therefore, if cloths are spread under the trees, they could be shaken down and destroyed. There are many others of this section such as the Nut Weevil, the Pea Weevil, etc., but time forbids me to dwell longer on them.

We will next turn to a class of animals, which, though very small indeed, are amongst the most destructive of all our garden foes. Red spider is not, as some people suppose, an insect, for as before pointed out all true insects are divided into three parts, and this is not. Insects, too, have six legs, but the spider has eight. This pest is of the order Acarina to which the spinning mites belong. Tetranychus telarius or red spider is one of the most troublesome pests the gardener has to contend with. It would take too long to describe them here, but if anyone will take the trouble to put one under a microscope, he will there see them in all in their beauty. As these cannot live in a moist climate, the best means to their destruction is to keep the foliage clean by frequent syringing. It is recommended by some to use milk of sulphur, but as the gardener is desirous of having everything, particularly his choice fruit, as clean and free from blemish as possible, any of the known insecticides that leave a sediment should be avoided, using only clean water which ought to be applied late at night and early in the morning. If this be followed up they will not make much headway.

The Currant Mite, Phytoptus Ribis.—This, like the red spider, is not an insect, but belongs to the same order as the previous named pest. In some gardens it attacks the buds of the Black Currant, causing them to swell to an enormous size. The best remedy is to dig up the bushes and burn them; then procure a fresh stock and plant them on another piece of ground.

Woodlice belong to the order of crustacians, which cannot live long in a dry place. They feed on both roots, stems, leaves, and fruit, doing considerable damage. They may, however, be trapped by placing food for them to eat in the bottom of small pots, which should be covered with moss. The walls of houses should also be washed down with boiling water.

The Julius worms or Snake Millipeds belong to the order Myriapods. They are not the larvae of insects as some suppose, as they do not go through the different stages of metamorphosis, and though possessed of numerous legs they never have wings. In some instances they have as many as eighty pairs of feet. They feed on various root crops, and may be caught with slices of Mangolds placed in their haunts. Soot water will also drive them away from choice plants.

There are numerous other small animals which the gardener has to wage war against, but time forbids me to dwell longer on them. I cannot, however, close without a brief notice of slugs. Slugs and snails are very troublesome in showery weather, especially early in the spring, when things are tender. Of the many remedies recommended none is like a fine tilth and hand-picking. They may be got rid of by dusting the ground with lime during the night or early morning when out feeding; but to be effective this must be repeated for several nights in succession. Rats and mice and several kinds of birds are more or less troublesome; the latter, however, cannot altogether be considered as foes, for they do a considerable amount of good in the way of ridding the garden of other vermin.

Having thus given you a brief outline of our foes, I will leave you in hope that it may be possible for you not only to find means for their destruction, but in the hope that you may have profited somewhat by our evening's discourse; and trust that we may have the satisfaction of learning to assist each other in the knowledge some of us may gain. If we only knew how numerous our foes were, we should doubtless be better armed for their destruction. At the same time a study of their habits will no doubt set us thinking of that nobler life, wherein, if each and all set to work, there is none, not the least amongst us, but who could do something to help his neighbour.

H. C. Prinsep.

TRINITY ROAD NURSERIES, WANDSWORTH.

The Glass Department here is of considerable extent, as, indeed, it had need to be, when we take into consideration the important part that underglass space plays in the propagation of Roses, Clematises, and bedding plants of all descriptions, that Mr. Neal yearly turns out by the thousand. In addition to all this, there are the tenderer pot plants to be propagated and reared to saleable size, and it is astonishing to see the number of this kind of plants that are sent out each season. Either the public is growing increasingly fond of such plants, and hence the greater demand, or else they have treated them very badly, and new ones have to be obtained from the nurseryman to fill up the gaps. Most probably both these causes have to be reckoned with.

In many gardens the first two or three weeks of January are looked upon as being rather a slack time, but in a nursery such as that under notice, it is anything but this, as a walk around in charge of the glass foreman, Mr. Best would soon have convinced us even if we had previously entertained doubts upon the point.

Bedding Plants constitute a strong feature, as may be well imagined when we say that upwards of 30,000 zonal Pelargoniums are sold each year. The boxes of autumn struck cuttings are placed in heat towards the end of December, and the tops are taken off as soon as they are of sufficient length to warrant the operation. The blue Lobelia is another most popular subject, and the estimate that over 30,000 plants in the immediate vicinity of the metropolis, will come from the Trinity Road Nurseries during

the ensuing summer would by no means overstep the mark. Such easily grown and free-flowering annuals as Stocks and Chinese Asters are likewise grown in very large quantities.

The grafting of Roses is another operation carried on vigorously during the earliest days of the year. The plants are placed singly in small thumb pots and stood close together in shallow propagating frames enclosed in light roomy glass houses. There were thousands of these grafts to be seen, fully ninety per cent. of which, judging by appearances, would strike. A close examination revealed that in many instances, a union between stock and scion had already been effected. Other earlier batches showed the scion breaking into growth. The trade in Roses is wonderfully brisk; such well-known varieties as Catharine Mermet, Sunset, William Allen Richardson, Marechal Niel, Niphetos, Gloire de Dijon, and Crimson Rambler are in great demand.

Clematises in variety are treated in a similar fashion. Mr. Neal catalogues close upon sixty species and varieties, including all the leading forms of this beautiful genus of climbing plants which add so much to the enrichment of bower and garden.

In other houses the propagation of Ivies was going on, grafting upon H. canariensis being the method usually employed. Ampelopsis Veitchii, and A. hederacea were likewise to be seen in vast numbers. To those interested in propagation on a large scale, a visit such as ours is of untold interest. We can only add that the methods practised by those who have the management of these things at the Trinity Road Nurseries are of the most enlightened character, and are attended with a full measure of success.

Cytisus, or to give the more popular name Genista racemosa is one of the few hard-wooded greenhouse plants that are grown in great quantity by Mr. Neal. We were greeted with the sight of extensive batches of this favourite. A conspicuous system of training is one whereby the plants are made to run up with a clean stem varying from 1 ft. to 1½ ft. in height, carrying a fine head of great symmetry. When well flowered, such plants are most effective for conservatory decoration.

Cryptomeria japonica is a great success in small pots. The long, and slightly drooping branches are very graceful in appearance, and hence the plants form valuable material for decorative purposes. In large 48's or small 32's they do especially well, and it would be hard to imagine prettier plants. They possess the advantage over Araucaria excelsa of being somewhat cheaper. We were informed by our guide that they would lift well from the open.

Richardias in 6 in., 7 in., and 8 in. pots were doing remarkably well. The plants had been planted out of doors in the usual way last season, and remained outside until the latter end of October. They were actually flowering when they were lifted and at the time of our visit were all carrying flowers or buds, whilst the remains of two, and in some cases three, flower stalks were to be seen on each plant. The flowers open were of fair average size.

Bouvardias are excellent market plants, and Mr. Neal does them wonderfully well, indeed, we have never seen more vigorous and better flowered plants at any time. Alfred Neuner, Priory Beauty, President Cleveland, and Vreelandii are the sorts that command the readiest sale.

Stove Plants are by no means neglected, and the Dracaenas especially were much in evidence. D. rubra is, without doubt, the favourite for market work. It is easy to grow, is naturally of dwarf and compact habit, and will stand a good deal of knocking about. Kentia canterburyana is considerably dwarfer than K. belmoreana, but although a very elegant palm, is not nearly so much in demand as the latter form. Ficus elastica was represented by a number of well-grown plants, and cuttings in quantity which had lately been inserted to supply stuff to keep pace with the demand. The variegated variety seems to be steadily improving its position in the good graces of the public. Asparagus plumosus in 32-pots are a conspicuous success. We measured some of the growths borne by these plants, and found them to exceed 14 ft. in length—an ample proof of their strength and vigour.

Ferns were in strong force. Adiantum farleyense, although a most beautiful Fern, is by no means one of the easiest to manage. If the plants are once allowed to get into a bad state, it takes an infinite amount of trouble to get them out of it again. On this occasion, however, we were delighted with the appearance of a batch of plants in 48-sized pots. The huge size of the fronds, and the individual pinnules, the strength of the spikes, and the rich colouring were unmistakable evidences of health and vigour. Other Ferns such as Adiantum cuneatum, A. gracillimum, Asplenium fabianum, Pteris cretica cristata, and P. Wimsettii, are largely grown; although many of the Adiantums were enjoying their winter sleep at the time of our visit.

PHORMIUM TENAX.

The hardiness of the Phormium has been commented upon in recent issues of the gardening journals, and I now feel constrained to add my quota to that of the writers of the paragraphs alluded to. The Phormium is regarded as a greenhouse subject by the generality of gardeners, and it would interest a certain class of the community, but the rising generation of gardeners particularly, to know whether it really is hardy or not, as instances have been given where plants have been grown successfully out-of-doors for a considerable number of years. Hitherto, I, in common with the generality of the knights of the spade, had regarded the Phormium as a greenhouse subject, but the hardiness of a fine specimen which has for several years been growing out-of-doors at Fountainbrae, Monifieth, has now modified my opinion. The severity of the storm two years ago ranks high among meteorological records; and I am informed that on several occasions during that memorable winter the thermometers in the immediate vicinity of the Phormium in question registered a few degrees below zero, but even from that intense frost the plant does not appear to have sustained the slightest injury whatever.

The general appearance of it at the present time leaves nothing to be desired, as it is making splendid growth and producing numerous robust leaves of a rich dark green colour, and in no way does it manifest the slightest dislike to its situation or immediate surroundings. Under these circumstances one may infer that the constitution of the Phormium is not of such a delicate nature as is generally supposed, and that the genial temperature of an ordinary greenhouse is not absolutely essential to its successful culture.—*J. Peebles, Monifieth.*

EALING GARDENERS' SOCIETY.

An ordinary weekly meeting of this society was held on the 12th inst. in the Municipal Buildings, Ealing, when Mr. J. Hawkes, of Osterley Park Gardens, gave a paper on "The Cultivation of Cyclamen persicum." The meeting was a very full one, in fact, every available seat was occupied, Mr. Geo. Cannon being in the chair.

The exhibits were numerous and good, and the exhibitors were Messrs. R. Green, Cox, Cottrell, Woods, etc., the champion exhibit coming from Mr. Hawkes in the shape of a Cyclamen persicum, which possessed over two hundred pure white flowers, and measured 5 ft. 6 in. in circumference. Mr. Hawkes stated that it was three years old, the seed having been sown in November, 1893. The paper itself dealt with the origin, history, and cultivation of this noble plant, was sound in every detail, and, consequently, afforded the members the highest satisfaction and the liveliest interest. The discussion which followed was discussion in name only, as every speaker was obliged to admit—with such a specimen before him—that criticism was entirely disarmed.

It is not often that cultivators are willing to agree to any particular mode of treatment, as experience varies in every garden; but on this occasion there was no dissentient voice, as everyone seemed to feel that such a result could only have been obtained after much thought, and the highest cultural skill. One member, however, ventured to suggest that there must be "something" in the soil, but Mr. Hawkes assured him that the staple was very ordinary loam, and that he did not go off the premises to get it.

Mr. Hawkes was accorded an enthusiastic vote of thanks, and thus a very pleasant and profitable evening was brought to a successful close.

The Larch disease is almost unknown in Ireland. Some of the finest plantations of this tree are to be seen on partially reclaimed peat in the north of Ireland.

GARDENING MISCELLANY.

BIGNONIA VENUSTA.

Seeing the note on Bignonia venusta in your issue for December 26th, I thought it might be of interest to your home readers, by letting them know how freely it flowers round Philadelphia. I saw two plants of it in full flower last week. One was grown in the conservatory with shade, and had rather smaller flowers than is usually seen. The one growing in a warm house without shade, was one mass of bloom, and hung in large clusters from the roof. It was the finest thing I have seen. Thunbergia grandiflora is another fine winter flowering climber, that delights in the abundance of sunlight it gets here. I have a plant here in the conservatory under my care that is one mass of blue.—*J. Thatcher, Wynnewood, Penna*, January 7th, 1897.

OBITUARY.

Mr. Thomas Darling.—One of the founders of the firm of Messrs. Cardno & Darling, nurserymen and seedsmen, Mr. Thomas Darling died at his residence, 128, Mid Stocket Road, Aberdeen, on the 10th inst., in the 84th year of his age. Mr. Darling came originally from Dalkeith, of which place he was a native. He was engaged for twelve years as gardener to the Grants of Monymusk, who then owned Woodhill, which was under the charge of Mr. Darling. After leaving Woodhill, he entered into partnership with Mr. George Cardno, and the two gentlemen founded the well-known business which has since borne their name. Mr. Darling gave up active work in the business about twelve years ago, though he was able to move about at his pleasure till within a month of his death, when the infirmities of age prostrated him. He was a quiet and steady business man, and much respected, but being of a retiring disposition he never took any active part in public affairs. He was a widower for sometime previous to his death, but is survived by seven of a family, sons and daughters, who are grown up.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Treatment of Lilies.—*Lilium roseum*: We are sorry you have not been able to give them first-class treatment; because we do not think you can otherwise get first-class results. You do not tell us how many bulbs you have in the 11-in. pots. If the pots are not excessively crowded we see no reason for transferring them to 13 in. pots. Those who grow bulbs by the hundred for the sake of cut flowers, place them singly into 5½ in. or 6 in. pots as a rule. Lilium speciosum (lancifolium) can be grown 3 ft. to 3½ ft. high in those sizes, and L. longiflorum Harrisii to 4 ft., particularly under close treatment and rather far from the glass. Neither we nor those who grow them care to see them so tall, as it is the result of being grown in unsuitable houses with the plants too far from the glass. You may be able to keep your plants in a toolhouse under a skylight, but you should elevate them till they are close to the glass. If they had been placed here at first, growth would have been retarded till you were able to place them under more favourable conditions. We cannot too strongly impress upon you the fact that Liliums should get all the light possible, with plenty of ventilation in fine weather from the time the stems push up from the bulbs till the flowers are well-advanced, when a little shade during bright sunshine will prolong their beauty. If you start them so early next year, we advise you to reserve space for them on the front shelves of the greenhouse, close to the glass.

Agathea coelestis.—*Sigma*: There is much confusion about this plant, and as a consequence, it has several names, the *Flora Capensis* adopting Aster capensis, of Lees. You do not say in what way it has degenerated, but we must confess that we never have had a very high opinion of it as a decorative plant. The flower heads, with their bright blue rays are pretty enough; but we have never seen them produced in sufficient abundance to be eminently effective. Certainly it affords variety, and might be grown with that intention. Nevertheless, we should prefer the Swan River Daisy (Brachycome iberidifolia) in blue purple and white colours. Perhaps,

however, it would not give the same satisfaction in winter as in summer. Being an annual it is easily managed in pots. Agathea coelestis is a native of the Cape, has shrubby stems, evergreen leaves, and bears generally one flower head at the apex of each shoot. The neatest plants would be obtained by raising it from cuttings every year, and growing them on to the flowering stage under greenhouse treatment. By cutting back the old plants and repotting them after they start into fresh growth, larger specimens would be obtained no doubt, but whether they would give the cultivator sufficient satisfaction for his labour is another matter. The method might be tried, however, as there is nothing like experiment to prove which is the best method of artificial treatment.

British Ferns for exhibition.—*A Novice*: Half a dozen Ferns does not allow much room for selection or variety; but the undermentioned sorts are all very distinct and beautiful in their way, while they are at the same time fairly common and not expensive to procure. Polysticum angulare proliferum has drooping fronds, 2 ft. to 3 ft. long as a rule, in pots. Lastrea Pseudo-mas cristata, is more erect, and beautifully crested. Athyrium Filix-foemina plumosa is a feathery and beautiful variety. Scolopendrium vulgare crispum, Polypodium vulgare trichomanoides and Adiantum Capillus-Veneris grande, are dwarfer, and serve to add variety. If you require taller plants, then Athyrium Filix-foemina Victoriae, Lastrea montana ramo-coronans and Osmunda regalis, may be substituted for the three previously named kinds.

Violas from seed.—*M.M.F.*: Yes, you can sow them at once in a temperature of 50° if you like; but you should remove the boxes to a cooler house as soon as the seedlings are fairly up, so as to bring them on slowly. Transplant them into boxes about 1½ in. apart each way as soon as they have made two rough leaves or thereby. Give them more air as the temperature outside rises, and plant them outside about the end of March or beginning of April.

Seedling Gloxinias.—*G Kelman*: They like abundance of subdued light, not bright sunshine. The latter, however, need hardly be feared, as it is a very scarce commodity at present; but if more plentiful would not be powerful. However, you can always give a little shade when the sunshine gets strong. The shading should not be placed immediately over them, but preferably on the outside of the glass so that plenty of subdued light may get to the seedlings. In the meantime, as soon as they are fairly well germinated, stand the pots or pans on a shelf not more than 12 in., and not less than 3 in. from the glass.

Names of Plants.—*J.B.*: 1, Jasminum nudiflorum; 2, Zebrinia pendula.—*Weston*: 1, Cupressus nutkaensis; 2, Juniperus sabina; 3, Cedrus Deodara.—*A Novice*: 1, Odontoglossum lindleyanum; 2, Aspidium (Cyrtomium) caryotideum; 3, Aspidium (Polystichum) angulare; 4, Adiantum cuneatum; 5, Adiantum cuneatum mundulum; 6, Onychium japonicum; 7, Pteris serrulata cristata.—*E.W.M.*: 1, Cestrum elegans, often called Habrothamnus elegans. (This was smashed coming through the post, and quite brown. Send leaves next time as well as flowers); 2, Senecio macroglossus; 3, Curculigo recurvata.—*W. J.*: 1, Lonicera Cavendishi; 2, Lonicera fragrantissima; 3, Chimonanthus fragrans grandiflorus.—*J. Petrie*: 1, Odontoglossum crispum (a good average variety); 2, Laelia anceps sanderiana; 3, Cypripedium insigne var.; 4, Lygodium palmatum; 5, Asplenium Hemionitis.

Communications received.—C. H. P.—John Machar.—G. J. Ingram.—T. Gray.—C. W. Simmons.—Harry Vodden.—L. Wittnack.—W. Shrives.—Westward.—W. T.—L. B.—G. S.—W. H.—Woodman (next week).—F. Wilkins.—L.—T. Groves.—B.—Seasonable.—F. M. Y.—W. Young.—G. Hanwood.—Garden.—Hobbs.—Giles.—P.G.

TRADE CATALOGUES RECEIVED.

Henry Eckford, Wem, Shropshire.—Catalogue of Giant Sweet Peas, Culinary Peas, Vegetable and Flower Seeds.

James Veitch & Sons, Ltd., Royal Exotic Nursery, Chelsea.—Abridged Seed Catalogue.

Harrison & Sons, Royal Midland Seed Warehouse, Leicester.—Leicester Seeds.

Barr & Sons, 12, and 13, King Street, Covent Garden, London.—Barr's Seed Guide.

W. P. Laird & Sinclair, Dundee and Cupar Fife.—Catalogue of Vegetable and Flower Seeds.

Benjamin Soddy, 243, Walworth Road, London, S.E.—Soddy's Seed Catalogue.

Vilmorin-Andrieux & Cie., 4, Quai de la Megisserie, Paris.—General Catalogue of Seeds, Strawberries, Flowering Bulbs, &c.

Jadoo Limited, 5, Palace Gate, Exeter.—Prospectus and testimonials of the Jadoo Company.

LONDON SEED TRADE.

January 19, 1897.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a fair enquiry for Agricultural seeds. Clover seeds realise prices current last week. Ryegrasses steady. Rape seed scarce and dearer.

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	s. d.	s. d.
Apples.....per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs	50 0	
Grapes, per lb	0 6	1 6
Pine-apples, —St Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	1 6
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips ..... per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	3 0	6 0
Asparagus Fern, bun.	1 6	3 0
Azalea, doz. sprays...	0 6	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 6	3 0
Chrysanthemums, doz. blooms	1 0	4 0
Chrysanthemums, doz. bnches.	3 0	6 0
Enoharis ...per doz	3 0	4 0
Gardenias ...per doz.	4 0	8 0
Geranium, scarlet, doz. bunches	6 0	9 0
Hyacinths (Roman) doz. sprays	0 6	1 0
Lilium longiflorum per doz.	4 0	8 0
Lilac, White (French) per bnch.	3 0	5 0
Lily of the Valley doz. sprays	0 9	1 6
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Mimosa, per bnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	1 0	1 6
" Tea, white, doz.	1 0	2 0
" Niels	6 0	9 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.....	1 0	1 6
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	4 0	7 0
Tuberoses, doz. blooms ...	1 0	1 6
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz blms.	4 0	9 0
Violets (French) per doz. bnches.	1 6	2 0
Violets (English) per doz. bnches.	1 6	2 6
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per bnch.	2 0	3 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Azalea, per plant.....	2 0	3 6
Chrysanthemums, per doz.	6 0	9 0
" per pot	1 0	2 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica Hyemalis, per doz.	12 0	15 0
Erica, per doz.	9 0	15 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	10 0	15 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	9 0	18 0
Solanums, per doz.	9 0	12 0
Tulips, doz. pots.....	6 0	9 0

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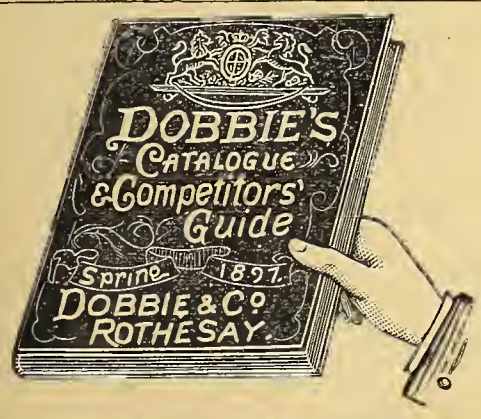

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, JANUARY 30th, 1897.

HONOURS FOR AN ENGLISHMAN.—The nomination by the French Government some weeks ago, of Mr. Harman Payne as Chevalier of the Order of the "Mérite Agricole," is one of those acts of international courtesy that has evoked the warmest expressions of approval from horticulturists on both sides of the Channel. For many years past that gentleman, as is well known to all cultivators of the Chrysanthemum, has pursued a course of critical study in horticulture, which, owing to his linguistic ability, has probably left him without an imitator; and certainly without a rival worthy of the name.

Fifteen or sixteen years ago, the popular autumn flower, when regarded in the light of present experience, was at a low ebb; and the whole of our novelties were imported from one or two French seedling raisers, and numbered at the most about twenty varieties per annum. This, from some points of view, may be considered as a consignment quite equal to our requirements; but there is no doubt that Mr. Payne's increasing energy in discovering new raisers, and in making known their new varieties, has done much to popularise the flower he has so ably taken in hand.

The benefits have been mutual, for if the foreign raisers have found an outlet for their productions, which must otherwise have been considerably restricted, English collections have been materially enriched by the many discoveries that he has made; and one of the most interesting results has been that the competition has brought about a realisation of what was previously regarded as almost an impossibility, namely, the raising of seedling Chrysanthemums in our own country.

Although he has long since discarded the practical part of the subject, Mr. Payne has never faltered in his allegiance to his favourite flower, but has busily employed his pen in its service. Year after year his contributions to the horticultural press have increased in numbers until they reach a figure that would, not many years ago, have been deemed fabulous. Literary, historical and critical essays on the flower, reviews of new books, the editing of official catalogues, of the society of which he is the Foreign Secretary, and the collaboration with authors in America, Belgium and France have all formed a part of his literary work and we are not, knowing these circumstances, at all surprised to find that the Continental Chrysanthemum growers and raisers, but especially those who are familiar with the gardening press of this country, should have exerted themselves to the length of using their influence to obtain some honorary distinction in Mr. Payne's favour.

In England distinguished service in horticulture either of a practical or literary nature has no hope of receiving any distinction at the hands of the Government, but they order these things better in France. And therefore, as many of Mr. Payne's literary efforts have had a distinct bearing upon one phase of French horticulture, the Chrysanthemum, he has been considered worthy of a decoration that we believe has seldom or never been conferred upon an individual Englishman before. Although he is not a professional horticultural journalist the honour is a tribute to English Journalism, and we are only too pleased to be able to emphasise the fact that an amateur, who has devoted his leisure to a distinct branch of horticultural literary work, should have met with such an exceptional recompense for his services, and this, too, at the hands of the Government of a great horticultural nation like France.

The Recent Blizzard.—On Friday, 22nd inst., Londoners about the Strand, and other leading thoroughfares were doubtlessly inconvenienced by the snow that continued to fall during the day, chiefly because it kept the streets in a state of semi-liquid mud; but they were dependent upon outside information, or news concerning the great amount of snow that had fallen. In the suburbs, however, where the traffic was not so great, the public had visible evidence of winter in about three inches of snow, which was greatly augmented during the evening and the greater part of Saturday. As far as London was concerned, however, the full fury of the storm was felt only in the more open spaces and along the course of the Thames. We refer to the storm on account of its suddenness, and the wet, adhesive nature of the snow, which is therefore liable to cause much destruction amongst evergreen trees and shrubs, particularly Conifers. Deciduous trees soon lose their loads, especially under the influence of a driving wind; but the snow of Friday was wet and heavy, sticking to everything, and dwarf or young trees and shrubs were in many cases borne down by the snow.

The winter hitherto has been so open in the southern counties, that little or no preparation was made for it. As far as the frost is concerned, however, we do not anticipate that much, or any damage has been done, where everything that ought to be housed, was so sheltered in due season. It is the long continued spells of low temperature that cause damage, rather than the short ones. In the case of snow that hangs to bush and tree, no matter how brief the storm, provided the fall is sufficiently heavy, damage of a more or less irreparable character is sure to be done. As a precaution against mishaps amongst valuable evergreens, Conifers especially, we consider it would repay the trouble of directing the men on an establishment to go over the shrubberies and young plantations at intervals, with poles, in order to beat down accumulations of snow. No precise directions could be given as to the frequency with which this operation should be performed, as it depends entirely upon the snowfall; but going round just before leaving off work for the day, and again in the early morning would save many valuable trees from being broken down. Tall old Cedars with long and heavy side branches, spreading horizontally, offer the most serious difficulty in operations of this kind; and evergreens or Holly Oaks sometimes come into the same category. Irish Yews, Swedish Junipers, and Oriental Arbor Vitae, of upright habit, and usually consisting of many stems of about equal size and importance should be lightened of their load of snow without delay, for nothing sooner suffers in general appearance than these trees when their heads are allowed to become split up by means of a heavy snowfall. Much staking and tying are necessary before they can be restored to their former orderly condition; and the longer the snow is allowed to lie upon them the more difficult it is to bring them into shape afterwards.

Mr. Andrew Borrowman.—The death is announced of Mr. Andrew Borrowman, one of the most successful floriculturists north of the Tweed For the past quarter of a century he took a leading place in national Pansy exhibitions, and during that period gained thirty-two gold and silver medals, besides other prizes. Deceased was fifty-nine years of age.

Royal Botanic Society.—At a meeting of the Fellows, held in the gardens, Regent's Park, on Saturday, the 23rd inst., Mr. J. S. Rubinstein brought forward a resolution recommending the Council to intimate to the Lord Mayor, the chairmen of the London County Council, the London School Board, and other local authorities, and to the secretaries of recognised societies and institutions, that the Council would be pleased to arrange for the use in the coming season of the society's gardens, for garden parties and receptions. The resolution was carried.—*J. S. Rubinstein, Hon. Auditor, 56, West Cromwell Road, S W., January 23rd*, 1897.

Eastbourne Horticultural Society held the annual meeting on the evening of Tuesday, January 12th, at the rooms of the Natural History, Lismore Road, Eastbourne. Councillor Sharp presided. At the election of officers the choice of the meeting fell upon the following gentlemen, and these were elected to their respective posts, as under:—Mr. G. Boulton, president; Councillor Sharpe, vice-president; Mr. F. Pyke, hon. treasurer; and Mr. E. A. Newman, secretary. The chairman spoke of the progress made by the society, and he suggested that they should make application to the Technical Instruction Committee of the Town Council to continue the lectures for another three months. This it was subsequently decided to do.

Chester Show.—The schedule of the second exhibition of this society shows a prize list of about £500. For a group of plants not more than 300 square feet, the following prizes are offered:—£25. £15, £10, and £5. In class ii. for twelve stove and greenhouse plants, the liberal sums of 20s., 15s., 10s.; and for six plants 10s., 5s., and 3s., are offered. Surely the claims of these important classes have been overlooked, especially when 30s. is allotted as first prize for a single Palm, and 20s. for a single greenhouse and stove plant, respectively, in bloom. For a display of cut flowers the prizes are £10, £7, £5, and £3; for a table of fruit, £15 15s., £12 12s., £8 8s., and £5 5s.; for a collection of vegetables £5, £3, and £2. Sections are provided for open, nurserymen, amateurs and cottagers in 151 classes. The show is to be held on July 28th and 29th. Major Walter Jones is the secretary.

Five fine old Yew trees are to be found at the back of Strokestown House, Co. Roscommon, the residence of Mrs. Pakenham-Mahon. The girths vary from 13 to 9 ft.

Bristol Amateur Horticulturists.—Mr. E. M. Dyer presided at the last annual meeting. In the absence of Mr. E. G. Machon, the hon secretary dealt with the subject of manuring and trenching the ground. Mr. R. E. Davey gave items of seasonable work in the greenhouse. Mr. W. F. Lanhane delivered a short lecture on "Chrysanthemum Cuttings—How to Strike Varieties, and the Selection of Plants"; also some hints on Tomato culture. Mr. T. Sims read a paper on "Chinese Primulas," so that altogether a wide range of subjects was covered.

The Holly Hedge Dispute at Richmond.—We understand that the deputation of householders, who waited upon the Richmond Town Council on the 12th inst., concerning the hedge *v.* railings, resulted in a compromise satisfactory to both parties. The hedge of Holly and Thorns is to remain as it is, but iron railings, 2 ft. 9 in. high will be placed immediately inside the hedge so as to be mostly hidden from the terrace commanding the famous landscape view. The railings will serve to keep stray dogs from entering the Terrace Gardens.

Liverpool Horticultural Association.—This society held its tenth annual dinner on Saturday at the Adelphi Hotel, Liverpool, when about one hundred members and friends sat down to an excellent repast, served in high class style, and the function was in every respect a great success. Mr. Wm. Fletcher-Rogers, hon. treasurer of the society, occupied the chair. The loyal toast having been honoured with the accompaniment of the national anthem, sung by Mr. J. Wadsworth McDonald, a capital programme was thoroughly enjoyed by the company; a special feature as usual having been made in the way of musical entertainment. The tables were beautifully decorated with plants and flowers, lent by Messrs. Thos. Davies & Co., Wavertree Nurseries, Liverpool. The Ichthemic Guano Company also presented to each guest through the same firm a beautifully illuminated box of their cigarettes.

Presentation to Mr. James Cypher.—Our readers will remember the recent announcement we made concerning Mr. Councillor Cypher, the well-known nurseryman, of Cheltenham, who recently entertained his large staff of employés to supper in commemoration of the attainment of his seventieth birthday. The entertainment came as a complete surprise to the men, who were consequently unprepared to make any recognition of the interesting event at the time. They were determined, however, not to let such an event pass unrecognised, and accordingly on the 22nd inst., Mr. Cypher was made the delighted recipient of a handsome armchair as a mark of the high esteem in which he is held by the men, and of the cordial relations that have so long subsisted between employer and employed. The presentation was made in a few well-chosen words by Mr. Richard Cull. Mr. Cypher, who was much affected by this unexpected mark of appreciation from his men, acknowledged the gift in a feeling manner, and expressed the hope that he and they might long continue to work harmoniously together.

Woolton Mutual Improvement Society.—The annual meeting of this society was held on the 21st inst. at the Mechanics' Institute, Mr. R. Todd in the chair. The secretary's report showed a slight decrease in the attendance of the past year, with a falling off of two in the roll of membership. The papers throughout were of a practical nature, showing evidence of careful preparation, and resulting in good discussions. Votes of thanks were tendered to the lecturers and to the institute committee for the free use of the room during the year. The statement of accounts showed an income (including the balance from last year) of £10 4s. 3d., the expenditure amounted to £3 8s. 7d., leaving a balance in favour of the society of £6 15s. 8d. The president and vice-presidents were re elected, and the following were chosen as members of the committee:—Messrs. G. Haigh, R. Todd, T. Carling, W. Disley, H. Corlett, G. H. Webster, R. C. Cookson, W. W. Gamble, and A. E. Wright. Mr. R. G. Waterman was elected secretary and treasurer. Votes of thanks were accorded to the officers for their past services and to Mr. Todd for presiding.

Land devoted to Orchards.—Fruit farming is evidently on the increase, though slowly. Kent, Gloucester and Worcester give the best returns in this respect. Several other counties show a small but decided increase of land devoted to Orchards. In this category might be placed Cambridgeshire, Bucks, Cheshire, Dorset, Essex, Hertford, Lincoln, Oxford, Shropshire, Warwick and Sussex.

Devonshire Wild Flowers.—Cowslips are found in Devon, but not nearly to such an extent as the Primroses. The Ivy-leaved Toad Flax is very common, and many localities are sheeted over with the blue of the Bluebells in the spring. Wild Roses, too, twist and twine over the hedges in great profusion. The Columbine is also found in great numbers in the neighbourhood of the Tavy.

Tunbridge Wells Gardeners.—This society is full of energy. At a recent meeting the certificates issued for success in various branches of horticulture were issued to their respect recipients. After the election of several new members, proposals for officers for the ensuing season were in order, when no less than four members were nominated for the presidency, and ten for the vice-presidency. These matters will be settled at the next meeting.

Daniels Bros.' Illustrated Guide for Amateur Gardeners.—With the advent of the new year, gardeners, both amateur and professional, are accustomed to welcome the publication of the popular annual known by the above title, issued by the well-known Norwich firm. We are in receipt of a copy of the new edition and can assure our readers that the Messrs. Daniels evince no diminution of their pluck and enterprise in the artistic get-up and and high-class work contained in their Guide for 1897, whilst the cover and two-coloured plates are magnificent specimens of the first style of chromo-lithography; the work contains nearly 150 illustrations in the form of wood engravings and process blocks, notably some remarkably life-like representations of Dahlia blooms and Potatos reproduced from photographs. Messrs. Daniels have earned the thanks of the public for having introduced some of the finest Potatos which have been so popular during the past quarter-of-a-century, and we note that for 1897 they are placing on the market some very promising novelties in this way, which will be well worthy the attention of exhibitors as well as the growers for market supply. The culture of Roses and fruit trees on a large scale is evidently a leading feature with the firm, and planters are assured as to the grand healthiness of the trees grown by them. Our gardening friends cannot do better than procure a copy of the work under notice.

Ulster Horticultural Society.—We note rom the eighth annual report of this society that it continues to prosper, last season improving upon 1895. Their November show is acknowledged to be one of the foremost of its kind. Legitimate horticultural exhibits in November last numbered more than 100 in excess of those of 1895. Trade exhibits having no bearing on horticulture were excluded, and this arrangement proved highly advantageous. The receipts were increased owing to the fine weather that prevailed on both days of the show. Most of the nobility and gentry of the district turned up to support the Marchioness of Dufferin and Ava, who opened the exhibition. The display of Chrysanthemums was excellent, and competition unusually keen. The display of fruit was magnificent, the Apples being especially fine. The competition for the Veitch Memorial Prize was spirited, and the leading honour was secured by Mr. T. Gray, gardener to J. B. Houston, Esq., V.L., with an admirable arrangement. A fine landscape effect was produced by Mr. M'Kimm, and a fine group by Mr. T. H. Dickson, both having been allowed to display their talent by the consent of the Parks' Committee. The special thanks of the society were accorded the City Council for the use of their splendid covered market in which to hold the show. A large number of eminent people contributed special prizes. The receipts of the society from all sources were £505 6s. 11d., and the expenditure £481 14s., leaving a balance of £23 12s. 11d., which, added to the balance brought forward, shows a total of £54 18s. 5d. The prospects for the show in November next are highly promising, for the committee intends to give £100 in the class for forty-eight cut blooms of Japanese varieties.

Sweden and Norway annually export vast quantities of wood pulp for paper making.

Watermelon for Freckles.—A South American lady, having washed her face with the juice of a Watermelon during a scarcity of water, found the effect so soothing that she repeated the process, and found that in the course of a few days all her freckles had disappeared. Ladies might take the hint.

The Lindfield Chrysanthemum Society held its annual meeting on the evening of Tuesday, January 18th. The Rev. E. F. d'Auvergne presided. The balance-sheet, which was presented by the secretary, Mr. C. Wheeler, showed a balance in hand of £3 12s. 11d. against a deficit last year of £2 13s. 5d. The saving was effected in the prize money, only £19 being disbursed in this direction as against £24 the previous year. In speaking of last year's show the chairman said they had been severely handicapped by the refusal of local gentlemen to allow their gardeners to exhibit. At the election of officers, Mr. C. S. Gibbons was re-elected president, Mr. J. Burket, and Mr. H. Brunlees took the places of Messrs. Godfrey and Hardman upon the list of vice-presidents, Mr. C. Wheeler was unanimously asked to continue the secretarial duties, and Mr. P. Jupp was re-elected treasurer.

Culture of Small Fruits.—A lecture on this subject, the second of a series was delivered on January 21st, in the Nicholson, Leek, by Mr. Robert Cock, lecturer for the Staffordshire County Council. Gooseberries, Currants, Raspberries, and Strawberries were all fully dealt with, detailed directions for propagation, pruning and planting being given. A selection of varieties was given. Amongst Strawberries Mr. Cock recommended Vicomtesse Hericart de Thury, and President as being of good flavour and colour. There were fewer varieties of Raspberries to choose from, but he especially recommended Carter's Prolific, Semper Fidelis, and Superlative. Amongst Gooseberries he mentioned Crown Bob, and Whinham's Industry. Staffordshire, he said, was particularly noted for its Gooseberries. Red Currant Raby Castle, and Black Currant Lee's Prolific were the lecturer's favourite sorts. Those who grew small fruit should exercise a deal of caution in planting; and if pruning was attended to, and not overdone, he was quite sure the cultivation of small fruit in the neighbourhood of Leek might be made a profitable business. At the conclusion of the lecture Mr. Cock replied to several questions that had been raised by the audience with regard to planting and pruning.

Grand Yorkshire Gala.—The schedule of the thirty-ninth year of the Grand Yorkshire Gala, floral and musical exhibition, York, is already before us and shows that the great annual floral and horticultural fête is to be held in the Bootham Field, York, on the 16th, 17th, and 18th June next. Prizes to the value of £750 are offered for various exhibits of fruits, flowers and vegetables, in ninety-five classes. A new feature of the schedule for this year is a sum of £45 offered for a group of Orchids, and termed the "Victoria Prize," given to commemorate the sixtieth year of the reign of Her Majesty the Queen. The Orchids must be in bloom and arranged for effect in a space not exceeding 150 sq. ft. Palms, Ferns and foliage plants generally may be used in the arrangement. Select Orchids will be taken into consideration by the judges in making the awards. The first prize will consist of £20 and the society's Gold Medal; and the second and third prize of £15 and £10 respectively. Three Gold Medals are offered for trade exhibits, including a collection of Orchids. Prizes are also offered for Orchids in seven other classes. Another important feature of the schedule is the class for a "decorated table of ripe fruit" (10 ft. by 4 ft. 6 in). There must not be less than ten nor more than fourteen dishes of fruit, the number of fruits to each dish being stated. Pot plants will be allowed in decorating the table, and the arrangement must be carried out by the exhibitor or *bona-fide* assistant. Quality of fruits and plants, beauty of flowers and foliage, harmonious blending of colours and general arrangement for effect will be taken into consideration in making the awards. For this class £40, in four prizes, is offered. The secretary is Mr. Chas. W. Simmons, Harker's Hotel, York.

Paper from wood.—The largest factory for wood pulp in the world is said to be that of the Hudson River Paper Company, Corinth, New York, which consumes 30,000,000 feet of Spruce annually.

Mr. Hugh Fraser.—We regret to learn that an old friend is retiring on account of failing health. Mr. Hugh Fraser has been in the employment of Messrs. Methven and Sons, Leith Walk Nurseries, Edinburgh, for the long period of forty-eight years. For all that length of time he has been a well-known figure about Edinburgh, and at various literary societies, as well as much further afield. He also turned up in London occasionally. He is the author of a volume entitled *Conifers and Rhododendrons*. For many years past he has contributed botanical and scientific articles to scientific and popular magazines, and had a reputation as a botanist as well as a horticulturist. When studying different subjects such as Oaks or other trees, he did it very thoroughly, making collections of dried specimens by way of illustration and for reference. He has also done good work as a member of the Edinburgh Botanical Society, the Edinburgh Naturalists' Field Club, and Microscopical Society. He was one of the pioneers of the Scottish Horticultural Association, and it was to his initiative that the now popular Chrysanthemum shows were instituted. Looking back on his life work, we consider that he has done much to popularise the science of botany amongst a wide circle of friends with whom he came in contact, and amongst his readers.

Jadoo, Limited.—An extraordinary general meeting of Jadoo, Limited, was held at the offices of the company, 5, Palace Gate, Exeter, recently, for the purpose of considering the draft of an agreement proposed to be entered into by the company with Col. Halford-Thompson, for the acquisition by the company of his foreign and colonial patent and trade-mark rights (except for the United States and Canada). Col. Halford-Thompson, J.P., Teignmouth, occupied the chair, and the directors were all present, including Mr. P. C. M. Veitch, or were represented by proxy. The secretary of the company is Mr. H. Vodden. The chairman stated that his brother wished to take £500 of the new capital. He also stated that the meeting was of vital interest to the company, and was in fact a turning point in its career. The shareholders were to be asked to give their sanction to increasing the nominal capital of the company to £50,000, to authorise the directors issuing £30,000 at once, to approve of an agreement with himself, under which all restrictions to the company's trading abroad (except with the United States, and Canada) would be removed, and foreign patents already obtained in France, Belgium, Germany, Spain, Spanish Colonies, and Jamaica, and in process of being obtained in India, and Ceylon, would be taken over. He was very glad that the agreement made would enable him, out of the purchase money for patents, to give the existing shareholders some benefit for having helped to lay the foundation of the trade that had already sprung up in Jadoo, and which he hoped some day would reach enormous dimensions. He knew that the secretary had to answer inquiries in a single morning from firms wishing to represent the Company in Australia, New Zealand, Italy, and Japan. Jadoo was originally intended for growing plants in pots in urban districts, where really good loam was practically unobtainable, but it had since been proved to be a valuable medium, in which to grow every sort of young plant. The extra capital was required chiefly, though not entirely to develop the foreign trade in "Jadoo." The prospects for the Company in this foreign trade was as good as in any commercial venture ever started. Jadoo is now used as a propagating medium for plants of all kinds, including plants of foreign countries, usually difficult to root; also for growing Vines, Roses, flowering shrubs, Tomatos, fruit trees, Melons, Cucumbers, Strawberries, vegetables, Orchids, Palms, Ferns, Chrysanthemums, Pelargoniums, Carnations, &c. Mr. C. T. K. Roberts moved that the draft and contract with Col. Halford-Thompson be approved, and that the directors be authorised to complete the same. Mr. P. C. M. Veitch seconded the resolution, which was carried unanimously. The chairman moved that the capital of the Company be increased to £50,000, by the creation of 47,000 new shares of £1 each, to be issued as, and when the directors think fit. This was seconded by Mr. Littlejohn and and carried.

Gleanings from the World of Science.

Supposed Hybrid Hare.—At a meeting of the Linnean Society of London, on December 17th. Mr. J. E. Harting exhibited a supposed hybrid between the Common Brown Hare (Lepus timidus) and the Irish Hare (Lepus variabilis) recently obtained in Carnarvonshire, where the latter species had been introduced in 1878. He compared the specimen in question with examples of both the above-named species, and contrasted their distinguishing peculiarities, pointing out the intermediate characters exhibited by the supposed hybrid. His remarks were criticised by the president, who thought that too much stress should not be laid upon external appearance and colour; that the question of hybridity should rather be determined by comparing the relative measurements of the leg-bones; and that the Irish Hare should be compared in detail with the Hare of Southern Europe (L. meridionalis or mediterraneus). Prof. Howes drew attention to Nathusius's observations upon the Peyer's patches of the Leporines, and pointed to the necessity for examination of the viscera Mr. Barrett Hamilton, who was present as a visitor, was inclined to regard the supposed hybrid as an example of the ordinary Brown Hare turning white in winter, hitherto unnoticed in this country.

Mr. Thomas Christy inquired what position the so-called Belgian Hare or Leporine occupied in relation to the question of hybridity; and was answered that the popular notion of that animal being a hybrid between Hare and Rabbit was fallacious, since it was nothing more than an overgrown tame Rabbit coloured like a Hare.

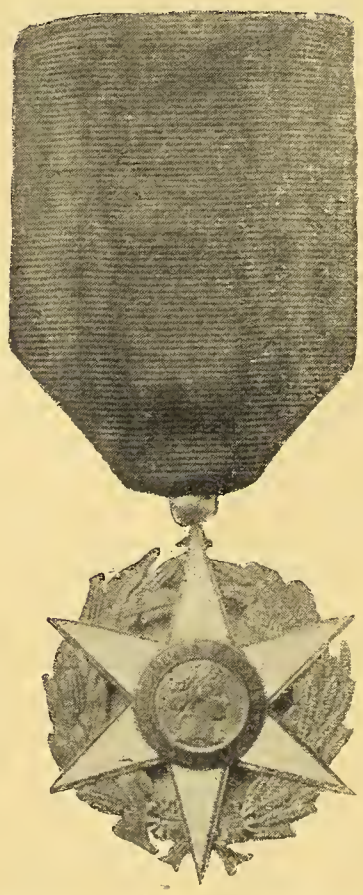
Ovule of Orobanche.—At the same meeting as the above, Mr. W. C. Worsdell gave the chief facts of a paper dealing with the "Development of the Ovule of Christisonia, a genus of the Orobancheae." Referring to Prof. Koch's detailed account of the development of the ovule of Orobanche, he remarked that Christisonia as a parasitic plant was of such interest and differed so much in its vegetative structure from Orobanche, that it seemed to be worth while to record the facts of its embryological development. A brief description of the vegetative parts of the plant was then given; these were the rhizome-like, anastomosing network of roots bearing tubers at intervals, from which latter the exogenously-formed haustoria are produced. The haustoria penetrate the roots of the bamboo or Strobilanth upon which the plant is parasitic. The lateral roots and the stems are derived endogenously; the latter grow rapidly, and after producing the flowers, die at the end of the season. The flower resembles, in its main features, that of Orobanche. The ovary in one species is unilocular throughout, in another species it is bilocular below and unilocular above; the placentae are two in number.

By the aid of blackboard drawings the author then described the development of the embryo-sac and the embryo. This was shown to follow essentially the same lines as in Orobanche. Its main features were the origin of the archesporium from a hypodermal cell; the casual occurrence of a double archesporium; the absence of tapetal cells; the division of the archesporium into four cells, the lowest of which subsequently grew into the embryo-sac; an anomaly was observed in one ovule in which two of the uppermost cells persisted as rudimentary sacs, in one of which the nucleus had divided into four; the large size of the synergidae, as compared with that of the corresponding cells at the antipodal end; the outgrowth of the embryo from the ovum as an elongated unicellular structure; the fusion of the polar nuclei; the early stages in the formation of the endosperm; the sequence of cell-divisions in the developing of embryo and the irregularity of these; the extremely rudimentary character of the embryo as compared with ordinary Dicotyledonous plants, this being, perhaps, even more pronounced than in Orobanche.

Finally, it was pointed out that in a great many plants, the vegetative and the reproductive organs have not always, by any means, a parallel development. A striking instance of this was to be seen in Christisonia. In this plant the vegetative structure was of a very abnormal and reduced type, and remarkably different from all other Phanerogams; while, on the other hand, the strcture and development of the embryo-sac had remained essentially of the same normal type as in the majority of Dicotyledons. The paper was criticised by Dr. D. H. Scott, who testified to the importance and interest of some of the facts established.

Mr. C. Harman Payne.

Cultivation of Beet in France.—The United States Consul at Havre reports that the cultivation of Beet for the production of sugar in France pays the farmer better than any other agricultural crop. The area under this crop in 1894 was 1,700,000 acres, and the weight of roots harvested was some-



Decoration of the Order Chevalier du Merite Agricole.

thing like 18,500,000 tons, or nearly eleven tons to the acre. After the juice has been expressed for sugar making, cattle are fed on the pulp. Considerably more than half of the entire weight of the crop is utilised in these two ways. It is asserted in some quarters that the leaves are utilised for the purpose of adulterating tobacco. If this latter fact is well founded, then it would cause no surprise that the Beet crop should prove a paying one seeing that two of the waste or by-products of sugar making are utilised.

PEOPLE WE HAVE MET.

Most of our readers will be familiar with the name of Mr. Harman Payne in connection with the National Chrysanthemum Society, but few, we opine, are aware of the extent of his labours in connection with his favourite flower, the Chrysanthemum. Many an amateur gives his labour or help in connection with the "Autumn Queen," and that willingly, but Mr. Harman Payne joined the cause many years ago, and has continued unremittingly ever since to give it his best attention. A layman from a horticultural point of view, he nevertheless deserves well of the profession—more, in fact, than any other amateur. At one time he was a grower of the popular flower, but as he became known to Chrysanthemum lovers all over the world, his duties independently of his own profession, increased to such an extent that he had, perforce, to give up his cultures, and attend entirely to the literary aspect of the question. Such is the price of notoriety in a popular cause; but whether it brings an adequate reward for unceasing labour and the burning of the midnight oil is another question to be considered apart, and one which largely depends upon the view which the worker himself takes of it; for

"Nae treasures, nor pleasures,
Could make us happy lang;
The *heart* ay's the part ay
That makes us right or wrang."

He has infinite resources upon which to fall back for assistance and reference in his historical and other writings concerning the Chrysanthemum. For many years he has been collecting books, pamphlets and pictures, that describe, tell how to cultivate, or illustrate the Golden Flower. Not content with books in the English tongue, he has ever been eager to acquire foreign works upon the same subject, and the more rare or antiquated they were, so much the better. His library on Chrysanthemum lore of all sorts is quite unique in the kingdom, and, we might safely say, anywhere else. The knowledge and practical experience of Continental languages at his command enable him to peruse foreign works on the Chrysanthemum, or to travel amongst the Continental growers, a large number of whom he counts amongst his personal friends. Many of his pictures and paintings of Chrysanthemums are rare and valuable.

We are highly pleased to present our readers with the most recent portrait of Mr. Harman Payne, more particularly for those at a distance, who may not yet have had the pleasure of meeting him in person. He is no stranger, however, to many at remote centres from London. As a correspondent both at home and abroad, he is known both by repute and otherwise to a much wider circle of friends, admirers and well-wishers for services rendered.

As evidence to corroborate the above statements, we need only to refer to his numerous titles and connections with societies, at the same time referring our readers to another column for further information. Mr. Harman Payne is a fellow of the Royal Horticultural Society, and the foreign corresponding secretary of the National Chrysanthemum Society. More recently he became an honorary member of the French Horticultural Society of London, at the annual meeting of which he presided last year. He is also the corresponding member of the National Horticultural Society of France; a member of the French National Chrysanthemum Society (Lyons); corresponding member of the Northern French Chrysanthemum Society (Lille); and associated member of the Paris Chrysanthemum Committee (the only English member on it). He has been the editor of all the N.C.S. Catalogues since 1886, and also of the Year Book, 1895. It is but reasonable to infer that some honour was due to a man who has so many honorary duties to perform; but his most recent distinction has come as a surprise to many, and from a quarter as unexpected as it has been agreeably surprising and acceptable. We refer to his being made a *Chevalier du Mérite Agricole* at the instance of the French Government, as announced by us recently. Once more this honour bears witness to the fact that fraternity amongst lovers of horticulture is not limited by nationality. The accompanying illustration is a *fac-simile* reproduction of the decoration conferred upon Mr. C. Harman Payne, to whom we offer our sincere congratulations.

ORTHOEPY OF THE TERM "CYCLAMEN."

It is generally admitted that the flowers and foliage of Cyclamen persicum are very beautiful; but——

How shall we sound its mystic name
Of Greek descent and Persian fame?
Shall "y" be long and "a" be short,
Or will the "y" and "a" retort?
Shall "y" be lightly tripped o'er,
Or should we emphasise it more?
Alas! the doctors disagree,
For "y" 's a doubtful quantity.
Some people use it now and then,
As if 'twere written "Sickly-men";
While others try its scope to ken,
And mournful give it "Sigh-clay-men";
But, as it comes from *kuklos*, Greek,
Why not "Kick-laymen," so to speak?
The gardener, with his ready wit,
Upon another mode has hit;
He's terse and brief—long names dislikes,
And so he renders it as "Sykes."

—*C. B. G., Acton, W.*

EXHIBITORS OF VEGETABLES.

North *versus* South.

Your correspondent, J. C., Chard (p. 269), raises an interesting point respecting the merits of Northern *v.* Southern exhibitors of vegetables; and, after dealing with various points respecting the early training of young gardeners, goes on to state that "When looking over the reports of many large shows and that of the National Chrysanthenum Society's late show, was impressed with the idea that northern exhibitors were not maintaining their ground, when one comes to see how many prizes go to the southern growers." It is on this point that I am inclined to differ, as I fail to see where a fair comparison can be made. Supposing J. C. had also read the reports of some of the leading exhibitions in the north, say at Glasgow, Edinburgh, or Dundee, and he found that all the prizes were won by exhibitors practically from these localities (which is the fact), would that give J. C. the idea that the southern growers were not maintaining their reputation? I venture to say it would not. The mere fact of the N.C.S. Show being held in the south I consider fully accounts for the success of the southern exhibitors, because of being fully represented, whereas the northern growers, except in the single dishes, as far as I am aware, were not exhibitors, and, of course, their reputation as vegetable growers stands where it did.—*James Gibson, Devonhurst, Chiswick.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Odontoglossum Pittiae, *Nov. hyb. nat.*—This is the name that has been resolved upon for the Odontoglossum mentioned in our last issue as having been sold for 105 guineas. It is a supposed natural hybrid between O. crispum and O. luteo-purpureum, and having been examined with the picture of O. pittianum is found to be abundantly distinct. Both are from a similar parentage, but the actual varieties concerned in it must have been different. The sepals and petals of O. Pittiae are broader than those of O. pittianum, and the flower as a whole is much rounder and equal to that of a good O. crispum, though very different in the ground colour. Both are now in the possession of H. T. Pitt, Esq., Rosslyn, Stamford Hill, N., who has had a hand painting of a flower of each executed.

Dendrobium crassinode album.—This is the name given to the beautiful variety of D. crassinode, in which the purple tips of the sepals and petals are absent, the whole flower being white, with the exception of the golden-yellow blotch at the base of the lip. We saw it in the possession of Mr. J. Seeger, Bandon Hill, Croydon, the other week.

Varieties of Cattleya Trianaei.—A great amount of variety has turned up from time to time amongst importations of this popular and useful Cattleya, since it was first discovered by M. Linden in 1842, in the Cundinamarca district of Columbia. A double page coloured plate representing the flowers of eight selected varieties, appears in the *Lindenia, pl.* 530-531. The sepals of C. T. Festiva are slightly rosy, the petals pale rose, and the lip of a rich reddish-crimson. The lip of C. T. regalis is of a dark purple-red, the colour extending into the tube and obscuring the customary large orange blotch. In this respect it is a distinct and most telling variety. Delicate and charming is C. T. Dulcis, something in the way of C. T. delicata, but the central area of the lip is lilac-rose and the small orange blotch in the throat is margined with a white band in front. It is almost orbicular and beautifully crisped. Another handsome light variety is C. T. amplissima, the beauty of which also centres in the lip. This has a broad crimson band towards the apex with a broad white border (a feature of unusual occurrence in C. Trianaei), and the orange blotch of the throat is clearly defined. The sepals and petals in the above four cases are very light. The sepals and petals of C. T. superba are pure white, while the crimson-red lip has a paler margin, and forms a striking contrast to them. The sepals and petals of C. T. Ardens are pale rose, intensified towards the margin. The orange blotch covers a large area of the base of the lip. The seventh variety is named C. T. splendens and is characterised by pure white sepals and petals, and a lip that is almost wholly purple-red, making a most striking contrast. The side lobes are flushed with rose and therefore considerably paler than the lamina. C. T. majestica may be described as intermediate between C. T. ardens and C. T. Amplissima, inasmuch as the pale rose margin of the lip is more or less heavily flushed or splashed with red. On the centre of the lamina is a large purple-red blotch below which the expansive lip is ornamented with two large white blotches, one on either side. The whole of the eight varieties form a striking picture on a background of foliage.

THE FLOWER GARDEN.

If the present cold snap lasts, work out of doors will be greatly impeded. Snow sweeping, of course, will require some attention. It will be wise, indeed, to clear the paths as soon as possible after the snow has ceased falling, otherwise a little traffic will render it exceedingly difficult to sweep them clean. This will especially apply to paths near the mansion. Another job that usually falls to the gardener and his men to perform is the clearing of the snow off the roof of the mansion. Where the latter is of considerable size, and, as is often the case, rather hybrid in construction, there are numbers of nooks and corners in which the snow lodges. The heat from the rooms beneath causes it to melt, and if the water cannot readily escape the plaster and wall paper of the dwelling rooms receive injury.

In other ways the cold weather will do real good. The mildness of the autumn and early part of the winter have caused things to be unduly forward, and if this had gone on for a little longer there would have been considerable damage done if sharp weather had then supervened. A little seasonable frost and snow will at least have the effect of keeping things back in their proper places.

Meanwhile the days that cannot be improved by forwarding work out of doors may be turned to advantage under shelter. It is often difficult to know how to employ unskilled labour to the best advantage. Such men, however, as are not capable of doing good service under glass may be set to work making labels and stakes. During the summer months many plants require to be pegged down, such, for instance, as Verbenas and Heliotropes. A supply of small pegs suitable for such work should be secured now, and thus much valuable time, and not a little trouble, will be saved presently.

Carting Manure.—Advantage should be taken of the ground being hard with frost to do any heavy carting of soil or manure that is necessary. In mild weather, unless it is unusually dry, it is impossible to run heavy carts over lawns and paths without cutting them up and spoiling them.

Seeds of Annuals that were saved last year, and have been lying by in a rough state just as they were gathered may now be cleaned, properly labelled, and tied up in packets for use when required. This will not be very long, by the way. Some seeds will take a deal of time to pick over, as for instance, Stocks, and in such a case the job should be given to the garden women, if any are employed, for they are, as a rule, very much lighter fingered than the men.

Bedding Plants.—Just now the working up of a sufficient stock of bedding stuff will be requiring earnest attention. Where thousands of plants are bedded out an immense amount of labour is required to get them together. Zonal Pelargoniums that were placed in a gentle heat at the beginning of the year may have their tops taken off at once, and inserted as cuttings. If kept fairly close for a while these strike readily enough, but they must not be kept in heat for too long, otherwise they will become drawn and weak, and will never develop into really serviceable plants. All the flowers must be kept regularly picked off the autumn struck cuttings, for they are not infrequently liable to weaken themselves by flowering at this season.

Alternantheras, Mesembryanthemums, and other dwarf growing plants, suitable for carpet bedding, are needed in strong force in many establishments still, and hence it is advisable to make an early start with their propagation. They, together with Lobelias, Heliotropes, and Verbenas, strike quickly and well in a hot bed; indeed we have found by experience that better results are obtained with Lobelia cuttings, when treated this way, than have been forthcoming by any other. Use very sandy soil for the cuttings, and do not be afraid of putting them in thickly, as directly they are rooted they will have to be potted off.

Soil.—About the middle of February a start must be made with potting up the zonal Pelargoniums for bedding. Whether pots or boxes are used, a large quantity of soil is necessary, and this should be got in readiness meanwhile. If the soil has been outside, and has got sodden, it must be dried by artificial means, for to pot plants in such a medium at any time is a mistake.

HARDY FRUIT GARDEN.

Every advantage should be taken of fine weather to push on the pruning of all hardy fruit trees except Figs. The prevailing mildness of the season has caused the buds to swell earlier this year than usual, and unless the spell of frosty weather breaks before long, the period during which it will be safe to handle the trees will be considerably shortened.

Small Fruits, such as Gooseberries and Currants, in addition to being planted in lines close to the edge of the walks in the kitchen garden have often to be planted in quarters specially devoted to them in order to supply the demand for this class of fruit. Trees planted in this latter way have the advantage of being easily protected from birds when the fruit is ripe. These should be pruned as soon as possible, as it will enable the digging over of the ground they occupy to be seen to, and this is very desirable, if only for the sake of tidiness.

Bud-eating Birds.—Although this term is specially applied to bullfinches there are other birds that are fond of pecking out the buds of various fruit trees, particularly Plums, Cherries, and Gooseberries. Sparrows, for instance, are more destructive than bullfinches by reason of their vastly superior numbers. Bullfinches it is possible to keep down by shooting, always supposing that the shooting does not take place when the birds are resting on the fruit trees, otherwise the remedy will be far worse than the disease. No. 9 shot will be found the most serviceable missile. On the other hand, the sparrows are too numerous to shoot, and are, moreover, not easily scared away. The only thing that can be done to keep them at bay is to dust the trees, when wet, with lime or soot, or a mixture of both.

Fixing Wires on Walls.—The present time is a very suitable one for furnishing walls with wires, or mending any that may be broken. Nails are all very well in their way, but pull a wall to pieces terribly. Old walls that have been subjected to this knocking about for a few years will require to be repointed, and when the frost has gone this may be done, otherwise it must be left until next autumn, for frost is sure to destroy fresh mortar that has not had time to set and harden properly.

Lime-washing Walls.—Where insect pests are very troublesome in the spring and summer it is a good plan to give the walls a good lime-washing sometime during the winter. The trees must be untied or unnailed, and the branches looped together in bunches. This will be found necessary, or, no matter how careful the workmen may be, there will be sure to be damage done to the trees.

Newly-Planted Wall Trees.—It will not be advisable to tie or nail these for some time yet, as the ground will be sure to sink to some extent, and if the tying is done before this sinking occurs the branches are apt to get "hung," and harm results both to them and the roots which are disturbed in consequence. Trees planted in the autumn have had the benefit of some very heavy rains, and these have settled the soil to a very great extent, so that in such a case there will not be likely to be much more subsidence. Still it is best to be on the safe side and leave the tying for a little longer.—*A.S.G*

HINTS FOR AMATEURS.

Window Plants.—The present is a most trying time of the year for window plants of all descriptions. In frosty weather the fires in the dwelling rooms are naturally kept going vigorously, and the length of the nights also means that either gas or oil is burning for a good many hours out of the twenty-four. The air thus becomes anything but suitable for plants, but this unavoidable disability in not a few instances becomes greatly aggravated hy neglect. The plants, perhaps, are left standing in the window; where, if the frost during the night happens to be severe, they receive great damage; the transition from a parching heat to nipping cold being too much for the patience of even the best tempered plant. On retiring for the night, therefore, any plants which are standing in the window should be removed into the middle of the room, where they will be in comparative safety.

Sponging.—During the summer months, foliage plants, excepting the majority of ferns, are greatly henefited hy being taken out occasionally, laid upon the grass, and given a good syringing. It is obviously impossible to do this now, and hence recourse should be had to sponging. For removing ordinary dust and dirt which has settled upon the fronds, a little soft soap may be dissolved in tepid soft water. It is not advisahle to use insecticides any more than can he helped; for, although the prejudicial effect of each application is so slight as to be nnappreciable, it tells in the long run.

Scale is a pest that is particularly fond of plants, and if allowed to hecome numerous, will soon spoil the appearance of the finest. The little yellow or white dots to be seen on the fronds of many palms are caused by scale. Some amount of force is required to remove them, as they stick very closely. A careful scrape with the finger-nail is the quickest way of getting them loose. Follow this up by a washing with Fir-tree Oil. We have found this specific very effective in getting rid of scale.

Lilies of the Valley.—Much as these are prized when they come naturally out of doors, they are even more appreciated in the dark, dull days of winter, and they are one of the comparatively few flowers that will stand hard forcing really well. The numher of crowns that is forced annually to supply the market must be enormous when we consider how comparatively common Lilies of the Valley are throughout the early months of the year.

Lifting Clumps of the Lily from the garden, and forcing them straight away, used to be a very common practice with old-fashioned gardeners, despite the fact that it was a very wasteful one. Many of the crowns in these clumps were too small to flower, and as a consequence there was a great waste of space and time.

Selected Crowns.—An infini tely better plan than the foregoing, and the one most generally practiced now, is to force only the larger and stronger crowns, every one of which will be sure to flower. The very most is thus made of the space at command, and there is absolutely no waste of material, for the younger and weaker crowns, which would not produce flowers if forced, are given a little longer respite, and eventually obtain sufficient strength to flower the following season.

All amateurs, therefore, who desire to force Lily of the Valley, should invest in the selected crowns; for, thereby, they will save themselves much trouble, and in the end expense. The Berlin crowns give the best results, as they will force rather better than the majority of home-grown ones.

Pots may be used if desired, but shallow boxes will be found much handier, as they can he stood in positions where pots could not be; also they economise space. Most of the large growers use old herring boxes, measuring about 15 in. by 12 in., and 4 in. to 5 in. in depth. These can be obtained from the costers at a few shillings a gross. As each of these boxes will contain fully a hundred crowns, the statement that the using of boxes is an economy of space, as against pots, is amply borne out.

Cocoanut Fibre Refuse is a much better medium to force the plants in than soil. It is lighter and more cleanly, and can be more easily obtained than suitable soil. As there will be little or no root action, it will be readily seen that the fact of the fibre refuse not containing so much nutriment as the soil is of small moment.

Temperature.—In order to get the crowns to flower within a reasonable time, a rather high temperature must be given and maintained. If possible, a bottom heat of 85° Fahr. should be given, with an atmospheric temperature of 75°. Under such conditions good flowers will be forthcoming by three weeks time from the date of the placing in heat.

Position.—The boxes may, if desired, he placed upon the pipes of the house, on the ground underneath the stage, or in any corner where they will get the required heat. For the first twelve or fourteen days they must be kept in darkness. This may easily be done by inserting an empty box of the same size as that containing the crowns over the latter. Those cultivators who force quantities at a time employ houses fitted up with beds like Melon pits, in which the boxes are plunged. The whole house is then darkened by covering mats or tarpaulin over it.

Taking the Plants to the Light.—If the temperature recommended is maintained throughout, at the expiration of twelve or fourteen days light must be given. It will not be advisable to let in a flood of light at once, but the change should be effected gradually.

Such a process as the one described will enable the amateur to obtain an abundance of first-class flowers, and each individual bloom will be open from the top to the bottom of the raceme. Herein the forced material possesses an advantage over flowers produced in the ordinary way out of doors, for in the latter case, as many of our readers will have ohserved, the lower flowers are open and over long before the uppermost ones have expanded.

Table Decorations.—Here Lilies of the Valley play an important part. Not only are they very effective as cut flowers arranged with their own foliage, but the plants themselves, if in suitable receptacles, are charming. Hollow cones or pyramids of wire, fancy baskets of the same material, or ornamental pots and vases of any kind may be turned to excellent account thus. Certainly one of the prettiest floral tahles we have ever seen had, as a chief feature, cones about 15 in. high, furnished with Lily of the Valley. The crowns in this case had been planted in the cocoanut fihre refuse, with which the cones were filled, and forced thus. It is not necessary, however, to force the crowns in the receptacles in which they are to flower. As has been previously ohserved, root action is almost dormant, the flowers and leaves drawing upon the reserve stores of nourishment in the crowns for their supply. Hence the plants may easily be shifted; as easily when in flower as before they are started.

In the matter of other suitable fancy receptacles, we may well trust to the discretion of our readers. Douhtless several articles of various shapes and sizes will suggest themselves.

Foliage.—As the foliage of those plants which have been hard forced will necessarily be rather yellow, it is a capital plan to put a few clumps from the outside garden in heat. By giving the leaves borne hy these a fair amout of light they will put on a lively green. These leaves will be found very useful for arranging with the flowers.

Cyclamens in Flower.—The Cyclamen is a tender plant, it is true, but it will not stand being subjected to strong heat. If the plants are to be kept dwarf they must be kept cool. A warm greenhouse temperature is just the thing for them, but beyond this it is not desirable to go. Plants that have been growing in a too warm place are easily recognised by the long, lanky flower stalks, and their drawn appearance generally.

Old Hyacinths.—We often hear the query "are my old Hyacinths of any further use for another year after they have been forced." It may be opportune to refer to these now as the flowers will have been taken from numbers of bulbs ere this. Such bulhs will be of no service for forcing again another year, as the flowers, if they came at all, would scarcely repay the trouhle. However, they may be turned to some account by planting them out in the garden. Choose a corner in the herbaceous border that will not he disturbed. As long as the bulbs are in the pots they should be given an occasional watering, for unless this is done they may as well be thrown away at once.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Yew Timber.—*Giles* asks if it is true that the wood of the Yew placed in water will assume a violet-purple hue?

According to Varennes de Fenilles, if the wood of the Yew before it is seasoned is cut into thin veneers and steeped in pond water for several months it will turn to the colour stated by *Giles*. The presence of alkali in the water would probably be accountable for this.

Measuring Timber.—*Woodman* asks for instructions with regard to the method of roughly measuring timber after it has been felled.

The measuring of timber involves a fair knowledge of arithmetic in order to find out how many cubic feet any tree contains. The rule is to find the average diameter of the tree first of all. This may be done by measuring the cut ends. Thus if one end measured 2 ft. in diameter and the other end 1 ft., the average diameter would be 2 + 1 = 3 ÷ by the number of measurements (2). This would be 1½ ft. To get the total number of cuhic feet multiply 1½ by 1½ and multiply the product in its turn by the number of feet that represent the length of the tree. The answer will give, roughly, the number of cubic feet. Of course, to be exact, an allowance must be made for the form of the tree being round instead of square.

Stevensonia grandifolia.—I have a small plant of this Palm which has the leaves spotted and blotched with rusty-brown. Will you tell me the cause of this? I can see no signs of insects upon it, and it has been carefully looked after for watering, etc. It is growing in a house which is maintained at a temperature of 55° by night. Is this too cold?—*F. Wilkins.*

It is a common thing for the fronds of Stevensonia grandifolia to exhihit the rusty appearance complained of. It would be difficult to assign a true reason for the occurrence, but it is not due to ill-health or insects, for we have seen numbers of vigorous young plants that had been kept perfectly clean and yet the markings were there. Older plants behave in the same way, but the area of rusty-brown to green is greater in the young plants. The temperature you mention will do very well, although 3° or 5° higher would be better.

Curculigo recurvata.—Rough usage causes the tips of the leaves to go off, *P. G.* The only thing you can do to make the plants presentable is to trim off the dead portions with a sharp knife or pair of scissors. The Curculigo is not a Palm, properly speaking, although it is often described as such. It belongs to the Natural Order Amaryllideae. You may propagate it hy splitting up the old plants in spring, and potting up the suckers, which are freely thrown out from the base.

Lilium Harrisii.—We do not believe in forcing this very hard, *Hobbs.* In order to get plants to flower at Easter you should have bought some bulbs early in the season and potted them up not later than the end of August or the beginning of September. Without hurrying them to any extent they would now have been nice sturdy plants about a foot in height. Such plants will produce flowers of larger size and better substance than they would if they had been forced hard.

The Birds Nest Fern (Asplenium Nidus) will do well in a cool greenhouse temperature, *P. G.* We have grown it well in a house that was often down to 40° Fahr. in cold nights, and was never allowed to get above 45° by night all through the winter. The form A. australasicum requires a higher temperature in order to succeed with it.

Climbers for Greenhouse.—Will you give me the names of three free-flowering climbing plants suitable for the roof of a cool house?—*W. Young.*

You will find Lapagerias, both red and white, Hibbertia dentata, and Pleroma (often called Lasiandra) macranthum suitable.

Asparagus plumosus.—Yes, *Graig*, cuttings of this will root. Take them off with a slight heel, insert in very sandy soil, and place them in a propagating frame where they will get a brisk bottom heat. We recommend seed sowing, however, as being by far the better plan, as it invariably produces vigorous plants, which cuttings will not often do.

Staging for plant houses.—Undoubtedly a stage built of iron framework with a slate bed is the most substantial of any, *Duncan L*, but it is also the most expensive. Sheets of corrugated galvanised iron will come much cheaper than the slate, and will answer the purpose quite as well. They may be covered with shingle or crushed coke, to a depth of from 1½ to 2 in.

DIEFFENBACHIA MELEAGRIS.

This graceful and beautiful species was discovered in the equatorial regions of South America. It first appeared in this country at the Temple Show of the Royal Horticultural Society where it was exhibited by Messrs. Linden, L'Horticulture Internationale, Parc Leopold, Brussels. It formed part of an exhibit of novelties with variegated foliage. The specific name refers to the beautiful variegation of the petioles which are tessellated like the feathers of a guinea hen, or like the flowers of Fritillaria Meleagris, the latter being the scientific name for the guinea hen, a beautiful but noisy bird not so often seen in collections of poultry, perhaps, as it used to be. The ivory-white blotches are unequal in size and distribution over an olive-green groundwork. The petioles are long and much more graceful that those of the numerous species of Dieffenbachia already in cultivation, and for that reason the plant is better adapted for table decoration. The lamina of the leaf is ovate, elongated, thickened at the entire margin, and furnished with a few creamy-white blotches both on the upper and under surface, on a dark green ground. Like the rest of its kind it requires stove treatment, and we should suspect it to be more suitable for withstanding the dry atmosphere of dwelling rooms than its congeners. Messrs. Linden have given us this opportunity of reproducing a plant that is as yet but little known.

Dieffenbachia Meleagris.

CHINESE PRIMULAS AT READING.

At the end of last week, in the midst of a blizzard of blinding snow from the cold north, we found our way to the Portland Road Nurseries of Messrs. Sutton & Sons, Reading, and though the houses were shaded with a heavy coat of snow, the interior presented a strange and brilliant contrast to the tempest raging outside. While the snow in London had a muddy appearance, here it was clean and altogether winter-like. The Primulas, on the contrary, were suggestive of summer on account of the quantity of flowers and their bright and lively appearance. The numerous varieties in their various sections are arranged together in masses of a sort in the span-roofed houses, which are well-adapted for the cultivation of soft-wooded subjects. There is no better way of cultivating Primulas than growing them in houses by themselves where the proper treatment can be accorded them. They fill several houses at Reading and, with exception of a houseful of plants on trial to test whether the seed is all true to name, they are grown for the production of seed. Therefore, those who would like to see them in their full beauty should pay a visit to Reading at once, because the flowers begin to drop soon after they have been pollinated. When merely grown for decorative purposes the flowers last much longer, and the lateral trusses continue the succession of bloom for months. The absence of insects in winter precludes the possibility of the crossing of the flowers by that agency, and that also is in favour of the cultivator.

Single Varieties.

Snowdrift is one of the earliest to bloom even when the seeds of all the varieties are sown together; and it is rightly named by reason of the profusion of pure white flowers which it produces. Another quality is that the flowers do not readily drop when the plants are shaken about. The foliage is pale green, and Fern-leaved. Sutton's Blue is also a Fern-leaved variety, with clear and bright Forget-me-not flowers of most pleasing aspect when seen in groups or batches, and most effective in a conservatory. Every plant blooms abundantly, and forms a centre of attraction. The large rosy-pink flowers of Rosy Queen are charming in their delicacy, and the quantity in which it is grown attests its popularity. The Fern-leaved foliage is of a light green, and in that respect corresponds with the character of the flowers. Those of Brilliant Rose are dark rose, deepening to carmine with age, and the mixture of tints to be seen on a plant in full bloom is charming as an object lesson in colour harmony. Gipsy Queen stands out in strong contrast to Rosy Queen, inasmuch as there is no correlation of homologous parts. It is a Fern-leaved type, with leaves of a bronzy-olive above and of a dark bronzy hue beneath; yet the flowers are pure white, or occasionally tinted with blush. In its way there is nothing more distinct in cultivation.

Time is the best test of a good Primula, and in Pearl surely nothing could be more decisive of its general utility than the fact that it was put into commerce as early as 1879. The large pure white flowers, borne well above the foliage, change to a pearly tint with age; and every part of the plant still betokens a sturdy and vigorous life. The bronzy foliage and large pure white flowers of Royal White also marks out another fine thing altogether worthy of the cultivator's best art. The flowers of Reading Pink open of a delicate hue, and deepen with age, till they surpass those of Rosy Queen in that respect. These light colours are pleasing in themselves, and always draw a considerable amount of attention from the general public. The leaves are light green, and of the ordinary form. Brilliant Ruby has the same dwarf habit as Ruby King, from which it originated, but the flowers are darker even than those of Brilliant Rose, as they get fully developed. The plain-leaved Reading Blue is the darkest of the blues, and produces an abundance of blossom, well above the bronzy-green foliage. In Purity we have something that recalls Gipsy Queen, but the foliage is of a much lighter bronzy shade, and the flowers are white as the driven snow.

Single-flowered Giant Strain.

The varieties belonging to this section are characterised by the great size of the individual flowers. Twenty years ago no one could have believed that Chinese Primulas would ever produce flowers larger than the face of an English lever watch. Giant Royal White is the finest white in the section, for the huge flowers measure 2½ in. across, are of great substance and pure white. The robust leaves have bronzy petioles. Unfortunately it is not yet plentiful enough to be sold separately, but the surplus seeds are disseminated in mixture with others of the giant strain. Giant Pink is an admirable companion to the above, and has light green leaves and flowers of the largest size. Indeed, on this score the two varieties leave nothing to be desired. Giant White has large flowers, tinted with blush as they age, and this contrast with the rich golden eye is well marked. Giant White (Fern-leaved) differs in no important particular from the previous variety except in foliage. Giant Crimson forms a well-marked contrast to either of the above. An unnamed seedling of a rosy-salmon has its flowers thrown well above the foliage. We expect to hear more of it anon, but at present the spare seeds are put in the mixed packets. The same may be said of Giant Lavender, a very distinct colour, and of huge size; but, like other varieties of high development, it seeds but sparingly.

DOUBLE VARIETIES.

There can be no doubt that this type is entirely different in general effect from the single varieties; and as the flowers hang much longer under the same conditions they serve to prolong the display, and for that reason they are arranged in batches alternately with the singles at Reading, an example that might be followed in private establishments with great advantage to all concerned. In a cut state they are also more durable, and therefore well adapted for cut flower decorations. A useful and free-flowering variety is Sutton's Double Scarlet, witb blooms of large size. The same may be said of Double Heliotrope, wbose colour is well described by the name. It originated from a cross between Double Carnation flaked and Double Blue. Double White (Fern-leaved) is very pure, and reminds one of the ever useful old Alba Plena, for wbich it may well be used as a substitute, with the advantage that it may be raised in quantity from seed without any trouble whatever. White flowers of a durable nature are always in demand. A free-flowering and strong-growing variety is Double Carmine, the flowers of which have a decided and beautiful salmon shading. A light and pretty variety is Double Pink, well worthy of being added to a collection. Double Blue is characterised by large trusses of rich colouring, and the flowers might well be substituted for Marie Louise Violets when the latter are unobtainable. A bouquet of tbe flowers would be equally effective as far as colour is concerned. The plain-leaved Double Wbite is very pure, and might well be extensively used for cut flower purposes, as well as for general decoration in pots. For conservatory work contrast of colour is indispensable; and Double Crimson, together witb the Scarlet, Pink and Blue, furnishes tbe material with wbich to harmonise and contrast tbe various arrangements required in private or otber establishments.

MISCELLANEOUS ITEMS.

In passing througb the various houses we could not fail to notice considerable differences in the flowering period of the numerous standard types grown by Messrs. Sutton & Sons at Reading. As an instance of this we may state that Reading Scarlet, Pearl, and Brilliant Rose are the three earliest varieties amongst the plain-leaved type. Tbe first named was actually out of season and shunted into another house. Snowdrift, Rosy Queen, and Reading Blue (Fern-leaved) are tbe counterpart of the above in the Fern-leaved strain. In like manner we have a third section represented by Double Scarlet, Double White, and Double Pink, all of which are very early although sown at the same date as the rest. Here we may mention Double Carnation-flaked as a general Primula, inasmucb as the flowers of tbe primary truss open of a pure white, or nearly so wbile the lateral trusses, thrown up in great profusion and nearly of equal strength with the first, bear flowers flaked with carmine and purple.

We bave already mentioned some novelties belonging to the different sections or varieties so scarce tbat they can only be named in mixture. Very handsome is tbat with flowers of the colour of an Old Clove Carnation and a black zone round the eye, developing later on a narrow belt of a gray paste like an Auricula. A large batch of it is now in its prime, and a brilliant effect it produces, but unfortunately it is a sby seeder. Already a Fern-leaved type bas turned up amongst the seedlings and a semi-double one. We expect to see and hear more of this strain in the near future.

A houseful of the Moss Curled section is highly attractive at the present time. The flowers continue to improve in size and brilliancy, while the varieties increase in number, and tbe beautifully curled and crisped foliage in various tints is retained. Pink, rose, white, purple, and other colours may he noted. There is also a giant lilac moss-curled variety of great promise. There are at least two houses filled with crosses of all colours, from the palest to the darkest.

Other Primulas are represented by the dark blue-purple P. capitata and the yellow P. florihunda, which have been flowering freely for some time past. While passing through the Primula houses we noted great stores of clumps of Lily of the Valley, bulhs of Lilium auratum, L. longiflorum Harrisii, L. speciosum, and tuhers of Gloxinias, Begonias, Tuheroses, etc., in sheds and houses close by, where they were being packed for dispatch independently of had weather. When thus housed they are kept dry and easily got at wbenever required.

FORCED FLOWERS AT PUTNEY.

LILIES OF THE VALLEY in January are to be met witb at nearly every private establishment of any size tbroughout the kingdom. The amenity of this charming flower to forcing is now generally recognised, but the old method of forcing it is now pretty well a thing of the past. Time was when clumps were lifted from the open garden and carried into heat, when the forcer grew his own material for forcing. He complained of the results, perhaps, and declared that they were unsatisfactory and expensive, for it has been proved over and over again that our soil is not, except in exceptional cases, suitable for producing Lilies of the Valley that shall force really well. Since that day a great industry has sprung up, and is annually increasing in dimensions, whereby our German friends supply us witb what we need in tbe way of picked crowns that force splendidly. The value of the Berlin crowns for forcing purposes is admitted on all hands.

The average gardener, then, grows enough of tbe fragrant bells to supply the wants of the establishment with which he is connected, but the public market has to be thought about. It is in this special direction tbat Mr. Iceton has achieved such wonderful results.

At the time of writing upwards of 150,000 crowns are in flower at tbe busy "plant factory" at Putney Park Lane. House after house is filled witb boxes, each containing about a 100 of the plants, and the sight is one that is difficult to adequately describe. The vistas of pure white dazzle the eyes with their glistening sheen, and tbe perfume with which the air is laden is so overpowering as to be almost unpleasant.

Taking tbe year througb, about 3,000,000 crowns are forced by Mr. Iceton, tbat is to say that between 8,000 and 9,000 fresh crowns come into bloom each day the year through. Cocoanut fibre refuse is used instead of soil, being more cleanly, lighter, and quite as effective since root action is very weak until after tbe flowers are over. Generally speaking, about three weeks elapses between the placing of the crowns in heat until the flowers are fully open. For tbe first stages and until the racèmes have attained tbeir full length the plants are kept in a state of semi-darkness. The light is tben admitted to them to induce the flowers to open. A temperature of between 70° and 80° Fahr. is maintained throughout. Naturally under sucb conditions the leaves are pale and etiolated specimens, totally unlike the vivid green of their relatives which have tbe free air of heaven playing about them. The flowers, on tbe otber hand, do not suffer in size, beauty, or strength of perfume. The only appreciable difference seems to be tbat the flowers are placed farther apart from each other on the raceme. This, of course, is due to the latter being "drawn," owing to the absence of light.

TULIPS are forced in large quantities. For these, as well as for the Lilies of tbe Valley, shallow boxes are employed, and very gay do they look when full of dwarf sturdy little plants in flower. Yellow Prince is one of the very yellow varieties for early work. When grown in masses it is very effective. Proserpine exhibits a very pretty sbade of salmon-pink. Keizer Kroon, yellow, striped red, is a great favourite, but it is very variable in its hehaviour. Sometimes it will force fairly well, wbilst at others it will only produce very second-rate results.

ROMAN HYACINTHS, also in boxes, do exceedingly well, and as white flowers are in great request at this season of tbe year vast numbers of tbem pass through the nursery annually.

LILIUMS.—Tbese are grown in tbousands, particularly L. longiflorum, and its popular variety L. l. Harrisii. The earliest batch of the latter is composed of plants in 32-pots. The bulbs were potted in August last, and are now healthy vigorous plants from 15 in. to 18 in. in height. These are reckoned to flower about Easter time, when the blooms will find a ready sale.

Other forced flowers are represented by Astilbe (Spiraea) japonica, which is a most valuable decorative plant besides affording material from which to cut. Ghent Azaleas, too, are very easily managed. At the time of our visit Mr. Iceton had a houseful of these plants in superb condition, indeed, one might go a long way hefore discovering their equals witb regard to the profusion and rich colour of the flowers.

ARAUCARIA IMBRICATA.

IN SOMERSET.

IN reading the article on the above Conifer in last week's number of THE GARDENING WORLD, I noticed that the writer says tbat rough, long blowing winds it cannot stand. I used to think so, but there is one in this neighbourhood standing in a very hleak position indeed. The main road leading from Minehead to Dulverton passes over a portion of Exmoor, through the village of Wheddoncross, about two miles from Dunkery Beacon and at an elevation of at least 1,300 ft. above the level of the sea. The tree in question stands in the village scbool grounds and must have been planted twenty-five years ago at least. It is about 30 ft. bigh, and is well proportioned, but rather stunted in growth, and no wonder when the position is considered. It has lost tbe lower brancbes, but otherwise is quite healthy. It is fully exposed to the winds on all sides except the north-east, and it is a proverbially windy place, also very cold. Tbe soil is poor, and very few trees are near except Beech hedges and Oak shrubs. Of course this may be an exception, but we really do not know what some of these trees will endure and still thrive.—*W. Shrives.*

IN AYRSHIRE.

I am somewhat surprised tbat we have heard so little in your columns regarding fine specimens of the above plant, as doubtless there are many throughout the country. I was greatly interested in a communication by Mr. Webster in a recent issue about the plant at Cudham Hall. I always considered, and observed, the plant to be dioecious, but there is no disputing Mr. W's testimony, and I think your readers are greatly indebted to him for this information; it is in such ways we learn.

I know of at least three specimens of Araucaria imbricata that are considered by many wortby of note, and are certainly in the front rank among Scottish examples. The first and largest is at Cloncaird Castle, near Maybole. In 1892 it was measured and photographed by Mr. Paxton, Kilmarnock. It was then 55 ft. high, and at 5 ft. up was 5 ft. 5 in. in circumference. I do not know its age. Tbe second I will refer to is at Rozelle, near Ayr. It is 48 ft. high, and at 2 ft. from the ground is 6 ft. 6 in. in circumference; length of branch, 15 ft. It was planted in 1839, and is a male tree. The third example is at Glendoune, near Girvan, and is considered by many to be the handsomest tree in the county. It is 44 ft. higb, and at 1 ft. up is 7 ft. 3 in. in circumference; and at 5 ft. up is 6 ft. 1 in. in circumference; length of branch, 17 ft. It is a female tree, of most symmetrical form, was planted in 1848, and is, at the present time, carrying dozens of fine cones. There are several fine specimens at this place, all over 40 ft. bigh. There is a male tree about 46 ft. high, finely furnisbed, wbich bears cones freely, but of tbe erect habit peculiar to it. I am of the same opinion as your correspondent, Mr. Webster, that the finest specimens, and most luxuriant, are to be found in sheltered districts near the sea, and a comparison of the above measurements will bear out this statement.—*Brightspade.*

AUSTRALIAN DRIED FRUITS.

AMONG the many infant industries in Australia none show a more certain promise of future development than that associated with tbe production of Raisins, Currants, and other dried fruits. Althougb in California, where the soil and climate closely resemble those of the soutbern half of Australia, fruit-drying has been made tbe basis of a large and remunerative export trade, the lesson tbereby afforded was, until a comparatively recent period, completely lost upon the Australian colonists, notwithstanding it had frequently pointed out tbat in those districts where tbe Grape grew most luxuriantly the production of Raisins of a good quality was attended witb no difficulty. The establishment of the two irrigation colonies—Mildura, in Victoria, and Renmark, in South Australia—was followed by a rapidly increasing output of Raisins and Currants, dried Apricots and Peaches, and other dried fruits of sucb an excellent quality that they went rapidly into consumption, demonstrating beyond all question the possibilities of the industry if conducted on sound principles. During the season 1894-95 the quantity of Raisins produced at Mildura was nearly 2,000,000 lbs., of wbich fully 50,000 were Muscatels, and the rate

of production has since been steadily increasing. In addition, the settlers annually produce considerable quantities of dried Apricots, Peaches, and Figs.

New South Wales is asserted to be even more favourably situated than any of the other colonies for the prosecution of the dried fruit industry, and for the building up of a large export trade in Raisins, dried Currants, Figs, and other staples peculiar to the isles of the Levant and the Grecian peninsula. Wherever the Spanish Muscatel has been introduced it has proved a very prolific bearer, and were it more generally cultivated, there is no reason why raisins equal to the finest obtained from Muscatel should not be produced. In the Muscatel district the raisins are said to bring the vignerons a profit of from £40 to £60 per acre, and, all the conditions being fairly equal, the Australian grown product should yield proportionately high monetary results. The main obstacle to the development of the dried fruit industry in New South Wales is want of knowledge and inexperience on the part of both vignerons and fruit-growers generally. The colonial Government, recognising the importance of encouraging the infant industry, has engaged the services of competent instructors to impart practical information respecting the various processes; but some time must necessarily elapse before any tangible results are obtained.

Here is the opportunity for those possessing the necessary experience, energy, and capital. Suitable areas for vine or fruit cultivation are readily procurable on the easiest terms under the improved land system in force in the colony, labour is moderately plentiful, and the cost of conveyance to the ports of shipment has been considerably lowered. How great are the capabilities of the colony for Raisin production may be inferred from the fact that in addition to the large quantity of Grapes required during the last season for the manufacture of 885,673 gallons of wine, and 7,149 gallons of brandy, 4,017 tons were raised for table use. Currants and Plums are largely grown in the cooler districts, as are Apples and Pears, while Peaches, Apricots, and Nectarines abound everywhere. Yet, with all these opportunities, New South Wales, like the other colonies, imports considerable quantities of dried, tinned, and other preserved fruits, which could be produced as good and as cheaply within its own boundaries.—*John Plummer Sydney, New South Wales.*

VEGETABLE CULTURE FOR EXHIBITION.

At a meeting of the Liverpool Horticultural Association, on Saturday last at the Puhlic Lihrary, Liverpool, under the presidency of Mr. Thomas White, Mr. J. Hathaway, superintendent of the Southport parks and gardens, read an admirable paper on "Vegetable Culture for Exhibition." As Mr. Hathaway has frequently proved at the foremost exhibitions in the north his thorough knowledge of this important section of gardening, considerable interest was evinced in the paper.

Potatos.—A recommendation was given for an open, well-drained plot. He also advised his hearers to manure early in the autumn, and plant medium sized sets from the middle to the end of March, the rows to be 2 ft. to 3 ft. apart, according to their strength. He also told them to scoop out all eyes except one or two strong ones previous to planting, and after the tops are above the soil to thin out if necessary.

Cauliflowers should be of quick growth throughout, not leaving the plants in the seed bed to become drawn. The ground should not be deficient in lime. Plant out in April and cut the flowers whilst the dew is on them, and if they are to be kept pull up the plant with roots attached, hang in a dark shed, and syringe, when the Cauliflowers will keep from ten to fourteen days.

Celery should be sown in the second week of February in shallow boxes, and again later, placing the boxes on a hard bottom, on which place 2 in. of spent mushroom manure, then 3 in. or 4 in. of good soil. In preparing the trenches take out the soil to the depth of 10 in., and place in 3 in. of manure, which should be dug in. Then add 4 in. of the soil taken from the surface of the trench. By this means a richer soil will be provided, in which the roots delight to roam. For early blanching exclude the light with brown paper, in preference to soil. To prevent the fly dust with soot on dewy mornings.

Leeks should be sown in January and February in pots or boxes. Plant them out about the middle of April in trenches similar to those recommended for Celery. Plant so that the leaves will be across the trench, which will give additional room and light.

Onions.—Prepare the ground in the autumn, giving plenty of manure. Sow in January, plant out firmly in March, allowing 15 in. from row to row, and 10 in. from plant to plant. Dress fortnightly with salt, soot, and nitrate of soda, applying the stimulants where the foliage is dry.

Carrots.—Select ground that has been heavily and deeply manured for a previous crop. Sow in the first week of March up to the second week in April. In some soils it may be advisable to make a large hole with a dibber the same shape as the Carrot, and sow the seeds in the richer soil with which the hole should be filled. Artificial manures should not be used, as they induce splitting. Parsnips and Beet are similar in their requirements to the Carrots.

Peas.—These should be allotted a rich deep friable soil. Sow in trenches 2 in. deep, Superphosphate of lime will prove a good dressing, which should be placed in a drill 3 in. from the Peas. When three or four pods are set take out the point of the growth. If an extension of the season is required, ruh off the early flowers and take out the point of the growth after the early flowers are set.

French Beans.—Sow these in the second week in March and from that time up to the third week in April, in rows 2 ft. apart, and with an abundance of room from Bean to Bean. After the fruit is set, pinch out the growing point and gather the Beans immediately they are ready.

A selection of twelve kinds for show are Potatos, Cauliflowers, Peas, Onions, Carrots, Tomatos, Celery, Leeks, Beet, Artichokes, Runner Beans, and Cucumbers. For six kinds those that are first named are the best. Cucumbers should not be included in a collection of less than eight varieties. A discussion followed, after which a cordial vote of thanks was tendered to Mr. Hathaway.

NOTICES OF BOOKS.

Popular Bulb Culture: A Handy Guide to the successful Culture of Bulbous Plants, both in the Open and Under Glass. Fully Illustrated. By W. D. Drury. London: L. Upcott Gill, 170, Strand, W.C., 1897. Price 1s.

This is an octavo volume of some 105 pages, including an index. The arrangement is entirely alphabetical from beginning to end, but Latin or English names are used as headings, according to which (in the idea of the writer) is the most common. This mixed arrangement is somewhat peculiar, being intended to help the amateur, but whether it will do so or not is open to question. The adoption of such a system is liable to further complication, as may be seen by reference to Hyacinth. Here the popular name is used as the heading, both in the text and in the index. Hyacinthus is placed immediately under Hyacinth in the text, and includes Hyacinthus orientalis with its varieties. Referring to the index we find that Hyacinthus includes H. candicans merely as a synonym of Galtonia candicans in the text, but omits H. princeps, which is also mentioned in the text. All Latin names in the index are printed in italics, so that names and synonyms are apparently of equal value there. The English names, on the contrary, are printed in Roman characters. The index will, however, help the amateur if he forgets one or other of the names.

In dealing with popular bulbs, a pretty wide margin is allowed for the term in order to include a variety of subjects that flower in spring In catalogues we are accustomed to Crocus, Gladiolus, Lily of the Valley, and Solomon's Seal, being included under the general heading of bulhs, or bulhous and tuberous plants, mainly on account of their association with certain uses, or because they may be used for forcing purposes. Popular bulbs, as a term, must be pretty elastic, however, when made to include Anemones, both spring-flowering species, and the autumn-flowering A. japonica. Anemone Hepatica is also included, but under the generic heading of Hepatica, the correct name being recorded as a synonym. We think it would have served the amateur equally well if it had been recorded under its proper name, and Hepatica given as a synonym, because the index would have served the purpose of finding it in the proper place in the text. The chief objection to its present arrangement is that the next writer of a popular book may use a different classification. We meet with a similar case where Tritoma is used as the heading, but in the text Kniphofia is given as the correct name. Imantophyllum is made to do duty for Clivia, even although it is admitted that botanists do not now recognise the former. Really we fail to see how amateurs should be prejudiced in favour of a long, unwieldy name like Imantophyllum, which is wrongly spelt if its Greek origin is to he followed, and botanically wrong to boot. Imitophyllum Aitoni (not Imantophyllum) was the term used in describing this plant in the *Botanical Magazine*, yet we prefer to follow Lindley, and call it Clivia nobilis. We do not mention these facts in a carping mood, but because we think it is as easy for an amateur to learn the correct name as a wrong one. Beginners will certainly hail the day when something like unanimity is adopted by different writers. In the case of Tigridia the artist must have been taking liberties with nature, when he (or she) sketched two out of three flowers as irregular, with four inner segments each.

Cultural details and directions for particular methods of treatment leave little room for fault finding, as far as they go, but they are necessarily limited in proportion with the size of the book, which we consider quite equal to its money value. The text is clean and distinctly printed in bold type, and the paper is also good. The illustrations are numerous and good for a book of this scope, with the exception of Tigridia above mentioned. The book is in paper covers, but those who have occasion to use it frequently would find it worthy of binding in cloth at least.

N. C. S. DEPUTATION TO THE CONTINENT.

Subjoined are extracts from the report of the National Chrysanthemum Society's deputation to the Continental Chrysanthemum shows, 1896:—The deputation consisted of Mr. Harman Payne, Mr. Thos. Bevan, and Mr. H. J. Jones. They left London on November 13th, and after visiting the Ghent show, a private collection near Brussels, the Paris show, and one at Amiens, they returned on the 21st, except Mr. Jones, who was compelled to leave three days earlier, owing to an engagement at Edinburgh.

It is the custom at Ghent for the exhibits to be arranged, and the judging done, the day previous to the opening of the show. The Casino, where it is held, is admirably suited for the purpose, being a lofty, well lighted hall of large extent, allowing the show to be seen in its entirety. Cut blooms are not so important a feature as at an English exhibition, the chief effect being obtained by the employment of large groups of pot plants. These are tastefully arranged, and are interspersed with some of the finest groups of Palms, Ferns, and foliage plants possible to imagine.

The ground plan consists of a series of winding paths between the groups, all of which are bordered with an edging of green turf, and are of sufficient width to allow visitors to circulate freely without placing the exhibits in jeopardy.

The schedule was somewhat less comprehensive than that for 1889, when the N.C.S. also sent a deputation to Ghent, and of which Mr. Payne was the only representative on the present occasion. The competition classes consisted of two divisions viz., (1) Chrysanthemums, and (2) ornamental and other plants. To facilitate the work of judging, the jury was divided into two sections, the composition of the first being—president, Mr. Harman Payne; secretary, M. Dale of Paris; members, Messrs. Jones, Bevan, Stepman, and Val Hal, having for their steward Mr. Charles Pynaert. This section took the first 40 classes all devoted to Chrysanthemums:—

Money prizes are not offered, but instead silver, silver-gilt, and gold medals of the society, and a few valuable works of art in bronze, etc. Amateurs and nurserymen compete in separate classes, and so far as Chrysanthemums are concerned the exhibits of the first named were a long way ahead of those contributed by the trade.

The distinguishing features of the Ghent show were the grand exhibits of M. Ernest Fierens and M. O. de Meulenaere, whose excellent catalogues were issued to each member of the jury for reference. Both in groups and in cut flowers, these two gentle-

men made a remarkably fine display. The plants in pots were freely grown standards without wires, bearing 15 to 40 blooms each, and were arranged so that the blooms were never crowded or crushed. That of M. Fierens for 100 plants was arranged with great taste, and occupied a superficial area of about 450 square feet.

For 50 plants in pots M. Fierens had a very fine exhibit of about 300 square feet, M. O.de Meulenaere had another, but less attractive, group of dwarf, well-flowered plants, each bearing good blooms. Among the best blooms in these collections we specially noticed Charles Davis, Good Gracious, Mrs. C. Harman Payne, W. H. Lincoln, Edwin Molyneux, William Seward, Val. d'Andorre, Etoile de Lyon, Col. W. B. Smith, Mdlle. Thérèse Rey, Bonnie Dundee, Hairy Wonder, Calvat's Australian Gold, Mme. Carnot, C. H. Curtis, &c.

Cut blooms showed a very marked improvement since our last visit seven years ago. Local exhibits came from M. Fierens and M. de Meulenaere, while exhibitors from a distance and foreigners were represented by Messrs. Calvat, de Regdellet, Jones, and Cannell The N.C.S., for the first time in its existence, played the part of an exhibitor, and carried off the highest award in the power of the jury to grant— "A Silver-Gilt Medal *encadrée*." The blooms were collected by Mr. Bevan, to whom the best thanks of the N.C.S. are due; and were grown by the following members of the Society:—Messrs. J. Brookes, E. C. Jukes, Sandford, Turk, Martin, Skeggs, Bevan, and A. H. Page. They comprised large-flowered and Japanese Anemones, pompons, and a collection of Japanese; one especially, a Mme. Carnot grown by Mr. Page, called forth a special mention by the jury. The exhibit was staged in glass bottles on a table, and interspersed with little pots of Adiantum and other Ferns, and formed an attractive feature of the show. A photograph of the exhibit was taken by order of the Ghent Society, and a copy was presented to each member of the N.C.S. deputation.

It was decided to spend a day in the neighbourhood of Brussels, and to visit the residence of Mr. de Wolfs, at Boitsfort. In that gentleman's absence we were courteously received by his gardener, and allowed to view the four curvilinear houses in which his collection was housed. There were about 2,000 well-flowered, disbudded specimens, carrying some excellent blooms. The varieties, mostly well-known exhibition kinds, were such as might be seen at the residence of any suburban English enthusiast.

We returned to Brussels to catch the express to Paris and arrived shortly before midnight. There, as at Ghent, the exhibits are all got together the day before, or else very early the same morning, but the judging was somewhat differently managed, being performed on the morning of the opening of the show.

The jury was divided into six sections, the first three being for Chrysanthemums and the remainder for miscellaneous exhibits of which there were a goodly number. Again the N.C.S. deputation formed a part of the jury, Mr. Harman Payne being appointed president of the second section.

The show was held in the Palais de l'Industrie, on the upper floor of which was a floor space of vast extent, but, unfortunately for the show as a whole, the hall was partitioned off into fourteen separate rooms. From an artistic point of view it was impossible for the Paris society to obtain anything like the fine general effect that we saw at Ghent, although many of the rooms were quite interesting exhibitions in themsevles.

It is not the custom to award prizes in cash. Upwards of 150 prizes were allotted to the winning exhibits and these consisted of medals ranging from bronze to gold, and special prizes by the President of the Republic and the Minister of Agriculture. M. Felix Faure personally inspected the show on the first and second days, showing that horticulture receives patronage in France from those in high places.

The attendance of visitors was surprising, for on the afternoon of the first day the crowd round the entrance extended half way across the road, and circulation throughout the show was well nigh impossible. Much the same thing occurred during the afternoons and evenings of the successive days.

Groups were largely shown, the exhibits of several competitors being sometimes amalgamated, and of these there were twenty-five in all, some of great extent. The disposition of these groups was mostly square or oblong. The plants were all placed inside a wooden border raised a few inches from the level of the floor. The pots were hidden by being sunk in sawdust and the top covered with leaf-mould or moss. Dwarf plants varying from 2 ft. to 3 ft. in height appeared to find the greatest favour, and the blooms were in general of fair medium size and well finished. Most of the varieties were Japanese, of American, French, and Italian origin, English kinds being by far in the minority.

Cut blooms at Paris were numerous, but there was a want of uniformity in the quality, and in the staging. Some exhibitors used show boards, others glass bottles, while others staged their blooms on a flat slope, without the aid of cups and tubes, thus giving the blooms a flat and uncharacteristic appearance. To the English eye it is curious to judge a class for, say fifty varieties, and on counting them up to find eighty or ninety blooms; but this appears to be allowed for effect if the competitor complies with the required number, the remainder, we were told, not being taken into account in the judging.

In point of size there were some really fine flowers, but the subject of staging, in our opinion, requires attention. Messrs. de Vilmorin exhibited cut blooms with long stems and foliage, but the American plan of staging them in tall ornamental vases found no imitators among the French exhibitors. We are of opinion that where Chrysanthemums are shown for the purpose of displaying the individual perfection of the flowers no better method of setting them up has yet been tried than that of the old show board of proper dimensions with suitable cups and tubes.

At this point Mr. Jones left, and the remaining members of the deputation proceeded to Amiens. The show there was purely a provincial one, and its chief characteristics were merely a reproduction, on a small scale, of those at the Paris show. In conclusion, we can safely affirm that there are now many capable exponents on the Continent of the art of Chrysanthemum growing for exhibition, and that they have reached a high degree of perfection. Subordinate matters, time alone will ensure.

CULTURE OF TUBEROUS BEGONIAS.

There has been so much said and written on this subject, that I presume most of your readers will think it worn quite threadbare; but knowing, at least, one instance in which for some few years a striking success has been achieved under a departure from the methods of culture generally followed, it may interest your readers to have the *modus operandi* briefly described. I may add that a better display of these popular plants in the open air is inconceivable than my friend has in the height of the season. They are planted in comparatively large beds, which, as soon as they are cleared in the autumn, have a good dressing of well-decayed stable manure spread over them, and turned in roughly, leaving the soil as rough as possible through the winter that it may be acted upon by frost and wind, till planting time. They are then raked down, choosing favourable weather so as to secure a fine tilth. Planting has been done as early as the last week in March, in mild and dry weather, with the most satisfactory results; but the first two weeks in April is most frequently the time chosen. About a fortnight or three weeks previous to planting the tubers are overhauled, and any which are quite dormant are placed in shallow boxes, on an inch of cocoanut fibre, with which the crowns are slightly covered. They are then placed in a gentle heat, and syringed night and morning till they begin to start. They are then hardened off, and planted out with the rest, at a depth of from one and a half to two inches below the surface. The summer culture is the same as is generally followed, and the usual treatment is given in the matter of lifting and storing the tubers. The advantages of this system are the limited time and space occupied under glass. The plants come along steadily and naturally, giving little or no trouble till dry weather sets in, and they make better and stronger growth than those treated in the more usual fashion.—*W. B. G.*

Locusts are taking their toll from South African farmers. The Bathurst and Pendle districts are suffering severely from large swarms.

THE FLORA OF THE ALPS.

The recent issue of the Linnean Society's "Transactions" (vol. v., pp. 119-227) contains a valuable contribution to plant-geography in general and alpine botany in particular. In a lecture at the Royal Geographical Society in 1879, on the origin of the flora of the European Alps, the late John Ball told how a passion for mountain scenery had led him from youth onwards to pass much of his time in the Alps, and to visit, among other mountain districts, the Carpathians, the Pyrenees, the mountains of Southern Spain, and the hills of our own islands. "It was impossible to collect the plants of all these districts without being struck at once by the resemblances and the contrasts presented by their respective floras, and without being led to endeavour to account for them."

Selecting the southern side of the main chain of the Alps as having the richest and most varied flora, he divided it into fifty districts, and set himself to collect materials from published works and herbaria, but chiefly from his own repeated visits For nearly thirty years he worked at the collection and tabulation of the plants of these fifty districts, and their distribution on other European mountains. Unfortunately, at his death, in 1889, the work was still incomplete, and for his conclusions from all this mass of material, we are entirely dependent on his lecture at the Geographical Society of ten years before. Mr. Thistleton Dyer undertook the editing of the table, which occupies one hundred pages of the Linnean Society's "Transactions," and will be a valuable basis for further work.

Without doubt, facts of the highest interest lie buried in its columns, but it will need a skilled botanist, and one who has studied Alpine flora well, to bring them to light. If the entries are treated as mere symbols, misleading or false conclusions will arise. In working in this way with all the plants of a flora, critical and doubtful species will, unless great care be taken, exercise an important influence on statistical results. A safer and simpler method of studying the relations of the local floras of large areas is the one recommended by Mr. C. B. Clarke in an address to the Linnean Society, to which we referred in "Natural Science" (vol. viii., p. 366, June, 1896). It is the selection of a limited number of common and unmistakeable plants, and a careful elaboration of their distribution and habitat.

According to Mr. Ball, the Alps, as a whole, contain 2,010 species of flowering plants, representing 523 genera, and 96 natural orders. Compared with the floras of other regions, a large proportion of the species, more than two-fifths are found in all parts of temperate Europe, the majority extending to Siberia, and many even to North America. "These are clearly plants that have a considerable power of adapting themselves to varied physical conditions, and whose vigorous organisation has made them victorious in the struggle for existence." Of these, however, not one in twelve (actually only 65 in 792) can be reckoned as plants of the higher mountain region; most of them are common enough in the lower zone, but grow equally well in the woods and heaths and waste grounds of Middle Europe. Subtracting also some Mediterranean stragglers, we have a special Alpine flora of about 1,150 species. Of these "more than one-seventh are endemic, rather more than half are common to the Alps and Pyrenees, just two-thirds are common to the Alps and Carpathians, while rather more than one-sixth are common to the Alps and the north of Europe and Asia."

Compared with other mountain regions not immediately adjoining, the closest affinity is found to be with the mountains of Northern Asia, notwithstanding the vast interval of space and the great difference in climate. Of every twelve Alpine species, three are to be found in the Altai, but only two in the Caucasus, a mountain mass with a rich flora, and a much more favourable climate. Finally, a comparison between the Alpine and Arctic floras shows that only 17 per cent. of the species of the former are found in the latter, in strong contrast to the 25 per cent., which are common to the Alps and the mountains of Northern Asia.

The conclusion to which Mr. Ball was therefore inclined, is that the Alpine flora owes but little to a migration from the North. "What," he says, "should we have to say of the remaining 83 per cent., including at least four generic types peculiar to the Alps, and a very large number not found in the Arctic

regions?" "Is it credible that in the short interval since the close of the Glacial period, hundreds of very distinct species and several genera have been developed in the Alps, and—what is no less hard to conceive—that several of these non-Arctic species should still more recently have been distributed, at wide intervals, throughout a discontinuous mountain chain some 1,500 miles in length, from the Pyrenees to the Eastern Carpathians?" Many of these non-Arctic types are, moreover, represented in the mountains of distant regions, not by the same but by allied species, which must have had a common ancestor. Wulfenia, for instance, has one species in the Alps, another in Northern Syria. while a third allied species has its home in the Himalaya.

The origin of the flora of the European Alps remains an unsolved problem; but towards its solution Mr. Ball's table will, in the right hands, afford considerable help.—*Natural Science.*

GARDENING MISCELLANY.

RHODODENDRON GRANDE.

The corner of the temperate house at Kew which is devoted to the Himalayan Rhododendrons is just now brightened with the noble trusses of large white flowers of Rhododendron grande. These flowers are between 2 in. and 3 in. in depth, and from 1½ in. to 2 in. in width. The leaves are ovate in shape, and run from 6 in. to 10 in. in length. On the Kew plant they have a peculiar drooping habit that is decidedly singular. Undoubtedly, this Rhododendron is one of the noblest of its kind, for even in this country it is more or less arborescent in character, while in its native home, Sikhim, it attains the height of 30 ft.

HELICONIA ILLUSTRIS RUBRI-ACAULIS.

One of the most conspicuous features of the stove at Kew, is certainly a well-grown plant of this Heliconia, which received a F.C.C. at the Temple Show in 1894. The Kew specimen is fully 3 ft. in height. The leaves are elliptic in shape, green, and transversely striped and margined on their upper surfaces with bright rosy-pink. The under surface is red, the veins and midribs standing out by reason of their deeper hue. The sheathing petioles are of a deep carmine shade. The whole plant, indeed, is exceedingly beautiful; and as it is not at all difficult to grow, only requires to be better known to be widely cultivated.

VEITCH'S CHINESE PRIMULAS.

A splendid strain of well grown Chinese Primulas belonging to Messrs. J. Veitch & Sons, Ltd., came under our notice the other week. Four of the varieties at least were notable for their great size, the individual pips or blooms measuring 2½ in. in diameter. Two blue varieties were notable for their rich dark blue colour, but the smaller of the two had a bronzy-yellow eye which is quite an uncommon feature. A rich dark purple variety was also very good, and the pink sorts were charming in the delicacy and clearness of their colouring. There were three or four in this group ranging from a delicate blush to a rich rosy-pink. A salmon coloured variety was notable for the depth of its colour. The darkest was of a brilliant vermillion, and as is usually the case with dark flowers, was the smallest of the blooms. It had its counterpart exactly in a semi-double form. There were also semi-double purple, blush, and pink varieties, all very useful and beautiful in their way. The substance of the flowers was no less remarkable than their size, enabling them to remain fresh for many days even in a cut state, if not exposed to a drying atmosphere.

COCCOCYPSELUM REPENS.

This plant is more curious than pretty, although it is not entirely unornamental. As the name indicates, it is of creeping habit. The leaves are broadly ovate in shape, rather succulent in texture, and are covered, like the stems, with long, somewhat stiff violet-coloured hairs. The flowers are small, blue, produced in the axils of the leaves, and nearly sessile at first. They lengthen considerably, however, when the fruit is formed. It is a native of the West Indies. We noticed it quite recently growing with Messrs. John Laing & Sons, Forest Hill.

THUNBERGIA LAURIFOLIA.

Curiously enough, a large number of the Acanthad family flowers with us during the winter, and the more beautiful and dwarfer kinds are grown in pots for the decoration of the stove, greenhouse, and conservatory during winter. That under notice, however, is a tall stove climber, but reaches its flowering stage during the winter months, and from that point of view is valuable, where a due amount of headroom can be accorded it. The leaves are narrowly ovate, entire, and bear some resemblance to those of Laurus nobilis as the name would imply. The large, light blue flowers are irregular, with an oblique 5-lobed lamina and produced in axillary clusters along the upper portion of the long, slender shoots. In order to reach a flowering stage, the plant must be allowed to run up to a considerable height, trained to pillars and rafters, after which the shoots should be left free, so that when they come into bloom they may be seen to best advantage after the manner of a Passionflower, or Tacsonia. A coloured plate of the species is given in the September number of the *Bullettino della R. Societa Toscana di Orticultura*, accompanied by historical and descriptive details.

SOLANUM GIGANTEUM.

This is an arborescent species, a native of the East Indies, from whence it was introduced in 1792. Owing to its great size, the space it would occupy, and that it requires stove or greenhouse temperature, prevent it from being grown to any extent in this country as a flowering plant, though it might profitably be grown as a bedding plant for the subtropical garden, judging from the rapidity of its growth, as stated in the *Tijdschrift voor Tuinbouw*. The plant in its native country varies from 10 ft. to 25 ft. in height, but the journal just mentioned states that it grows to tree size in two years. An illustration in No. 17, p. 170, shows a plant about 15 ft. or 16 ft. in height. The leaves are about 8 in. long and deeply lobed, almost resembling those of some species of Oak. The flowers are blue, under an inch in diameter, and produced in dense cymes terminating the branches.

THE OTAHEITE ORANGE.

This is the popular name applied to Citrus japonica, for which we are indebted to China and Japan. It is very suitable for culture in small pots, as it is naturally of dwarf and compact habit. While it revels in a high temperature during the summer months, it will stand a deal of cold, even frost, during the winter. It is thus of considerable value for furnishing in conservatories in which the temperature is apt to drop rather low during cold nights. The bright orange yellow fruits hang on for a long time and are very ornamental. They have the additional recommendation of being very pleasant to eat if gathered soon after they are ripe. If not taken then, they lose their juice and become somewhat insipid. They possess, at their best, a pleasant acidity and an unmistakable aromatic flavour. Messrs. John Laing & Sons, of Forest Hill, have a fine stock of shapely and symmetrical plants of this charming miniature orange.

APHELANDRA FASCINATOR.

A small specimen of this Aphelandra in the stove at Kew, well exemplifies the decorative value of some of the members of this genus, that under notice included. The leaves are produced in large, dense, terminal spikes. The flowers are very large, and bright vermillion scarlet in colour. The leaves, also, are attractive in no small degree. They are ovate to ovate-elliptic in shape, and acuminate. The under surface is a rich purple violet, the upper a lively green banded in the neighbourhood of the midrib and the principal veins with broad bands of silvery white. Such a plant is well worth growing in quantities for winter flowering. In small pots it is especially elegant and very effective. It deserves to be extensively grown.

BAUHINIA FERRUGINEA.

Many of the Bauhinias make very pretty stove climbers, their foliage being so different from that of the ordinary run of plants devoted to the furnishing of walls, pillars, and roofs. A small specimen of B. ferruginea growing in a pot in the stove at Kew is very distinct. The characteristic lobing of the leaves of the members of this genus is here carried to a great depth. The leaves usually run to about four inches in length, by as many in width, when the plant is in a young state, although they doubtless are bigger upon the more mature plants. The great point about the leaves, however, is their curious colour. The under surfaces exhibit a shade as of rusty iron which shines through the green of the upper sides when the sun is shining, giving a peculiar tint of bronzy green.

A LATE FLOWERING TREE.

The Mulberry is very late in coming into leaf, and still later in coming into blossom. For this tardiness it makes amends by being amongst the first of trees to ripen its fruit. The latter, although appearing very complex, is really very simple. Nothing is wasted. The fruit itself is very small, and surrounded by a perianth of four leaves, green at first, but becoming succulent, juicy, red, and ultimately black. These little fruits are crowded in a head like a Blackberry, which is the outcome of a single flower.

CALAMUS FISSUS.

The great objection with regard to the Calamuses, and one that at least cannot be said to lack point, is their spiny nature. It is impossible to handle them without danger to the skin of the operator. The above species, however, is beautiful enough to make up for a certain amount of personal discomfort. It has its full complement of spines, especially upon the petioles, where they are black in colour and very stout. The pinnate fronds have very narrow pinnae, and thus present a most elegant appearance. When they first make their appearance they are bright cinnamon in colour, but ultimately change to a deep green. Like the rest of its congeners, C. fissus will grow well in a compost of equal parts of loam and leaf soil with sand. Plenty of water throughout the summer months is an absolute necessity, and a high temperature all through the year is much to its liking. We recently saw some very shapely specimens at the establishment of Messrs. John Laing & Sons, at Forest Hill.

PRUNUS NANA.

For conservatory decoration in the early part of the year Prunus nana is a little gem. It forces fairly well and blooms very freely. True, the habit of the plant may be too straggling to please all, but this defect is more than atoned for by the good points. The light rosy-pink of the flowers is very bright and pleasing. This Prunus is well utilised at Kew, and at the time of writing a batch of plants in full flower is one of the most conspicuous features of greenhouse No. 4.

FICUS CANONI.

We have not too many stove plants with foliage of the colour exhibited by this Ficus, which is similar to that seen in the Copper Beach. Hence it is of value in a stove if only for the sake of variety. The leaves are ovate-elliptic in shape, and are covered with tufts of stiff hairs. The plant is inclined to get leggy as it gets older, and therefore it is advisable to propagate it pretty frequently. Well grown specimens in 48 or 32 sized pots are valuable material, and are certainly more effective than one or two of the Acalyphas that often find a place in private gardens.

CINERARIA KEWENSIS.

The garden Cineraria has not only been much talked about of late, but it has been the subject of numerous experiments by the hybridiser and cross-breeder. The results of one of these experiments is now to be seen in the greenhouse at Kew. A cross between C. cruenta and the garden Cineraria has yielded some highly decorative plants. They are dwarfer and sturdier in habit than C. cruenta, and the dwarfing influence of the garden Cineraria is very evident in this direction. The inflorescence, on the other hand, is more compact, and there is no doubt that the flowers themselves are larger and finer. The multiplication of colours is not surprising, when we consider the wondrous range of hue exhibited by the garden Cineraria. A word of comment should also be made upon the evident health and vigour of the plants. They are accommodated in 8 inch pots, and are sturdy specimens throughout.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Grubs Under Old Leaves.—*James Dymock* : The dark coloured grubs you sent us are known as Leather Jackets, and are the larvae of Daddy Long Legs (Tipula oleracea). The grubs are very destructive to the roots of grass, and to various garden subjects including Carnations. They are not very particular as to what they eat in the way of vegetation of any kind, and prove a veritable pest, more particularly in damp situations, where they often abound in hundreds or thousands, according to the extent of ground infested. You cannot do better than destroy all of them you can find, and save all further bother with them. The yellow grubs you sent along with the above were wireworms. They also should be destroyed, as their destructiveness is well known. Those you sent were about full grown. They feed on the roots of vegetation for three years. The cold weather is making them dormant or inactive, but as soon as the temperature rises, they will commence feeding again.

Caterpillars on Roses.—*James Dymock* : The slate-coloured grubs you sent have nothing to do with the mutilation of the leaves of your Roses in summer; they cannot leave the ground. The caterpillars that infest Roses, are very numerous in kind; but most of them may be destroyed by syringing or dusting with some of the numerous insecticides in use. Before the Roses are in bloom, or at any time during the season, when caterpillars are present, you may syringe the bushes with a decoction of White Hellebore powder. This is a poisonous drug, and should be used carefully. To make a decoction, pour two gallons of boiling water over one ounce of the drug; stir the mixture, then cover the vessel with a slate or board, and leave it to cool. Add an ounce of glue that has previously been dissolved, then pour in sufficient water to make the mixture up to three gallons. This insecticide kills by contact with the insects or by being eaten. Persian insect powder, Dalmatian insect powder, and Buhach are made from the powdered flower beads of several species of Pyrethrum, and may be used in the same way as White Hellebore. They are not poisonous except to insects. A simpler way is to syringe the bushes and then dust them with the powder. Be sure you get the powder good.

Derivation of Orchid.—*J. M.* : This word and all other compounds in which the same etymological root occurs are derived from the Greek *orchis*, in allusion to the shape of the root as found in Orchis maculata, O. mascula and O. latifolia. Orchid is the root of the word as shown in the genitive, dative, or accusative case, as for instance *orchis* becomes *orchidis*, *orchidi* and *orchidem* in the three cases mentioned.

Origin of the old Primula sinensis alba plena.—*J. M.* would feel greatly indebted to anyone who could tell him where and when this popular old variety originated, or by whom it was raised. An idea is prevalent that its origin is lost in obscurity.

Cubic feet of Air in a house.—*J. W., Ealing* : In the case of a lean-to house 34 ft. long, 10 ft. high at the back, and 12 ft. wide, take half the height (5 ft.) and multiply 34 with it. This will give 170, which multiplied by 12 will give 2,040 cubic feet. In like manner a house 36 ft. long, by 10 ft. high at the back, and 12 ft. wide will give 2,160 cubic feet. This will be correct provided the roof slopes gradually from the top to the ground line. If, on the contrary, the houses have eaves standing at some height from the ground, this would alter the figures to some extent, and it would be necessary to measure their height before a correct calculation could be made. If you want this, measure the height of the houses from the ground to the eaves (inside measurement), and send us the particulars.

Size for Orange Boxes.—*Omega* : It is difficult or impossible to say how much larger the new boxes should be than the old ones, without knowing the size of the latter, and the size, age, and vigour of the trees. For young trees of vigorous growth we should give a greater shift than in the case of old trees that are not desired to be much larger. It is a point that can best be settled by the discretion of the gardener on the spot. If the trees are about as large as you have convenience for, we should reduce the balls somewhat and put the trees in the same size of tub. Supposing the trees are of moderate size and healthy you may allow 1½ in. to 3 in, of space all round the ball, in making the new boxes.

Square perches in a piece of ground.—*Omega* : A piece of ground measuring 54 ft. by 42 ft. would contain $8\frac{40}{121}$ perches.

Scions for grafting.—*Omega* : If you mean the scions of Apples, Pears, or Vines, then take them off and lay them in by the heels at once. Scions of Oranges and other evergreen trees should not be taken off till wanted.

Names of Plants.—*J. L.* : 1, Odontoglossum luteo-purpureum var.; 2, Odontoglossum luteo-purpureum sceptrum; 3, Oncidium Cheirophorum.—*J. C.* : 1, Doodia aspera; 2, Blechnum occidentale; 3, Lomaria ciliata; 4, Polypodium lingua; 5, Davallia elegans. —*W. W.* : 1, Eupatorium riparium, 2, Polypodium subauriculatum; 3, Pelargonium denticulatum; 4, Pelargonium Radula; 5, Oxalis floribunda; 6, Oxalis valdiviensis.—*A. Henderson* : 1, Rivina laevis; 2, Selaginella Martensi robusta; 3, Dracaena rubra; 4, Aralia Veitchi.

Address of Correspondent.—*J. Parnell* : The name you refer to as appearing in this column some weeks ago was J. Elson, and not the man you intend. We do not know the address of Mr. J. Elsom, whose name appears in the *Kew Guild*, but without any fuller address than Australia. Evidently nobody in this country knows his address, beyond the fact that he went to Australia.

Cockroaches in a stove.—*J. A.* : Searching for and killing these pests when found must be a mere labour of love, as it can neither pay nor prove effective. They quickly disappear when a light is turned upon them at night, so that we fear, judging by experience, they will breed as fast as you kill them. Several methods of poisoning them and trapping them are adopted. A very effective method is to lay bits of phosphorus paste on crocks or pieces of tile laid about in their haunts just before leaving off work, and then collect them in the morning to put in a safe place for the day. By eating this they will die by hundreds. There must be nothing in the house to which the paste might be carried by the cockroaches, if that is used as food for animals of any kind. Pyrethrum powder or Buhach is not poisonous, and may be dusted about in every crack and crevice of the house where the cockroaches can take shelter. Clear away loose rubbish of all kinds about the house, and fill up all cracks and crevices with cement or mortar. Both phosphorus paste and Buhach powder, we believe, can be obtained from the local chemist. If you explain what the powder is wanted for you might be able to get it under another name, for it is made in different countries, and gets many names. Your other request we shall remember when opportunity serves.

Catillac Pear not ripening.—*Pyrus* : Stewing Pears never ripen, and this is one of them. If you keep the fruits long enough they will either decay and become rotten, or they will shrivel up according as you keep them in a moist or dry atmosphere. They never become soft and eatable like Williams' Bon Chrétien or Louise Bonne, of Jersey. They may be stewed or otherwise cooked, however, soon after they are gathered, and during the time they keep sound and in good condition. Look up your lists and you will see that Catillac is described as a stewing Pear.

Communications received.—W. Swan.—W. B. G. —Croton.—Mum.—E. Webb & Sons.—W. Norman Brown. — C. Darmer. — Sutton & Sons. — A. J.—C. W.—H. M. 'L.—S. H.—W. G.—B. S.— X.—F. Ames.—W. Johnson.—Meg.—Mum.—R. O. — Scottie.—T. Benham.

TRADE CATALOGUES RECEIVED.

Wm. C. G. Ludford, F.R.H.S., Fern Lee, Four Oaks, Sutton Coldfield, near Birmingham.—List of Rare, Curious, and Beautiful Cacti and Succulent Plants.

The Leeds Orchid Company, Roundhay, Leeds.—Catalogue of Orchids, and Copies of Testimonials.

Thos. S. Ware, Hale Farm Nurseries, Tottenham, London.—Catalogue of Chrysanthemums, Lilies, Calochortus, Begonias, &c.; also Catalogue of Vegetable and Flower Seeds.

John Downie, 144, Princes Street, Edinburgh.—Begonias and new dwarf Cannas.

Francis G. E. Bonnett, Heathfield, Sussex, England.—List of Choice Garden Seeds, and Garden Requisites.

Dobbie & Co., Rothesay.—Dobbie's Farm-Seed List, and Farmers' Guide.

B. R. Davis, Yoevil Nurseries, Yoevil, Somerset, —B. R. Davis's Gold Medal Begonias.

Edward Webb & Sons, Wordsley, Stourbridge.—Spring Catalogue.

Fotheringham & King, Corn Exchange, Dumfries. —Seed List.

John Turner, North Street, Wetherby, Yorks.—Catalogue of Vegetable, Flower and Farm Seeds.

Charles Walker, F.R.H.S., 931, Fishergate, Preston.—Vegetable and Flower Seeds, and Horticultural Sundries.

COVENT GARDEN MARKET.

January 29th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples..... per bushel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Coh Nuts per 100 lbs	50 0	
Grapes, per lb	1 0	1 9
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	
Seakale...per basket		
Small salading, punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies. 12 blms.	3 0	6 0
Asparagus Fern, bun.	1 6	3 0
Azalea, doz. sprays...	0 6	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 6	3 0
Chrysanthemums, doz. blooms	1 0	4 0
Chrysanthemums, doz. bunches.	3 0	6 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	4 0	8 0
Geranium, scarlet, doz. bunches	6 0	9 0
Hyacinths (Roman) doz. sprays	0 6	1 0
Lilium longiflorum per doz.	4 0	8 0
Lilac, White (French) per bunch.	3 0	5 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Mimosa, per bunch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	1 0	1 6
" Tea, white, doz.	1 0	2 0
" Niels	6 0	9 0
" Safrano	1 0	2 0
" (English),		
Red Roses, doz.....	1 0	1 6
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	4 0	7 0
Tuberoses, doz. blooms	1 0	1 6
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz blms.	4 0	9 0
Violets (French) per doz. bunches.	1 0	1 6
Violets (English) per doz. bunches.	1 6	2 6
Violets (Parma) per bunch.	3 0	4 0
Violets Czar, large, per bunch.	2 0	3 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Azalea, per plant.....	2 0	3 6
Chrysanthemums, per doz.	6 0	9 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, In var. doz	6 0	24 0
Erica Hyemalis, per doz.	12 0	15 0
Erica, per doz.	9 0	12 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	10 0	15 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	9 0	18 0
Solanums, per doz.	9 0	12 0
Tulips, doz. pots.....	6 0	9 0

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As its name implies, this fine Marrow Pea is of the greatest service as a "Last-of-All" crop. It was well-grown last season in the Pea-trials conducted by the Royal Horticultural Society, and the only late Pea considered worthy of their Award. Height, 2½ feet.
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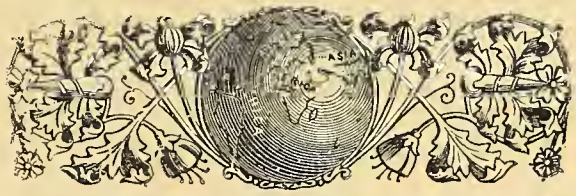

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, FEBRUARY 6th, 1897.

ROYAL GARDENERS' ORPHAN FUND.—The usual voting paper sent out to the subscribers of this charity takes the form this year simply of a notice announcing that "the Annual General Meeting is to be held at Anderton's Hotel, Fleet Street, London, E.C., on the 19th inst., for the purpose of receiving the report of the Committee and the accounts for the past year; to appoint officers for the ensuing year, and to elect by resolution (without ballot) thirteen children to the benefit of the Fund." This means that the committee of the Fund have resolved to place the whole of the thirteen applicants, whose cases have been considered and placed on the list supplied to subscribers, on the Fund without the trouble or expense of an election. We presume that the committee find themselves in a position to contribute the customary support to these thirteen children, and consequently feel justified in incurring the further liability. The Royal Gardeners' Orphan Fund has passed through or completed the first decade of its existence, having been instituted in the year of Her Majesty's Jubilee. It is therefore a timely and fitting act to commemorate the Queen's Diamond or Greater Jubilee by placing

these thirteen orphans on the Fund by the simple resolution of the subscribers.

There are just thirteen applicants for relief on the notice paper distributed last week—one being a third application and all the rest a first application. Whether a greater number has applied, does not appear; but in any case, we presume the most needy, and therefore deserving, applicants have had the preference. In twelve out of the thirteen cases scheduled, the father, a gardener, has died leaving no provision for his family, and probably the other case is similarly situated, though not actually stated. The mother of the child lives with her own mother, a widow and an invalid aged 77, so that there can be no doubt of the necessity of assistance in this, as in all the other cases. The need for such an institution, or charity as the Gardeners' Orphan Fund, would be a pressing necessity, if only thirteen orphans annually required help; but it really implies that thirteen families have been reduced to want through the death of the bread-winner. The total number of children in these thirteen families left destitute is 55, or slightly over an average of four to each, and this does not take the mothers into account, though many of them must of a necessity be prevented from going out in order to earn a competence. True, some of the older children are earning something for themselves, but unless living at home, it will seldom be within their power to render much assistance to the bereaved home. There is all the more need, therefore, that institutions should be supported by the many for the urgent needs of the few in the time of their helplessness.

French Beans for Forcing.—Amongst trials proposed to be conducted by the Royal Horticultural Society at Chiswick this year, we note that French Beans for forcing holds a place. We hope that the appeal for seeds has received an ample response, for this culture is becoming more and more important to gardeners who have to conduct them. For many years past a few varieties have been held up to the public as the very best for forcing purposes, including Ne Plus Ultra and Osborn's Early Forcing, some cultivators preferring the one, and some the other. Both are dwarf and prolific, and in that respect suitable for pot culture. It may be the case, however, that some of the newer varieties recommended to the public are equally, if not more, prolific under the same conditions. One of the greatest difficulties with which gardeners have to contend in the winter is the lack of sunshine; and cultures in the neighbourhood of large and smoky towns are particularly risky. The advent of a few days of fog in the early part of the year means the destruction of the plants in the neighbourhood of London; but fog alone in the absence of smoke is highly prejudicial to thin-leaved plants like French Beans, even in rural districts. The mere absence of sunlight has a disastrous effect when of any duration.

There may be varieties better adapted for forcing than those highly recommended, by reason of greater firmness of foliage, or greater vitality that would enable them to come through the ordeal of a trying winter. Until recently the comparatively mild nature of the winter might be held up as favourable to the gardener's interest; and while it may be admitted that such was the case in some respects, we are aware that such mild weather was attended by a long-continued lack of sunshine. The primary necessities of vegetation, particularly in an actively growing condition, are light, heat, air, and moisture. Under artificial conditions all these may be applied in unstinted measure, with the single exception of light, the absence of which is sufficient to nullify the advantages of all the rest. Electric light may to a certain extent supply the deficiency of sunlight in the near or distant future; but at present there is scant activity in the making of experiments in that direction, at least in this country. It nevertheless remains for us to make ample trials of the varieties of Dwarf or French Beans already in existence, in order to determine which are the most suitable for forcing under the prevailing influences of our foggy and misty winter atmosphere. The raising of new varieties with better staying power should also be encouraged. In the meantime let us hope that the Chiswick trials of this class of vegetables will afford some useful hints that may be turned to practical account by gardeners in succeeding years. Chiswick is so closely situated to London that the trials are placed under as unfavourable conditions as most gardeners in the kingdom would experience in the matter of light, so that the test should be a very fair one to all concerned. The question of different soils, under pot culture, is to a great extent eliminated.

Henry L. Sunderbruch, of Cincinati, Ohio, U.S.A., after whom the well-known Chrysanthemum H. L. Sunderbruch is named, was carried off on January 6th by Bright's disease.

Nymphaea zanzibarensis is very popular in many of the States. Seeds are sown early in the year, and the plants placed in the open ponds in May. It is calculated that well-grown plants should bloom in 120 days from the date at which the seed was sown.

Gunpowder as Manure.—From Texas comes the story of a man who got hold of 5 tons of gunpowder which had been spoilt by wet and was about to be thrown away, and, knowing that it was rich in potash, applied it as manure to four acres of Cabbage. It is said that record crops were the result, heads of 15 lbs. weight having been cut. Melons treated with this forcible manure were similarly benefited. Truly this is one way whereby the arts of war are made to benefit the products of peace.

A Presentation of Sixty Vines (one for each year of the Queen's reign) has been arranged by an anonymous donor to be made to sixty of the cottage residents of Hextable, Swanley, Kent, as a mode of celebrating the Queen's Diamond Jubilee. The donor has received a letter from the private secretary to the Prince of Wales informing him that His Royal Highness desires to thank the donor for informing him of the manner in which it is proposed to celebrate the sixtieth anniversary of the Queen's reign in the donor's parish. H.R.H. thinks the idea an excellent one, and thinks it cannot fail to be appreciated by the inhabitants.

West of England Chrysanthemum Society.—The annual meeting of this well-known society came off at 10, Seaton Terrace, Plymouth, on January 20th, the chair being taken by Mr. G. Soltan-Symons. Mr. Wilson, the secretary, brought forward the report, which stated that the last year had been a record one for them. From a financial point of view they had nothing to complain of. The balance-sheet presented by the treasurer, Mr. Groombridge, showed a total income of £272 8s. 2d., and an expenditure of £207 18s. 10d., thus leaving a balance in hand of £64 9s. 4d., as against 19s. 2d. of last year. They also had a deposit at the Naval Bank of £29. On moving the adoption of the report and balance sheet the chairman congratulated the members on the continued success of the society. The exhibits at their last show had shown a slight falling off with regard to members, but the quality of the blooms was superior to anything that had previously been attained in the west of England. Mr. Godfrey, of Exmouth, who was a grower of great experience, told him that he had attended many exhibitions, but had seen nothing that surpassed the Plymouth Show. Amongst other business that followed was the election of a long list of vice-presidents. Mr. W. Damarell presided at the dinner which followed. This was served in the Globe Hotel.

The Union Yew is a patriarchal tree which has several of its branches growing together. It is one of an avenue of old Yews near the Vartry River in Ireland.

A Cask of Apples was recently seized by a sanitary inspector of Whitechapel, who, in applying for an order condemning the Apples, said that the amount of bad fruit and food sold amongst the Jewish poor in the east-end of London was a continual source of public danger.

Seagrave Horticultural Society held a general committee meeting recently at the Grange Farm, Mr. J. D. Browning presiding. It was decided to hold a show at Seagrave on July 28th. The schedule of prizes for last year was revised, and additions made, chiefly in the cottagers' section, which is open to Seagrave and Simbury parishes only. It was also resolved to apply to the Bedfordshire County Council for a series of lectures on Horticulture.

"Chevalier du Merite Agricole."—With reference to our remarks in last issue (p. 339) concerning "Honours for an Englishman," it has come to our knowledge that Mr. C. Harman Payne is not the only one who has been decorated with *L'Ordre Chevalier du Merite Agricole*. The honour was bestowed upon Mr. E. J. Beale, J.P., managing partner of the firm of Messrs. J. Carter & Co., High Holborn, London, for services rendered by him in connection with the Agri-Horticultural Section of the Paris Exhibition of 1878.

Successful Rose-budding.—A jobbing gardener of Kent, well-known to be partial to good stout, was called in one day by the owner of a garden to bud the Roses, and told that, if he did the job well he would get an allowance from the house. During the day he called for his allowance oftener than was expected. The mistress expostulated, and asked what made him so dry? "Well, you see, mem," he explained, "I have to spit in the hole to make the bud take. It makes me dry, but the Roses must have something strong or the buds would fail." He got his allowance.

Shirley Gardeners.—At the last monthly meeting of this society there was a large audience, Mr. B. Ladham, F.R.H.S., presiding in the absence of the president, Mr. W. F. G. Spranger. Mr. Edgar Eady gave a most interesting lecture on "the habits of climbing plants." Mr. Eady said that the movements of climbing plants were so perceptible that the old theory of one difference between plants and animals being that there was movement in the latter and none in the former might be at once discarded. He then proceeded to classify the climbers, according to the particular means by which they climbed, into twiners, like the Hop; leaf climbers, such as the Clematis; tendril climbers, of which the Vine afforded an apt illustration; hook climbers, represented by the Bramble; and root climbers, of which the Ivy afforded a striking example. The lecturer gave a good deal of detailed information, and his remarks were illustrated by diagrams.

Brighton Horticulturists.—The annual meeting of the Brighton and Sussex Horticultural Society was held on the evening of January 21st, at the Imperial Hotel, Brighton. Mr. T. P. Harker, one of the vice-presidents, filled the chair. The balance-sheet was presented, and showed the substantial balance of £219 19s. 4d., including £100 on the reserve account, and a balance at the bank of £104 17s. 7d. The total receipts, including the balance of £189 8s. 5d. from the previous year were found to have been £1,267 11s. After the passing of the accounts some alterations were made with regard to the post of secretary, which has hitherto been described as honorary. The new secretary is to receive an honorarium of £25 per annum, this being the salary formerly paid to the assistant secretary. At the election of officers which followed, Mr. J. M. Kidd was re-elected president, and Mr. W. Balchin, jun., as chairman. The choice of the meeting for the office of secretary fell upon Mr. J. Lewis, who was duly elected. The committee recommended that arrangements should be concluded with the Oddfellows' Hall Committee for the use of the large hall for the monthly lectures and shows, also a small room as offices and committee room at a yearly rental of £15. This proposal was very favourably received, and it was decided to carry it out.

A specimen Chrysanthemum measuring 22 ft. in circumference was exhibited at the Boston U.S.A. Chrysanthemum Show last fall. W. H. Lincoln was the variety.

Early Peaches and Plums.—At a meeting of the Wellington Fruit Growers' Association at Wellington, South Africa, Mr. P. J. P. Gillie showed new varieties of early Plums and Peaches grown by him. One free-stone Peach was much admired: also a large blue Plum. Mr. Gillie stated that he had had Peaches and Plums ripe before the end of November.

Wild Flowers in Devon.—Replying to a criticism a correspondent on this subject states that there are plenty of Cowslips to be found on the cliffs, and in the combes between St. Mary Church and Teignmouth; also Primroses and Oxlips. He does not think the wild Roses have such richly coloured flowers, or grow so luxuriantly. Neither has Devon so many species. Devon can boast, however, of the white Cistus, the autumn Squill, the sweet-scented spring Narcissus, and the green Hellebore, which are by no means common elsewhere.

Bournemouth Gardeners sat down to their annual dinner at the Waverley Association Rooms, Bournemouth, on the 13th ult. The president, Mr. T. J. Hankinson. occupied the chair. After the loyal toasts had been honoured at the invitation of the chairman, Mr. McGregor proposed the "Association," remarking upon the educational value of such institutions as theirs. In replying to this, Mr. J. B. Stevenson (hon. sec.), said that, including honorary members, the society could now boast of being nearly a hundred strong. He was of opinion that there were still many good gardeners in the neighbourhood who had not yet joined.

"How Plants Live, Feed, and Breathe" was the subject of a very interesting paper delivered before the members of the Highbury Quadrant Literary Association on January 25th by Mrs. Kate Hands. Mr. Frank Lee presided. The essentials of plant life were described as being food, sunshine, fresh air, and warmth. Mrs. Hands went into detail with regard to inhalation of carbon dioxide and the fixation of the carbon. In speaking of the root hairs she described them as the feeders of the plant. The preservation of the root tips by hardened cells was also touched upon. Transpiration was dealt with at length, and it was shown how watering became a necessity by reason of the loss of water thus sustained.

Westwell Cottage Gardeners annual dinner took place on the 20th ult., under the presidency of the Rev. H. H. D'Ombrain. After the viands had been done justice to, the chairman gave the toast of the evening, "Success to the Westwell Gardeners' Society." He claimed the privilege of addressing them as brother gardeners, since he had been a gardener for sixty-five years, and could truly say that some of the happiest and most pleasant years of his life had been those spent by him in his garden. In referring to the Bunyard Centenary Show he said that it was with no small pride that he saw how many of the prizes went to Westwall. He enjoined the members to continue to stick to fair and open competition. He coupled with the toast the name of his gardener, Mr. Clements, who duly responded. The financial statement, which was laid on the table showed receipts amounting to £30 14s. 9d.; an expenditure of £26 14s. 1d.; and a balance in hand of £4 0s. 8d.

Birds in Conservatories.—According to *Gardening* (American) the Commissioners of Lincoln Park, Chicago, have been placing birds in the Palm-house. For some years a species of rail has had the freedom of the place, and has afforded considerable amusement to the children. The latest additions are a Japanese robin, and about twenty-five canaries. Everything was all right until they were let loose, but since then there have been sad complaints of the way in which the birds are endangering the safety of the plants. They have stripped the leaves from such plants as Solanum jasminoides, Jasminum pubescens, Bougainvillea glabra, and the young tips of Bamboos. The Passifloras have also been regarded by them as fit prey, for they have commenced defoliating them. It is hard to ascribe a reason for this behaviour, as the leaves are not eaten, except in a few isolated cases, but simply plucked off and thrown down. The problem before the management now, is to catch the birds, as shooting is out of the question by reason of the proximity of the glass.

Iced Fruit for a Long Journey.—The icy Currents which Dr. Nansen found during his expedition to the North Pole.—*Snaggs.*

Mr. J. A. Pettigrew, who has been superintendent of Lincoln Park, Chicago, at Milwaukee and Brooklyn, New York, in succession, has now been appointed superintendent of the parks at the city of Boston, and has accepted the appointment. When the officials at Brooklyn got to hear of the case they tried to retain the services of Mr. Pettigrew, but Boston refuses to release him.

Shepshed Floral and Horticultural Society.— Shepshed gardeners met on Jan. 28th, at their annual general meeting. Mr. A. Hubbard, the secretary, reported receipts totalling £59 3s. 11½d, and an expenditure of £55 14s. thus leaving a sum of £3 9s. 11½d, to the credit of the society. A vote of thanks was passed to Mr. Goodall for the use of his field for show purposes. It was decided to have a show on August 28th, 1897.

Bird Life in Banffshire.—The Banffshire County Council propose to apply to the Scotch Secretary for an order under the Wild Birds' Protection Act, to prevent the taking of the eggs and the extermination of such useful and comparatively harmless birds as the following:—Common buzzard, peregrine falcon, whooper swan, goldfinch, common gull, black-headed gull, Bewick's swan, kestrel, barn owl, short-eared owl, tawny owl, kingfisher, golden plover, ringed plover, sheld duck, shoveller, oyster catcher, pochard, crossbill, great spotted woodpecker, chough, quail, night jar, osprey, siskin, skylark, dipper, tufted duck, herring gull, kittiwake, lapwing, thrush, heron, and merlin hawk. The value of these birds to agriculture, and several of them to horticulture is now well known. Some of them, such as the common gray gull, and the lapwing may be tamed and kept in gardens to great advantage. Owls should also be encouraged about gardens to catch mice and voles.

Dalton Horticultural Society.—Dr. A. J. Cross presided at the annual meeting of this society, which was held at the Nelson Street Board Schools. The nineteenth annual report was read by the secretary, Mr. James Dickinson. The past year has been a good one, some 1,345 entries having turned up at the August show. The honour certificates in the amateurs' section fell to the lot of Mr. John Knight, gardener to Mrs. Ashhurner, Ruskinville, with 121 points; and to Mr. Thompson, gardener to the Mayor of Barrow, with seventy-four points. Mrs. Ashhurner was also the winner of the carver, knife, and fork, given by Mr. Fattorini, Shipton, with twenty-five first prizes, as well as the silver-gilt medal offered by Messrs. Dobbie. Messrs. Cannell & Sons' gold-lettered sash was carried off by a neighbouring society, the Kirkby. The Dalton society secured second place. The balance sheet showed receipts to £95 18s. 2d. The expenses amounted to £80 11s. 6d., thus leaving a balance of £15 6s. 8d. At the election of officers which followed, Wm. Kellett, Esq., J.P., of Dowdales, was chosen president; and Mr. Frank Dickinson, secretary. Mr. John Dickinson was asked to continue to discharge the duties of treasurer.

Renfrew Gardeners' Mutual Improvement Society.—This society was started in Paisley in the early part of winter—according to the syllabus, on November 17th last. Hitherto the meetings have been very enthusiastic, and everything points to a very successful issue of the first session. The last meeting was held on the 27th ult., when Mr. David Aitken, Gallowhill, read a paper on "Stove Plants and their Culture." There was a good attendance, Mr. Aitken being known in the district as a cultivator of no mean ability. He was listened to with much attention. A discussion followed, in which some of the leading gardeners took part. Mr. Aitken very ably replied to the various points disputed. A very hearty vote of thanks to the essayist, and chairman, Mr. Morton, of Blythswood, brought a very instructive and enjoyable meeting to a close. All the essayists are young, with the exception of Mr. T. N. Macalpine, Glasgow, Mr. Thomas Hogg, Woodside, and Henry Maxwell, Ralston. The meetings are held in Yeilder's Hall, Cross, Paisley, every alternate Wednesday at 8 p.m., from November to March. The secretary is Mr. Wm. Paton, The Gardens, Kilnside, Paisley; the treasurer, Mr. John Gault, Galiowhill, Paisley; and the convener, Mr. Robert Macfee, 3, Moss Street, Palsley.

Carnations are Coming Flowers in New South Wales, Australia.

The Trees of Paris.—A treatise concerning ornamental street trees in towns and lining the highways of departmental districts, from the pen of M. A. Chargnerard, is to be published by Messrs. Rothschild, of Paris. The work is full of details concerning the methods of planting in towns as well as in the country. The latter portion of the work also comprehends the subject of fruit trees. The streets and boulevards of Paris are planted with some 122,877 trees of various sorts, including 26,000 Planes, 17,000 Horse Chestnut trees, 15,000 Elms, 9,000 Ailantus, 6,000 Sycamores, 4,000 Maple trees, 4,000 Robinias, 2,000 Limes, 1,000 Paulownias, and a number of other genera represented by fewer specimens.

Loughborough Chrysanthemum and Fruit Society.—Mr. W. C. Burder occupied the chair at the annual meeting of the above society which took place at the King's Head Hotel, on Thursday evening, January 28th. In bringing forward the report, the secretary stated that the committee desired to express their heartiest thanks to Mr. J. Griggs and Mr. W. C. Burder for their tact and influence in effecting the amalgamation of the two Chrysanthemum societies. With regard to the work during the past year, the twenty-second annual exhibition was held in the Town Hall, on November 6th and 7th. The committee regretted that, owing to the inclemency of the weather at that time, it was not the financial success that they expected. There was a strong and healthy competition in the fruit classes, and some excellent fruit was staged. The Chrysanthemums, too, were of first-rate quality, and in the opinions of of the judges, the best that had ever been seen at their shows. In the amateurs' and cottagers' section there had likewise been great improvement. Votes of thanks to the donors of special prizes were passed unanimously. The financial statement showed a balance of 16s. 4d. Mr. Edward Warner, J.P., was elected president of the society. The retiring committeemen, auditors, and treasurer were re-elected. The secretary, owing to pressure of business, tendered his resignation; and it was resolved to leave the appointment of his successor to the committee.

ORCHID NOTES & GLEANINGS.

By The Editor.

Coelogyne lurida.—This is a recent acquisition to the genus, with erect flower spikes that are comparatively rare, the majority being pendulous or arching. That under notice was recently introduced by L'Horticulture Internationale, and flowered there for the first time in Europe last May. The size of the flower and the arrangement of colours would at first sight remind one of C. flaccida, to which it is superior in every respect. The broad, oblong leaves are slightly longer than the racemes of flowers, and the young ones are more or less tinted with red. Their petioles at this latter stage, as well as the flower stalks, are covered with reddish bracts, that enhance the appearance of the flowers considerably. The flowers are well-expanded, and not so dusky as those of many Coelogynes in cultivation. The sepals and petals are nearly of equal size, yellow and more or less tinted with reddish brown, giving the whole a bronzy appearance. The well-expanded, three-lobed lip is white, with a yellow crest. There is a good illustration of it in the *Lindenia Pl.* 532.

Dendrobium dominianum.—The chief interest of this Dendrobe lies in the fact that it is one of the earliest of hybrid Orchids, for it was raised by Dominy at the Exeter Nursery, at a time when the pedigrees of Orchids were not so carefully recorded as they are now, and have been for some years past. It was raised and in cultivation many years previous to its being described by Professor Reichenbach in 1878. The parents of it were D. nobile and D. linawianum, the latter being the pollen bearer. The flowers are pretty, but moderate in size. A specimen flowering recently in the collection of T. McMeekin, Esq., Falkland Park, South Norwood Hill, had bright rose-purple sepals, and petals fading almost white at the base. The short-tubed lip is white, with a maroon-purple blotch at the base, and slightly tipped with purple.

Dendrobium Endocharis.—Many cultivators have a difficulty in keeping D. japonicum alive for more than a few years. That under notice is a hybrid from it; and the pollen parent was the popular D. aureum. The greater vigour of D. Endocharis is a good reason for the raising of hybrid Orchids, which often prove more amenable to the cultivator's art than the originals, or at least than one of them. Cypripedium Schlimii, C. niveum and C. fairieanum might be cited as additional examples of Orchids that prove difficult to keep in health; while the numerous hybrids, to which they have given rise by crossing with others, are altogether finer and more satisfactory than the originals. D. Endocharis is intermediate between the parents, and takes after D. aureum in the strength of its stems and vigour. The flowers are almost, if not quite, as large as those of the last named, but the segments are narrower, showing a leaning in that respect to the seed parent (D. japonicum). With the exception of a crimson-purple, slightly rayed blotch on the lip, the flowers are white, and deliciously fragrant, the odour emitted by them being compared to that of violets.

Dendrobium Cassiope.—This may be regarded as a near relation to D. Endocharis, but has a slightly different parentage. It was obtained from D. japonicum, crossed with D. nobile album. The latter has imparted a more vigorous constitution to the progeny, as generally happens, when this vigorous and popular species is employed. The flowers are freely produced in lateral clusters from the stems, and at a season when white flowers particularly are highly cherished, that is, in winter; for it blooms freely in various parts of the country during December and January. We noted it flowering freely at Falkland Park, South Norwood Hill, recently, under the care of Mr. A. Wright, who thinks highly of it. The flowers, with the exception of a purple blotch in the throat, are pure white, including the pedicels. The clearer purple blotch of the lip, and the greater amount of white about the flowers, would constitute the difference between this and Endocharis, thus showing the influence of the white variety of D. nobile.

Cypripedium oenanthum superbum.—This beautiful Cypripede was raised from C. harrisianum crossed with C. insigne Maulei, and was the first of the genus in which a hybrid was one of the parents used. Without doubt it is one of the prettiest hybrids, if not the prettiest, in the section to which it belongs. The dorsal sepal is of a rich claret-red, marked with blackish purple spots, arranged in lines along the course of the veins, giving place to clear purple ones where they pass into the white ground of the apex. The petals are also of a rich claret-purple, and the lip darker and less bright in hue. The plant is of dwarf habit, neat, and exceedingly attractive. It has been flowering for some time past in the nursery of Messrs. J. Veitch & Sons, Ltd., who were the raisers. It is superior to the typical C. oenanthum seedlings, which are very variable, as secondary hybrids usually are.

RETIREMENT OF MR. DAVID THOMSON OF DRUMLANRIG.

A WIDE circle of friends will learn with deep regret that Mr. David Thomson, Drumlanrig Castle Gardens, is soon to vacate the post of head gardener to His Grace the Duke of Buccleuch, having decided to retire next May from that responsible position which he has held with such distinction for twenty-nine years. His successful career as a horticulturist, and manager of the princely gardens indicated, also at Archerfield, and during his earlier years in England is well known to all who have seen the work accomplished, in every branch of horticulture, by Mr. Thomson's indefatigable energy and skill, and in every detail, that no greater achievements have been attained in practical gardening.

The urbanity, kindness, and high character of Mr. Thomson, and his communicativeness to all who have sought his advice on matters of importance, as well as gardening, have commanded the esteem of very many friends. He has written with great lucidity on every branch of practical gardening, which is greatly appreciated by all readers.

Mr. Thomson's noble employers feel keenly the severance of their valued manager from their splendid domain, and have made the most kindly overtures with the view of inducing Mr. Thomson to remain at his post; but though activity in body and mind is as much in evidence as ever, health and advancing years must now be considered.

Mr. David Inglis, head gardener to Lord Grey, Howick Hall, Lesbury, has been appointed successor to Mr. Thomson. This very able all-round gardener well merits the choice which has been made.—*M. Temple, Carron, N.B.*

THE ORCHID HOUSES.

THE BEST TWELVE ORCHIDS.—Discussing Orchid culture generally, with an expert Orchidist the other day, the question cropped up as to the best and most useful dozen for those intending starting a collection to begin with. In arriving at our decision, we have put the commercial value outside the question, and have selected those kinds that may be purchased almost at Pelargonium price, and which are free flowering and easy to grow. Thinking it may help and interest amateurs, I purpose to give in a series of articles, our list, with cultural details.

Taking them in alphabetical order, we have, first; Aerides odoratum, a fine free-flowering species from China and India, which flowers during the summer months, and lasts a long time in good condition. The plants do best when grown in pots, which should be crocked up to within an inch of the rim, working the pieces in amongst the roots as the work proceeds, and finishing off with a good layer of live Sphagnum moss. Coming, as they do, from a warm country, they require the temperature of the stove to grow in, and to be placed where they can be frequently syringed during hot weather. They will soon make handsome specimens, and pay the grower for any extra care bestowed upon them.

CALANTHE VEITCHII, is one that is almost impossible to leave out of a list even of a dozen only, on account of its season of flowering, and the ease with which it can be managed. For winter decoration it is in much request. Its culture was so ably dealt with in a recent article by J. M., B., (p. 247) that it would be a waste of space to refer to it again so soon in detail. Briefly then, at the end of February, they should be shaken out of the old compost and re-potted in some fresh compost, which may consist of two parts good loam, one of peat, and one of dried cow dung or other manure. Add to this sufficient sand to keep all porous, and you have a mixture in which they delight. Use pots according to the size of the bulbs—one large one to a forty-eight, three medium ones to a thirty-two—with about two inches of drainage. Place them in a stove temperature, and water sparingly until the growths are well up, or the spot will make its appearance, but keep the syringe going amongst the pots. When well established they will take copious supplies. Shade from bright sunshine, or the foliage will become spoiled and the plants weakened. When they have exhausted the nutriment of the soil in which they are potted, give weak doses of manure water at alternate waterings.

COELOGYNE CRISTATA.—This is decidedly an old favourite, and, like the two preceeding, is almost indispensable, affording, as it does, a rich harvest of white flowers at the dull season, at a comparatively small outlay. As showing its cheapness and popularity, go where you will, you will most assuredly find a plant or two of this species. Its culture, too, is so simple that it is almost impossible to err. When one does so it is on the dry side; for on no account should it be allowed to shrivel. Peat and a little moss is about the best compost in which to grow it, although it does not by any means object to a little loam or dried cow dung mixed with it. It does fairly well, grown cool, but the best results are obtained when grown in a fairly moist intermediate temperature.—*C.*

VEGETABLE CALENDAR.

WITH the ground in its present condition—chilled with frost and snow—little can be done in the way of planting or sowing; but the first favourable opportunity may be taken to make new plantations of Rhubarb. This is not particular as to position, and a spot somewhat shaded, and perhaps not suitable for producing first-class vegetables, may be selected. It grows better than most crops under the shade of fruit trees. Deep trenching and heavy manuring are necessary to produce good strong growth. Single crowns are best for forming new beds, and these should be planted in rows 4 ft. apart, and 2 ft. 6 in. to 3 ft. from plant to plant, according to the strength of the variety. Good early sorts are Hawke's Champagne, Linnaeus, and Early Albert; while for a late kind Victoria is unsurpassed.

HORSE-RADISH.—This is another crop that may be taken in hand at the present time, and new beds formed. Although this plant will grow in almost any position, good culture is necessary to obtain strong roots fit for scraping. Straight young roots at least 1 ft. in length, and the stronger the better, should be selected for planting. These should be passed through the hands to within an inch of the top of the root, to clear off the lower eyes. Plant in rows 18 in. apart and 1 ft. apart in the rows.

ARTICHOKES.—The tubers of this plant are more in demand now than formerly. It is usually relegated to any out-of-the-way position in the garden, with the result that half the crop is too small for use. Given a good open spot, a free open soil, and plenty of room for the development of the tops, the best results will be obtained. Select tubers of good shape for planting, in rows 3 ft. apart, allowing at least 18 in. between each plant. Shallots may also be planted in rows 1 foot apart, in slightly raised beds of good soil.

CABBAGES.—The first opportunity should now be taken to make good any losses in the autumn planted beds. Those pricked out from the August sowings will come in useful for this purpose, and also for forming a succession bed. The ground must be kept open by frequent hoeing, a process that will accelerate the growth of the plants considerably.

CAULIFLOWERS.—Where movable frames are available, some of the autumn sown plants may be placed under them, planting somewhat thickly. This will give them a good start of the ordinary crop, and give a few early dishes. Any wintered in 60 pots may be potted into 16's in very rich soil, and placed in any cool house or frame near the glass, to bring them along very gradually for the present. Plants pricked out in frames and handlights should be well-ventilated to harden them in readiness for planting outside.

FRAMES.—A movable two-light frame may be usefully employed in making a small sowing of Brussels Sprouts, Walcheren, and Veitch's Autumn Giant Cauliflower, also a row or two of Cabbages and Leeks. The frame should be filled to within a few inches of the glass with good friable soil; and be placed in a sunny position, keeping it close until the plants are up, afterwards ventilating freely on all favourable occasions, and covering at night during frosty weather.

MINT.—This will soon be required, and a few roots should be potted or boxed at once and placed in gentle heat. For forcing purposes this plant should be propagated the previous season, as young plants give much better results than roots taken from old beds.—*J.R.*

THE PLANT HOUSES.

The Stove.

IT is a good plan to give the whole of the collection of stove plants a thorough overhauling each year, and the month of February offers itself as the most suitable time to effect this, for the light is gradually increasing, although the sun has not yet sufficient power to try the plants much. Many of the larger plants stay in their pots for a number of years, either because they do not require extra room or by reason of the fact that it is undesirable for them to take up more space. Thus while these may be passed over for potting they may have a top-dressing given them.

Some gardeners object to the practice of top-dressing because it is liable to be misleading as to the state of the roots beneath in the old soil; and undoubtedly there is a good deal of truth in this. A careful workman, however, will know by experience the requirements of the plants under his charge, and will take measures accordingly.

TOP DRESSING has the advantage of giving a much more tidy and trim appearance, and this is worth something. Again, if it is properly performed, and as much of the old soil as possible removed its value is obvious. At the same time the drainage should be examined, and if it is not in working order pests must be taken to make it so.

SOIL.—The ideal soil for stove plants generally is a mixture of fibrous loam and peat in equal parts with a sprinkling of sharp sand. To this may be added a few nodules of charcoal. This compost must naturally be slightly varied to suit particular plants. Thus the majority of palms like a greater proportion of good loam; indeed, the same may be said of most plants that are strong-growing. One important point about soil that is to be used for potting is the state of moisture. If a handful of it be taken up and gently squeezed the particles should adhere slightly to each other. If it is dryer than this it is not good, and if wetter, damage is likely to be done by the use of the rammer.

FIRM POTTING is very essential. It conduces to short and sturdy, whilst at the same time checking over luxuriant growth. Moreover, it assists in keeping plants within due bounds. A judicious use of the rammer will not hurt any fairly healthy plant.

WEAK AND UNHEALTHY PLANTS on the other hand need special treatment. Probably the best thing to do with them where root action is very weak is to shake them out of the old soil and to plant them *pro tem* in a bed of cocoanut fibre made up in a warm pit; or a half-way course may be adopted, the plants being potted loosely, and the pots plunged in the fibre. It will be well to have a pit that can be kept close in the manner suggested for the accommodation of weaklings, as thereby time will be saved.

BROWNEAS.—These are certainly some of the finest of our stove flowering shrubs, although from their size they are only suitable for roomy houses. Cuttings of fairly matured wood strike fairly readily if inserted in autumn in small pots filled with sand, and given a moist heat. They should be potted off at the commencement of January, or as soon after as possible. Larger plants will also be standing in need of a shift. Browneas take a number of years to grow to flowering size, and during that time they must not be cramped at the roots.

DIEFFENBACHIAS certainly include some very handsome foliage plants which do well in an ordinary collection. From their peculiar habit plants of above a year in age are of little value, as after that period the stems get long and leggy. Such plants should now have their tops taken off and inserted as cuttings. They soon root, and may therefore be placed straight away into 48 sized pots. Desirable forms may be increased by cutting up the stems into lengths containing an eye or two in each, and potting them up into small 60 sized pots. In this case the cut end should just peep out of the soil. Place the sets in a propagating frame, but do not keep them too close or they will rot off. It may be of service to state here that the juices of Dieffenbachias are acrid and poisonous, and hence no part of them should be allowed to touch the lips. More than one "green" hand has been trapped in this way by enterprising elders, and the results, to the sufferer, are most unpleasant.

PROPAGATING DRACAENAS.—After taking the tops of the plants off, and putting them in as cuttings the old plants may be left until they break into growth, which they will do at the topmost eyes first of all. Some growers adopt the plan of cutting off the whole stem, laying it down and covering it with cocoanut fibre in a propagating frame, when it breaks into growth at most of the eyes along the stem at the same time. D. Lindeni does very well if the stem is cut up into short lengths like Dieffenbachias and potted off into small thumb pots.

Pits and Frames.

TUBEROUS BEGONIAS.—Seed which was sown about the middle of last month will now have germinated. As soon as the seedlings have got big enough to handle they must be pricked off. This is a most delicate operation, and one that must not be entrusted to an incompetent workman. In separating the tender plants take care not to mutilate the tender roots, and also avoid having many out of the soil at once, as such an experience is most injurious to them. The pans or pots containing the pricked off plants should be placed in the same temperature as that from which they were taken. Water carefully through the medium of a fine rose, and shade during the middle of bright days with sheets of newspaper.

Last year's plants must now be fetched out from their winter's resting place. The probability is that if they have been wintered in a warm greenhouse they will have commenced to make top growth by this time. Shake them out of the old soil and pot them up afresh. They like a light rich soil, and a mixture of equal parts of good loam, peat or leaf soil, and manure from an old Mushroom bed, dried and rubbed through a sieve with sand, will be found to suit them well. Use no larger pots than can be helped and do not pot very firmly. It will be found that the tubers make roots much more rapidly when the soil is rather loose about them than they do when firm potting is given.

STREPTOCARPUSES.—The value of these pretty plants it is not possible to gainsay. A sowing of seed made now will furnish plants that will bloom from the latter part of June. Place the seed under the same conditions as recommended for Gloxinias.

TREE CARNATIONS.—As the bulk of the flowers are over now, preparations for an increase of stock may be made at once. Cuttings root very readily at this time of the year if placed in heat. Instead of cutting them off above a node in the usual way followed in preparing cuttings, they may be pulled out from the joint by a sharp twist of the hand and wrist. Cuttings treated thus root exceedingly well, as they have no cavities about their basis to afford lodgement for water and not so liable to rot off as others which are treated in the ordinary way. A temperature of about 60° will insure a good "strike." Use sandy soil, and place the cuttings fairly close to each other all round the inside edge of a small 60-pot.

THE OLD PLANTS should still be taken care of, as they will still keep throwing occasional flowers. Later on in the spring the weakest ones may be discarded, but until that time all must receive attention. It often happens that injudicious watering causes a lot of deaths among them at this season, therefore keep a sharp look-out upon this part of the programme.

COLEUSES.—It is quite time that a batch of cuttings was put in if fair sized plants are to be forthcoming at a reasonable date. For this purpose the tops may be taken off the cuttings that were inserted last autumn, and which have passed through the winter in their cutting pots, as advised. Put these autumn-struck cuttings into brisk heat, and keep them well syringed, morning and afternoon, and they will soon furnish another batch of cuttings.

FUCHSIAS were put into heat about the middle of January to produce cuttings. The main stock should be started now. What pruning is necessary should be given and the plants put in a gentle heat, and in a position where they can get the syringe at least once a day. When they have started nicely into growth they may be potted off into as small pots as will comfortably contain them. If they have commenced to break already, they may be potted off without further delay.

HERBACEOUS CALCEOLARIAS.—Plenty of light must be given these, and there must be an entire absence of any coddling. We have found them to succeed best when placed on a shelf near the glass, in a Peach house from which frost was only just excluded. Even during severe weather they were never shifted from this exposed position, and when they wanted water it was given them ice cold. Towards the end of the month the plants will be starting into growth, and will then call for their final shift into 8-in. or 10-in. pots, but it will not be wise to disturb them just yet.

GENERAL WORK.—Seed sowing will ere long be occupying a good deal of attention, and hence clean pots and pans, as well as soil, may be got in readiness. The seed store must likewise be overhauled so as to make sure that seeds which require to be sown earlier than others are not neglected. The furnishing of the conservatory will also need constant care. Carefully watch for the appearance of greenfly amongst late Cinerarias and Calceolarias, and fumigate as soon as necessary.—*A. S. G.*

Gleanings from the World of Science.

Nansen's Waymarks to the North Pole.—Year by year the microscopically minute forms of vegetable life are gaining in importance, in various phases of science and practice, as well as in their bearings upon the problems of health and disease. While the problem of how to reach the North Pole was being discussed some years ago, Dr. Nansen was not beneath taking into account such minute organisms as diatoms when laying his plans for reaching that mysterious goal before the Royal Geographical Society in 1892. The story of the diatoms he again brought prominently to the front in his letters to the *Daily Chronicle*, in November last. These vegetable organisms are again discussed in the February number of *Knowledge*, by W. F. Hume, D. Sc.

Dr. Nansen argued that the great Polar currents flow southward to the North Atlantic Ocean, between the east coast of Greenland and Spitzbergen; while, on the other hand, the currents from the Asiatic side flowed northward from the direction of Behring Straits, and turned north-westward at the New Siberian Islands. He argued these points from the fact that wood of Siberian Larch and Red Spruce was every year washed up against the east coast of Greenland, in greater or less quantity, and that the Esquimaux used this wood in the construction of boats, sledges, &c. This wood was also found in the sea north of Spitzbergen amongst the drifting ice. Even more interesting were the samples of dust which he collected on the snow and ice between Iceland and Greenland, and which, when tested microscopically, were found to contain diatoms. These vegetable organisms are so minute that 200 of them lying side by side would only measure one inch. Dr. Nansen placed his specimens in the hands of Professor Cleve, of Upsala, for identification, and the professor made out sixteen species and varieties, stating that this diatom flora was most peculiar inasmuch as it differed from the many thousands of samples which he had examined, except one. The exception was a sample collected by Kjellman (during the *Vega* expedition) on ice-floes at Cape Wankarema, near Behring Straits. The species and varieties of diatoms were identical in both cases. The inference was that the diatom floras from the vicinity of the Behring Straits and the east coast of Greenland must be identical, and that, therefore, there must be open communication between the waters of the sea at both these places. Amongst specimens from Cape Wankarema in Nansen's possession, twelve species were "only known from there, and from nowhere else in the world," though the diatom floras in various northern regions under notice had been partly examined. The minerals in the dust collected were also examined, and twenty varieties at least were determined.

Dr. Nansen, in conducting his now famous expedition both in the *Fram* and by sledges over the Polar ice, did so in the belief that he was following the same path as the diatoms, &c., were conveyed by the ocean currents. "Verily, great men can appreciate the teachings of very small things, such as driftwood, minute minerals, and microscopic plants."

Poisonous Plants of Essex.—A review of the poisonous plants native to Essex is being published in *The Journal of the Essex Technical Laboratories*. The writer is Mr. J. C. Shenstone, who says that "the accidental poisoning of man and other animals may not be an everyday experience, but cases do occur from time to time, and the results are often so disastrous that it would appear to be worth some trouble on the part of our farmers and others to become familiar with the more dangerous species growing in their district."

A considerable number of the Buttercup family are classed amongst the poisonous subjects, including the Buttercups, Anemones, Helleborus foetidus, H. viridis, and Monkshood (Aconitum Napellus). We hope, however, that Mr. Shenstone's remarks will not excite the Essex farmers to uproot and exterminate such rare British plants as the last three mentioned species, and Anemone Pulsatilla. Monkshood is as likely to be so named from the fanciful resemblance of the hooded dorsal sepal to the hood of a monk as to the fact that it is stated to have poisoned some of those gentlemen in olden times. We do not mean to say that Mr. Shenstone quotes this statement, but he says that "it appears that the root was frequently mistaken for that of Horse-radish."

Various plants are recorded here as being more or less poisonous, including Poppyworts, Roseworts, the Pink family, Vetches, Red Bryony, and Umbellifers. The latter include the Hemlock, Water Hemlock, Water Dropwort, Fool's Parsley, and others which are stated from time to time to be deadly poisonous to animals eating them. The Wild Parsnip is stated to have caused fatal poisoning, though the garden Parsnip is a wholesome vegetable. It would be highly satisfactory to all concerned if reputed cases of poisoning by British plants were scientifically investigated and certified.

HINTS FOR AMATEURS.

The Outdoor Garden has been presenting a strangely unfamiliar appearance during the past week or two. The year was ushered in with mild weather, and in this respect only carried on the promise of the autumn. Necessarily, such conditions have caused things to be much more forward than they ought to be. In the second week in January we noticed buds of Clematis in an advanced state of development, and in one sheltered garden, close to London, Pear trees were just coming into flower. Happily, the recent touch of winter's rude fingers has put a full stop upon the subjects that would have been inclined to follow such examples of precocity.

Frost on Fruit Trees.—Often enough, the effects of frost do not become apparent for a considerable time. We have, from time to time, and during several years, heard complaints from amateur fruit growers, that Pears and Apples have bloomed freely enough, but that instead of setting for fruit, the blossoms have all dropped off, and, not unnaturally, they have been greatly exercised in their minds to find a reason for such unsatisfactory behaviour. Unhappily, such seasons as the one we are now passing through, affords a clue to all this. The buds of Pears, for instance, if unduly forward, although they may not be actually open, will be frozen through, with sharp frosts, and the flowers, although they may open and be apparently none the worse for the ordeal, drop off after a brief period of barren beauty. We give these warnings in time, so that in the case of a bad "set" presently, the action of the weather in the matter may not be lost sight of in seeking for a probable reason.

Snow on Shrubs.—Here again is a frequent cause of lamentable damage. Small Conifers are often very favourite adornments for the front gardens of villas, and such trees are apt to suffer much during heavy falls of snow. From their peculiar habit they offer a greater area of lodgment for the falling snow, and the extra weight they have to bear in consequence pulls them out of all shape and nearly ruins them. Particularly is this the case, when the trees possess two or three leaders. If these are not secured together by means of judicious tying, the weight of the snow and the force of the wind cause an opening in the centre, the several leaders bowing gracefully outwards. The remedy for all this is obvious, viz., to shake the snow off as soon as possible, although prevention in the direction of staking and tying should perhaps, be placed first. A mixture of both alternatives is to be recommended.

Lantern Roofed Greenhouses.—These represent the highest type of modern horticultural construction, but they have one disadvantage attached to them in cold weather, particularly if the temperature inside be fairly high, and the atmosphere be correspondingly moist. Icicles form on the lanterns outside, and if allowed to get to any size, the glass beneath is in danger of being broken by their fall when loosened by the sun's rays. Houses built upon brick walls, with frames attached to either side, are similarly situated. It will be well, therefore, to keep the icicles knocked off before they reach any size, and this must be done regularly as long as the frost continues.

Shifting Plants.—Where it is desired to keep the conservatory filled with forced plants in bloom, it is a matter of some difficulty to shift them from the pits, where they have been forced, to the conservatory. While every amateur is aware of the danger of getting frost into his houses, comparatively few seem to realise the danger that exists in taking forced plants out into a biting wind. All moving that is necessary now, should be done in the middle of the day; and if any distance has to be covered, they should be covered up closely during transit. In many gardens, a box having neither top nor bottom, is made to fit over the hand-barrow, and hence when a mat is thrown over the top, the plants are snug enough.

Chrysanthemums.—The majority of the cuttings will now be in, including all those that are to be grown on for large flowers. From three weeks to a month is the time required for rooting, so that a large proportion of the cuttings will be rooted. At this juncture, the advantage of adopting the one pot one cutting practice will be amply demonstrated, for then potting off need not be hurried on, but a favourable opportunity may be waited for. On the other hand, if the cuttings have been dibbled in four or five in a pot, a delay in potting them off into single pots would be fraught with great danger. The roots become matted, and it is almost impossible to separate them without bruising or breaking them.

After potting, the plants should be returned to the handlight in which they were struck, or to a similar position. Here they must be kept close for a few days, but on no account must they be parched up with fire-heat.

Later Cuttings.—As these commence to make roots, they will gradually stiffen up and form new leaves. At this stage it will be necessary to give them a little more air. This may be done by tilting the top of the propagating frame, or the most forward of the cuttings may be taken right out of it and stood upon a shelf near the glass. This will allow of the frame being kept closer for the benefit of those cuttings that have not made such quick progress.

Nerines.—These should still be kept in vigorous growth, and must not be allowed to suffer for water. We have found weak solutions of guano suit them admirably, the foliage borne by plants treated thus being much more vigorous. Not a few amateur cultivators make the mistake of starving their plants at this juncture, and then complain that they do not flower at the proper season.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Hedges dying off at the bottom.—Will Yew and Holly hedges, if cut off at the bottom, put up fresh shoots? and would they be likely to make good hedges? My plants are dying off at the bottom, and are wider at the top than the bottom. When would be the best time to cut them? *W. P., Bilsthorpe.*

Holly would throw up fresh shoots if cut off at the bottom, but not Yew, at least, in sufficient quantities to form a hedge. Even in the case of Holly, you would have to wait a long time for results. You might try a medium course, *i.e.*, heading the plants back about half way. This would probably cause them to break into growth at the bottom, unless the branches are absolutely dead. If you want a hedge quickly, and you have sufficient room, try cutting off the dead lower branches, and planting some young dwarf stuff to fill up the gaps at the bottom. The other remedy is to root the old hedges out and plant afresh, and although this seems drastic treatment, it will probably turn out to be the best in the long run; and certainly if the hedges are in a very bad condition. Holly and Yew hedges are usually clipped in September, after growth has finished; but you may do any pruning or cutting back that you deem desirable any time before growth starts in the spring.

Starting Achimenes.—You may start the first batch as soon as you like, *T. Benham.* Allow about ¾ in. each way between the tubercles. You will find 32-pots a handy size. The vinery started at the beginning of the year will be an excellent place for them. Put them up on a shelf near the glass.

Lawn.—Turf will give quicker results, *Scottie*, but is dearer, if you get it good, than seed sowing. Where the whole of the lawn does not need remaking, turf should be used to make the patchy parts good.

Stewing Pears.—You will find Uvedale's St. Germain, and Catillac, excellent stewing Pears, *R. G.* The former grows to an immense size, but as far as our experience goes, the latter is rather the better cropper.

Birds in a Greenhouse.—*Mum* intends to let loose some birds (canaries) in his greenhouse, and writes to ask if we think the experiment would succeed. To this we can only reply, that we don't think it would. The poor plants would be sadly messed about, and the birds would be knocking themselves up against the glass until they ended in committing suicide. If birds are desired in the greenhouse they must be accomodated in cages.

Mustard and Cress.—*X.* has found out that Cress is always slower in growing than Mustard, and asks for a reason.

This is difficult to give, but the behaviour of these two saladings is always the same. Sow the Cress from four to seven days before the Mustard, and then both will be fit for use at the same time.

Forcing French Beans.—Which is the better plan, to sow the seed in the pots in which the plants are to fruit, or to sow two in a small pot and then transfer them to the larger ones.—*W. Thompson.*

It all depends upon the seed! If it has been purchased from a reliable source and you are sure it is good, you may save a potting by sowing straight away in the fruiting pots. On the other hand, if the seed is old and you are not sure about it, sow in small pots and re-pot when the plants are large enough.

Grafting Aralia Veitchii.—I have two plants of Aralia Veitchii which I wish to graft upon A. reticulata, but I do not know how to proceed; would you please tell me?—*Stove.*

The first thing to do is to obtain a sufficient number of stocks. This may be easily done by striking cuttings and growing them on in small pots until they have attained the thickness of an ordinary slate pencil. When grafting, the stocks must be headed down close to the ground, so as to get the point of union between stock and scion as much out of sight as possible. The stems of the old plants must be cut up to form the scions, each length having two or three eyes and a leaf or two. There are several methods of grafting from which to choose, and various growers have their own opinion as to which is the best to employ. Whip grafting is certainly as good as any. It is easy to perform and tolerably certain in results. We do not know whether you are acquainted with this method. We may briefly, however, run over the principal features. In preparing the scion make a long, oblique, clean cut, so that the lower point is very thin. Then make a longitudinal cut upwards to form the tongue or wedge, and the scion is complete. Make a similarly oblique cut upon the stock, and by making a longitudinal cut downwards form a cleft to receive the tongue of the scion. In inserting the graft see that the inner banks of stock and scion are brought into close contact with each other, otherwise the operation will fail. Tie up firmly and evenly to keep things in their places. After grafting, the plants must be kept close and warm, with a temperature of not less than 65° Fahr. January is the best month to graft Aralias.

Vines.—*Seasonable* has a lean-to vinery facing due south and planted with Black Hamburghs. He wishes to know when he may start the Vines. This will, of course, depend what means he has for heating. If the house is efficiently heated a start may be made at once. For the first week try a temperature of 45° by night, rising to 50° by day. If, however, the piping is insufficient to fulfil the requirements of the gradually increasing temperature needed for forcing, it will be better to "bide a wee," until the Vines start to break into growth of their own accord. This will not be very long if we get mild weather.

Plumbago capensis.—It is now a common sight to see this Plumbago bedded out in summer, *F. Y. M.* For sub-tropical work it is very effective. If you wish you may plunge the plants in their pots instead of planting them out, but in such a case a sharp eye must be kept upon the plants in dry, hot weather.

Elementary Botany.—*Garden*, the text book for the elementary stage of the examination in botany for the Science and Art Department, South Kensington, is J. W. Oliver's "Elementary Botany." This is a valuable little work and contains in a very concise form a great deal of information.

Cucumber Bed.—In order to cut Cucumbers in March, *G. Hanwood*, it is quite time that you were making preparations. As you intend growing them in frames upon a hot-bed, the first consideration will be to get the fermenting materials in readiness. As heat will have to be kept up over a long period, during much of which we may experience very cold weather, a large proportion of leaves should be used. Two parts of leaves to one of stable litter will form an excellent mixture which will give out a steady

and lasting heat. Shake the leaves and the straw well up together, and give them at least two turnings with an interval of three or four days between. The hot-bed must not be less than 4 ft. in height before the frame is put on, and if 6 ft. so much the better. In area the bed should be 3 ft. bigger each way than the frame that is to stand upon it. This will allow of a margin of 18 in. all round the frame, which will be necessary in order to attend to its occupants properly. Build the fermenting materials up round the frame until they are on a level with its sides. Put the soil in several days before planting is thought about, so that it shall become thoroughly warmed through.

A Pretty Fernery.—On one of my journeys a few days ago I came across a very pretty fernery in one of those conservatories attached to the modern villa, which always looks as if it had been put up by the architect just to fill up an odd corner, and regardless of its suitability, either of position or construction. The wall against which the house in question was built was covered with sheets of virgin cork, arranged so as to form pockets, in which Ferns were planted. Ornamental fern-tiles of various shapes and all filled with healthy-looking plants were hung against the glass sides of the house, and several baskets were pendant from the roof. On the floor a rockery about three feet in height had been built, and this ran in irregular mounds and ridges all round the house, also planted with Ferns, leaving a winding passage of between two and three feet in width. All the plants looked to be in the pink of health, and bore evidence of very tender care. The whole house was an excellent example for amateurs who have been puzzled to find out what plants will grow in their conservatories.

SUTTON'S STAR PRIMULA.

We have been watching this strain of Primula sinensis for some time, and note that people are now beginning to recognise its value for conservatory decoration. The prominent characteristic of a batch of plants is their graceful elegance; and whether seen alone or in proximity to the highly evolved modern race of Chinese Primulas, their distinctness is very striking. The stems are slender and tall, bearing successive tiers of flowers one above the other after the manner of P. japonica, P. imperialis, or P. poissonii, although so strikingly different to either. The next point that strikes the observer is that the segments of the flowers never overlap as in the highly-evolved forms, hence the name "Star." These two races, in fact, if they had been introduced from China together, would, years ago, probably have been considered distinct species, and described as such. The leaves form the closest connecting link between the two races, for those of the Star Primula are of the plain-leaved type, and are, perhaps, more slender than usual.

At first this type was grown in small quantity by Messrs. Sutton & Sons, Reading, but visitors to their Portland Road Nurseries at present are delighted with the spectacle of a houseful of plants. They serve to relieve the dwarf and massive character of the large-flowered types admirably. They vary from 1 ft. to 2 ft. in height and carry pyramidal bunches of white flowers, faintly flaked with purple or red. Each blossom measures from ¾ in. to 1 in. in diameter and is sufficiently large for this particular strain, to give a decidedly decorative effect. It remains for this race to be evolved into colour varieties; but of course it is merely a question of time. A few years will be necessary to get variations without bridging over the gap between this and the dwarf type. Already, however, there is a quantity of a lilac variety and a semi-double one, which may give rise to something better. We are obliged to Messrs. Sutton & Sons for this opportunity of reproducing the photograph of a houseful of Sutton's Star Primula.

A Houseful of Sutton's Star Primula.

SPECIMEN CHRYSANTHEMUMS.

Mr. Pettinger, says, concerning specimen plants (p. 314), that "the idea of perfection should be left out," but he does not believe in leaving it out himself; because he says he well remembers seeing "the nearest approach" to a perfect plant. Now without the idea of perfection in his mind he could not say whether it was a near approach to perfection or not. Then he says "pre-eminent must stand quantity of flowers combined with freshness and size." These again, are just a few characteristics of a perfect plant as it exists in his mind.

If Mr. Pettinger had just given us a clear definition of a perfect plant as it exists in his mind (as it does exist by his own showing), without going into side issues, as he has done, he might have aided in setting up a standard of excellence that would have been a guide to both competitors and judges. He does not, however, see any necessity for this; but just to try and find out the leaning of the judges in our own country, and play up to it. That would be pure "jockeying" to gain a prize, without the slightest consideration for the advancement of horticulture.

At the conference held by the National Chrysanthemum Society at their last show, they had under consideration the setting up of a standard of excellence for blooms, and why not for plants?—*Mum.*

FERTILITY OF OLD GARDENS.

This characteristic of old gardens, compared with many new ones, is often mainly due to the accumulation in the soil of animal and vegetable matter—a process which in many instances has been going on for generations, and which in some instances exceeds the requirements of certain crops. Where this is the case, a good dressing of lime is one of the best correctives. Another one is deep trenching, and bringing up a portion of the subsoil in such a manner that it becomes mixed with and forms a part of the surface soil. It is very interesting to note the great difference there often is in the length of time newly transplanted plants are in getting hold, as gardeners frequently say, of the soil. Where it is full of humus, herbaceous plants, as a rule, come away readily, when planted at the same time as others on poorer soil, in which they are frequently twice or three times as long before they make a start. Having under constant observation two separate pieces of ground—one of which occupies part of the site of a well-cultivated market garden, and the other a portion of a not very well done farm—the truth of these observations is forced upon me, as the natural staple of soil is very much the same. The difference in results proves that whatever may be the staple of the soil originally, it will in time become fertile by deep cultivation and ample manuring. The differences in the extent to which these are required will be in proportion to the natural qualities of the soil. Rich alluvial soils require far less help from man to make them productive than shallow poor ones; and, other things being equal, they ought always to command a higher rental.—*W. B. G.*

A CELEBRATED PLANT FACTORY.

The love of gardening and of plants has taken such a hold of the people generally, and is, day by day, increasing in intensity, that numbers of establishments have sprung up throughout the length and breadth of the land, having for the object and aim of their existence the supplying of the demand for plants of various sizes and of various kinds for the decoration of boudoir, dinner table, conservatory, and cottage window. Associated with this love for plants, there is exhibited a great deal of skill in managing them and attending to their wants. On the other hand, success in the art of the propagator is confined to a comparative few, for many a subject that is fairly hardy and good-tempered in its more mature stages, is coy and intractable in its earlier ones. The management of seedlings, for instance, is a profession in itself, and the same might be said of the practice of many, if not all, of the methods whereby the propagator increases his stock of the most popular plants. Mr. William Iceton's establishment at Granard Gardens, Putney Park Lane, S.W., is by no means unknown to fame. Mr. Iceton has had no small share in popularising Palms, as well as other foliage plants, by rearing them in such numbers as to enable even people in very lowly circumstances to indulge their love of a few of the gems of plant life. The thousands of plants he annually turns out for market from his establishment are ample warranty for the application to it of the name of "plant factory."

Palms, in themselves, occupy a large portion of the under glass space, and when we take into consideration their number and decorative value, the fact is not to be wondered at. One thing that strikes the visitor to Granard Gardens is the great variety in point of size. In some houses, thousands of seedlings with one or two leaves, and growing in pots scarcely bigger than thimbles, meet the eye. From these we turn to plants in 48's and 32's, and so on, until we come to the large conservatory, where we find some grand specimens that could only be accommodated in a lofty house. Among these older plants we found Archontophoenix cunninghamiana (better known, perhaps, as Seaforthia elegans), Thrinax radiata, Livistona rotundifolia, Howea australis, Howea fosteriana, Cocos plumosa, C. Datil, Rhapis flabelliformis, and Phoenix canariensis. The most popular of any is, undoubtedly, Cocos weddeliana. Hundreds of thousands of seeds are sown each year, and the seedlings form saleable stuff at a very early period of their existence. When they have developed two or three small leaves, they are in great request for filling the little fancy pots, and vases which ladies seem to love so much. True, it is, these vases are seldom suitable for the little plants, as far as their welfare is concerned, and the mortality is heavy. This accounts for the fact that the demand never seems to slacken. Licuala grandis in a small state is thought highly of. The plants are naturally dwarf and stocky, and the rotundate leaves with their deeply toothed margins are very ornamental. Chrysalidocarpus (Areca) lutescens sells fairly well, although it does not stand knocking about so well as the Kentias.

The above mentioned are the Palms most successful for market work, and Mr. Iceton possesses a splendid stock of them in all sizes, both with regard to numbers, and the health and condition of the plants.

Novelties find very little place where the sale of a plant is the chief consideration. Phoenix Roebelini, however, is a novelty that is thoroughly deserving of foremost place. This its beauty would without doubt win for it, but that the difficulty in propagating it, keeps up the price. At present, it is increased entirely by suckers, which it throws up from the base in a manner similar to a Pandanus. No seed of it can be obtained from anywhere. The whole plant is very striking in appearance. The fronds, which are of considerable length, arch over gracefully. The pinnae are very narrow, and set rather close together than is usually the case with the Phoenixes. A curious feature is the way in which the lower edges of the midribs, and the margins of the pinnae have formed a roughed corky layer instead of the smooth epidermis, and this runs like a gray-white stripe the whole length of the frond.

Passing on, we came into a house containing a mixed collection of stove plants. Dracaenas, of course, are much in evidence, more particularly D. Lindenii. We may say without the slightest exaggeration that we can never hope to see better coloured examples of this handsome Dracaena than Mr. Iceton has. The plants seem to like the locality, for the foreman assured us they grew like weeds, although they never bestowed any extra care upon them. Dracaena gracilis, D. pendula, D. terminalis, D. congesta, and D. rubra are all great favourites. Some of the larger specimens of D. congesta have a roughish time of it, for they have to do duty at numbers of social functions at which such decorations are required. Of the pretty but expensive D. Doucetii, Mr. Iceton has probably the best stock in the country. Having regard to the decorative value of this plant, it is a thousand pities it should be so dear. Begonia Arthur Malet is a well-known form with very handsome foliage that is grown in quantity.

Bambusa falcata, and B. f. aurea are both thought very highly of for pot work. They stand hard usage well, and keep their leaves on better in dark places than most of the others. One house contained a large quantity of fine stuff in 8 in. pots. Eurya latifolia is an old favourite that has not yet outlived its usefulness, and we were greeted with the sight of some shapely specimens in 8 in. pots that would be a credit to any establishment. Not only were they clean and in splendid health, but the foliage was exceptionally well coloured.

One of the special features of the establishment at Granard Gardens is Asparagus plumosus. Several houses are exclusively devoted to it. For making up with cut flowers, this Asparagus is invaluable; for not only is it very effective, being light and graceful, but it lasts for a long time. The most remarkable point about the Putney plants, however, is the freedom with which they seed. At the time of our visit, the black fruits, which are about the size of Peas, were much in evidence. We learnt in passing, that although the flowers which make their appearance in the autumn set freely enough, the reverse is the case with those which open in summer, as they all drop off, or, at least, only a few of them setting.

Myrsiphyllum asparagoides is a favourite market subject, where it is popularly known as Smilax. In common with other members of the trade who supply cut flowers and furnishing material, Mr. Iceton grows quantities. The plants are accomodated in a specially prepared bed of light, rich soil, and their growths supported by strings carried from the ground to the roof. When any of the sprays are wanted, all that is necessary is to cut the strings, allowing the growths to remain upon them.

In one of the cooler houses some superb samples of Araucaria excelsa were very conspicuous. Although they were only in 7 in. pots, they varied from 4 ft. to 7 ft. in height, with branches right down to the bottom, and clothed with the deep green that betokens health and vigour of no mean order. For specimen plants for forming the centres of small groups or nooks in conservatory or drawing-room, these would be most effective. Many, if not all, of these self-same plants have doubtless been used not a few times for similar purposes.

It is manifest that we could not leave the establishment without a peep at the two grand Stephanotis plants, which are certainly among the finest in the kingdom. Their pruning has been put off until much later this year, for it has been found that when pruned in autumn, as they have been up to the present, they started into growth soon after, but the lower portions of these growths did not flower. It is hoped by pruning in January that flowers will be borne along the whole length of the shoots instead of the lower portions being barren, as formerly. The plants are in splendid condition and a marvel of cleanliness.

DECORATIVE PLANTS IN SMALL POTS.*

I HAVE chosen this subject upon which to direct a few remarks, believing it to be one of the most important features in present-day decorative gardening, as far as pot plants for grouping and furnishing are concerned. By the term *small pots* I mean, more strictly speaking, pots that are small in proportion to the size of the plants themselves. After a considerable number of years' experience in growing plants for furnishing purposes and decorative work in its comprehensive form, I am fully convinced that many failures arise from the simple fact of not confining the plants to pots sufficiently small. In nearly every garden now-a-days a great demand is made upon the resources of the gardener for either decorative plants or cut flowers (frequently it is both). This will often tax his ingenuity to the utmost, and in cases where the demand is great, but the means at disposal totally inadequate, it reflects every credit on the management when efficiently carried out. The important fact must be borne in mind when any comparison is attempted between those plants as grown in private gardens and those grown by nurserymen and florists, that, in the private garden it is often a makeshift arrangement, or if not, plants have to be grown too much in a mixed fashion to suit their special needs. The trade does not do this, hence it is never a fair comparison to make as between the one and the other, as far as the appearance of the plants is concerned.

I would, however, much prefer well-grown home plants for immediate decorative uses to those taken direct from the nursery. My reason for this is, that the latter are not immediately fitted for use in this way. The object, and that a most proper one, of the trade grower, is to have a vigorous growth pervading his plants, this being facilitated by a more generous treatment at the roots than I would adopt for decorative plants in private establishments. Hence, as a rule, I would not advise their immediate use when coming from the nursery. Rather let them become acclimatised to their new surroundings, and then their enduring qualities will be considerably enhanced. If plants, on the other hand, be taken into use at once, it is not at all fair or just to blame the vendor. It may be said by some, perhaps, that plants in small pots require more attention in the way of watering, which may be true. But, on the other hand, the operation of watering can be far more expeditiously performed, less examination by far being needed to ascertain their requirements, there being much less danger of over-watering. There is also a saving of labour in potting, greater convenience in handling, and more adaptability to the work through the fact of the pots being small.

CONDITIONS OF SUCCESSFUL GROWTH.

These are several, but not insuperable, by any means. Good soil is most important. If it be peat, let it be the best that can be had, casting aside any that is devoid of fibre and good enduring qualities (the refuse can often be turned to account for plants that are not of permanent growth). In the case of loam let it be full of fibre, such as the best, Banstead loam being on the whole the most preferable. Leaf mould, such as that from the Beech and the Oak, when it has been laid up for 12 months or more, is a good rooting medium in conjunction with either or both of the foregoing. These, with silver sand, are the chief components. I have no objection to a

* A Paper read by Mr. James Hudson, at a meeting of the Chiswick Gardeners' Mutual Improvement Association.

small proportion of bone meal, but in the case of plants that will last some considerable time, any stimulant added to the soil in the way of an artificial compound or of a natural manure is not advisable. Only where the peat and loam are of indifferent quality would I use either Their use will give far better results when the plants have permeated the soil of their last shift with vigorous feeding roots.

Firm potting is a most important matter, and it should always take a foremost place in the building up of an enduring stock. Too frequently the work of potting is not deemed anything more than a matter of secondary importance, part of the necessary work which must be done, but which is hurried through to get it out of the way as soon as possible. If the soil be good, and the potting indifferent, there will not be much to choose between this and inferior soil combined with good potting. In growing decorative plants that are to serve a useful purpose, we must not attempt to pot so many thousands, as some have been recorded to have done, in one day. Never to be induced to give any larger shift than the next size above the last, is a most important point to observe. If large shifts be given, the tendency naturally will be to promote a correspondingly vigorous growth, but this growth will not afterwards stand so long when the plants are subjected to rough treatment, nor will they be in a fit condition for use so soon after re-potting. It is of special note that the treatment of plants intended for purposes of decoration should start from their earliest possible stages. This being borne in mind and acted upon will give far better results.

There are two distinct phases of plant culture—that of growing plants which are to remain in their growing quarters, being advanced from stage to stage, until the specimen is reached, and that now under consideration. The two modes of procedure by which the best results are to be obtained are totally different. Following the lines which are best suited to result ultimately in a well-developed specimen, will not give the most satisfaction when applied to plants used for furnishing purposes. If a decorative plant is to withstand lower temperatures, and to endure other indifferent kinds of treatment, it must be hard and wiry looking,or to quote from those who take part in athletic pastimes, it must be "in training."

From the cutting stage,or whatever other mode of propagation be pursued, the endeavour should be to secure a compact and sturdy growth from the very start. If it be Croton cuttings, choose those as far as practicable that are short-jointed and of sturdy growth, single shoots of erect growth bring preferable, whilst good colour for the respective kinds is also an essential. (In starting, on the other hand, to grow a future specimen Croton I should prefer a cutting with less colour, but with lateral shoots, so as to gain time). If it be Dracaenas, do not let the plants draw one another up from the "eye" stage, endeavouring rather to secure shorter but sturdier leaves. In the case of Pandanus Veitchii, from suckers, take those of small grass-like growth in preference to larger ones, which latter would be better defined as plants without roots. Should they be Caladiums, then small or medium sized tubers are preferable to larger ones, these being started in as small a pot as possible. With Ferns it is the same; from the earliest stages, never over pot nor encourage too luxuriant a growth. In the case of Palms the same rule follows. Never over pot in the early stages, nor even later on. To imagine that a more rapid growth in the case of Palms will be had by potting, as it were, in advance, is a decided mistake. Many Palms I have noted thrive best when quite pot bound, provided they are watered freely. Other examples could be quoted, such as the Aspidistra, the Heath, the Indian Azalea, and the greenhouse Dracaena, in which over potting is altogether wrong. I quote another instance viz., that of Spiraea japonica, when newly imported; pot some of these in comparatively large pots, and others in smaller ones in which it is hardly possible to add any fresh soil, then afterwards note the difference in the leaf growth. In the latter case it will be considerably less, but the spikes will be quite as good as in the other instance. In this case the trade growers adopt the proper, or at least the more rational, method.

OVERCROWDING.

The evil of overcrowding young stock should be carefully avoided; this, of itself, is a fertile source of ultimate failure. In the trade, those who are specialists in certain things devote houses to one kind of plant. Note in some cases how thickly the plants are stood together. The object is, of course, to turn out the greatest possible number of plants, and for doing this none would, I think, cast any blame; but does it afterwards tend to satisfactory results? I think not. If Palms be crowded together the result is readily to be seen in the increased length of the leaf stalks. The same kinds of Kentia, Areca, Seaforthia, or Livistona, as cases in point, are in quite different character when crowded together. Some may think these plants more light and graceful but they are certainly not so enduring as others grown at a fair distance apart. These drawn-up plants when put to the test will fail much sooner, for reasons quite apparent, and in conjunction also with too liberal treatment at the roots. Frequently I have had my advice asked in the case of Palms that have failed, the immediate cause of which would be either less moisture or a lower temperature, but the actual failure of which was brought about by an impaired constitution, overfeeding showing its effects as it does sometimes in the animal world. Proportionately smaller pots would counteract this in a great measure.

No plants, not even those grown in cool houses, should be used for purposes of decoration until they have filled their pots with roots since their last shift. The neglect of this has been the cause of many failures, as it will continue to be if still persisted in. Take any stove plant for instance, such as a Croton, a Dracaena, a Pandanus, or a Palm. When it begins to establish itself in its recent shift, it will throw out stronger roots than previously Any check to these must act injuriously to the plant itself; and when once such a check has been experienced it is not so easy a matter to set things right again. Leave these or kindred plants, however, until they are once more thoroughly established with plenty of wiry or fibrous roots, so that the moisture in the soil is taken up freely; then there will be far less injury done to them. Immediately a plant is taken into a lower temperature than that in which it has been grown it will need closer attention in respect to watering, on the whole taking less. This lower temperature in the surroundings also means a lower temperature at the roots. In order, therefore, to prevent harm being done to these it is essential that they should not be too freely supplied with water; if they are, it means a lower temperature still. Supposing plants, therefore, to be used which have not had time to re-establish themselves, it means this—the roots, by reason of the lower temperature, cannot assimilate the moisture in the soil as they should do; hence in due course they receive a check—more or less—which must act to the prejudice of the plant, the soil being both wet and cold. If this continues, the roots will perish in proportion to the characteristic hardihood of the plant. Afterwards it will take considerable time to restore these plants to their former health and vigour, if ever it be done at all, the end being the souring of the soil.

(To be Continued.)

LILY OF THE NILE AND ECZEMA.

SOME time ago we published an account of the effect on the hands of some people who had much handling of the bulbs of Hyacinths. Dr. Morris, of Kew, exhibited raphides or needle-like bodies, consisting of oxalate of lime, taken from the hulbs of Hyacinths, at a meeting of the Linnean Society of London, on the 5th of Novemher last. Dr. Morris gave it as his opinion that these raphides were the cause of a form of eczema to which some people were subject, when working amongst bulhs, particularly Roman Hyacinths. As a result of this explanation, Mr. J. Y. Johnson, of Funchal, Madeira, sent a letter (which was read at the Linnean Society on the 21st ult) commenting upon Dr. Morris' exhibit. Mr. Johnson mentioned a similar case in Richardia africana, variously known as Lily of the Nile, Trumpet Lily, and Arum Lily in gardens and markets. The laundresses at Funchal tried to utilise the starch obtained from the tubers of this well-known garden plant, but complained of a disagreeable irritation it caused to the hands. On examination this was found to result from the presence of raphides in the tubers of the plant, and which had accompanied the extracted starch. Needle-shaped raphides are hard and very sharp, but microscopical in size, and therefore invisible to the eye. They are present in vast quantities in many plants besides Hyacinths and Richardias, but their presence is not felt except when the cells containing them are ruptured or broken. In the case of Hyacinths, this would readily happen by the crumbling up of the old and dried scales of the bulbs.

AN ANNIVERSARY APPEAL.

WHEN we are in distress how we cry for help, but when we are full with all manner of store how seldom do we think of the needy, the fatherless, and the widow. Now in this year of our beloved Queen's reign all the world seems anxious for a joyful demonstration of thankfulness to our Great Benefactor for all the blessings we enjoy, viz., peace, health, and prosperity. This shows a wise and true national spirit; but for us gardeners who have begun a good work—I say for us who have bugun—how many thousands have never yet begun to think of their needy brethren, but when distress comes or the loss of the breadwinner? Then the cry, I wish I had been thoughtful and frugal, to have subscribed my little to help the poor widow and orphans of that good, hardworking man, who has been taken from us, not being able to provide himself for the needy ones left to face the world and all the trials man is subject to.

I have long thought—in fact every Saturday morning I open the papers, expecting to see some well-written article, praying gardeners to lay this call to heart, and now in my humble way I have thought a more opportune time could not present itself for a little sacrifice to be made by all; and if I could but persuade every gardener in the United Kingdom to make this one effort to contribute seven and sixpence each this year what a grand total it would make for the Gardeners' Orphan Fund. I am afraid Mr. Wood's idea is too far-fetched to ever succeed; besides, our own duty as a craft is charity to our neighbours, not thinking so much about our own comfort, but to help those who have no means of helping themselves.—*Charles Penny.*

ARAUCARIA IMBRICATA.

IN DEVON.

I MEANT to have penned a few lines two or three weeks ago, but pressure of work at this busy season prevented me doing this. As you are aware, we have a very fine avenue of this noble Conifer, 500 yards in length, with a broad carriage drive running through. The distance of one row from the other is 58 ft., and the distance between each tree in the row is 50 ft. There are twenty-five on either side, and the average height is over 50 ft.

The highest we have is 53 ft., and is a male tree, with a spread of branches of 45 ft., and measures in circumference (the bole I mean) 10 ft. 2 in. at 1 ft. from the ground. We have one tree that measures 12 ft. in circumference at 1 ft. from the ground; this is only 50 ft. high.

The trees are well sheltered on the eastern and western sides, but exposed to the north and south winds. They were planted on raised mounds 10 in. or 12 in. above the surrounding level; and have been planted somewhere about fifty-four years. While some have lost their bottom branches, others are well clothed to the ground. They are only 90 ft. above the sea level here, and that probably accounts for their well-being. —*J. Mayne.*

IN YORKSHIRE.

A subscriber from Yorkshire writes us as follows:—"Your comments on Araucaria imbricata (Monkey Puzzle), as well as those of your numerous correspondents, are very helpful and interesting, as they show how the tree behaves under very varying conditions. May I be allowed to contribute my quota by saying that there is a beautiful specimen of it in the grounds adjoining Aldboro' Manor, the residence of A. S. Lawson, Esq. It stands 56 ft. high, and is furnished right to the bottom with hranches which have a great span, and they sweep the grass, Its girth at 4 ft. up is 5 ft. 3 in. I do not know its age. I have not seen any cones on it, but should say there are some. It is planted in a place sheltered from winds except from the east. The soil consists of a black loam on a gravelly subsoil."

IN BUCKS.

There is a fine tree of Araucaria imbricata in the beautifully wooded grounds of Lady Fortescue,

Dropmore, Bucks, and which is, in all probability, the finest specimen of this species in the kingdom. Mr. Herrin, the gardener, tells us that it was planted in 1830, and is now 72 ft. high, or over that figure, as it has not been measured recently. It is a shapely specimen, being feathered from the apex to the ground, with a straight and beautifully tapered trunk about 3 ft. in diameter near the ground where it thickens considerably. It frequently bears male cones in abundance, about the size of the seed cones of Pinus Strobus. The tree in question would be sixty-seven years old, and is fairly well sheltered by other trees.

FLOWER PICTURES AT THE SUFFOLK STREET GALLERIES.

At the end of last week, through the murky atmosphere of a wet day and the semi-liquid mud of the streets of London we wended our way to the Forty-second Exhibition of the Society of Lady Artists now being held at the Suffolk Street Galleries, Pall Mall East, S.W Saturday last was the private view, and this particular exhibition remains open to March 5th, at a moderate charge for admission. The show rooms are very commodious especially the large central gallery; but every corner is well filled, it being difficult to find sufficient space elsewhere for the annual exhibition of this society. The pictures include all sorts of subjects, and the artists exhibiting are particularly numerous. There are 319 pictures in water colours, and the "oils" run the number up to 518. Other rooms include pictures representing handicrafts, and the Royal School of Art Needlework, the pictures and objects running the number of exhibits up to 763. Naturally, we were most interested in the flower pictures, which are fairly numerous, and it is pleasing also to note how extensively flowers are utilised in the handicrafts and the needlework.

Water Colours.

Spring scenery is frequently represented, including Blue Bells at Oxney Court Woods, near Dover. Here Scilla nutans looks interesting in masses of blue beneath tall deciduous trees skirting a walk. "Almond Blossom" is also suggestive of spring, the sprays of blossom being accompanied by Primroses. "Spring in a London Garden" shows a confined area, consisting of a little bit of grass, with a large Cherry tree in full blossom, and the end of a greenhouse in view. Very pretty is "The Valley of Argélès in the Pyrenées," both the vegetation and the cloud-capped mountains suggesting a foreign scene. "Autumn Flowers" consists of beautifully-defined single Dahlias, Clematis, yellow Marguerites and Hibiscus syriacus, all of which are unnamed, but readily recognisable. "Christmas" is very suggestive, with its red and yellow-berried Hollies, Christmas Roses, Mistleto, and Solanum Capsicastrum in berry. "Daisies" would more properly be named Ox-eye Daisies, for "the wee, modest, crimson-tipped flower" is not intended. "Japanese Anemones" are even more effectively rendered than the previous picture. "On the Moors—Yorkshire" shows a delightful bit of the purple heather on rising ground. The picture entitled "Berries," though moderate in size, is effective and pretty. The berries consist of Elder, Guelder Rose, Sloe, and Honeysuckle, accompanied by flowers of the latter, and would suggest the month of August or September.

Garden, field, wood, wayside, and mountain have been ransacked to furnish studies for the artist; but amongst representations of native flowers, none is more sweetly pretty than that entitled Meadowsweet. Intermingling with the blossoms of the latter are the Harebell, the Gray Heath (Erica cinerea), Honeysuckle and grasses on a ground colour of a slaty-drab hue. Nothing is either too crowded or too loosely arranged, but very natural. Poppies hardly ever escape the eye of the artist, and on this occasion we noted representations of the Corn Poppy, Iceland Poppy (in yellow, orange and white colours), and a vase of the double Papaver Rhoeas, differing from Shirley Poppies only in being double. Their large flowers and well-defined colours are well adapted for artistic representation; and we think water colours best and most clearly bring out their characteristics. The picture named "Carduus beatus" (or Blessed Thistles), represent a Carlina, possibly C. acanthifolia, forming a colony on the rocky ground of a steep hill or mountain side. There are several pictures of Pansies, but none of them is more clearly defined than that representing a bunch of the Peacock strain, now so well known in gardens, and here accompanied with a few yellow Pansy flowers. Two pictures of Michaelmas Daisies show how well adapted this autumn class of garden flowers is for the painter's art. Indeed, we liked them better than a more ambitious and larger picture of Chrysanthemums. It would not be different to determine the species if the sprays had been longer and more individualised. In a corner of the large room are pictures suggestive of spring, summer and winter in the shape of Daffodils, Iceland Poppies and Christmas Roses, respectively. "Where the Bee Sucks" represents a florid display of hardy garden flowers in borders skirting a walk. We have noted very similar garden scenes in reality.

Oils.

To the untrained eye, that is, to the eye of the ordinary observer, the brightness of the colours of flowers is often obscured; but there are exceptions. Fruit lends itself very well to paintings in oil. "Fresh Gathered" is the title of a small but attractive picture of Raspberries, beautifully and naturally represented with wasps as unbidden guests. The large white flowers of Convolulus sepium, accompanying the Raspberries, are also very clearly defined. A bunch of crimson and pink Carnations is neat, but the colours, at least in the dull light of a winter day, are not clear. "Under the Window" refers to a large bunch of flowers of a white variety of the Indian Azalea, and another of Acacia dealbata, both of which are very well executed. "Roses on Prairie" would suggest an American scene, where the wild Roses, tailing on the ground, are covered with a profusion of rosy-pink flowers. On the other hand "Girasole" would seem to suggest an Italian scene, and represents a girl standing under some tall Sunflowers, Girasole being their Italian name. "Hortus siccus" means a dry garden, but is most usually applied to a herbarium or collection of dried plants. Here it is made to do duty for the ripe and open seed pods of Iris foetidissima, the Winter Cherry, Thistledown, &c., forming a large bunch against a dark background. The whole forms a bold and unique picture of a great value, for a considerable amount of time must have been spent in its execution. "Strayed" represents a lamb which has strayed into a semi-wild portion of private ground from the neighbouring Gorse-covered common. Springtide is otherwise evident by the Primroses, Bluebells, Gorse, and Sloe blossom. "A Lily Garden" shows a central walk skirted on either side by Lilium candidum, Poppies, &c. "Dog Roses" is a small, but perfectly natural and well-executed picture of sprays in a bowl.

Some of the names or titles given to the pictures are very fanciful. Others have a motto rather than a name, such as those designated by "She has two eyes, so soft and brown. Take care!" and "Cross-patch, draw the latch, Sit by the fire and spin." The secretary of the Society of Lady Artists is Miss Fanny E. Partridge, who is in attendance at the Suffolk Street Galleries.

CULTURAL DIRECTIONS FOR SWEET PEAS.

"They that be whole need not a physician, but they that are sick." These directions are specially for those who are discouraged in trying to grow Sweet Peas. All the rules necessary for those who have favourable conditions of soil and climate can be put into a dozen lines. If you are one of those who have had success and you know how you did it, do not change your method.

But are you troubled with your vines dying all the way from the time they are 6 in. high, or even vines that have begun to bloom? And do you have a hard fight with cut worms? And have you failed from any other cause? I should be a "quack" if I pretended to know all the causes and all the cures, but these directions are once more prepared with great confidence in their virtue.

1. Catch this—We must abandon the trench method of planting Sweet Peas. The trench method was used to secure deep planting, and the substitute for deep planting is *firming the soil*. Since the trench method apparently causes the blight, we must stop it. Sweet Peas do best in a heavy soil, and you can get very nearly the same effect if your soil is light, by *firming it*. Plant if possible in your vegetable garden where the soil has been deepened and enriched in past seasons. And if where your row comes it has been newly spaded, *tread it down* considerably before planting. This treading will hollow out the place for your row about right (tread enough so as to hollow it about 2 in. deep and 2 ft. wide) and it will thus collect moisture, and by its compactness will hold it. In this hollow, scratch the lines for your seed 1 in. deep, covering them only this 1 in., and firm the ground above the seed with a garden roller or its equivalent. Your seed will thus be in this hollow, and when they come up do not fill in any earth about them, at least for six weeks. Every time you hoe, firm the ground compactly about them, and don't let moles loosen it up. You will notice that vines that come up in the well-trod path do not have the blight. This method applies to light soil in which the blight is troublesome. In the case of heavy soil, it settles soon of itself, and the surface of it must of course be kept from baking. In either case, after the buds begin to appear, put on a light mulching to shade the ground.

But in thus abandoning the trench method do not fail to have a soil of at least 12 in. of good loam, properly enriched. If you do not have such a place in your garden it may be necessary to dig a trench and fill in with good material. If you do, make it of good depth and liberal width, and put well rotted compost or tobacco stems in the bottom, covering with 8 in. of soil, and *tread down well every layer so as to have a firm bed.* Or such food as wood ashes or bone flour may be profitably worked in. As to using phosphate, it is so quick in its effect that a good time to apply it is just when buds begin to form. If you thus fill in a trench, fill it compactly within 2 in. of top and proceed as above.

But if you want to learn the art of floriculture, you must begin in the fall. Our high-class flowers will more and more be subject to diseases and insects. It must be a cardinal doctrine to *doctor the soil* instead of waiting till plants are sick. Begin as soon as the flowering season is over. Burn old rubbish where the ground has been infested with insects. Freeze them out by spading just before winter. A safe quantity of salt can be put on in the fall (four quarts to the square rod, once in three or four years). Break up some unslaked lime, and bury it in a shallow furrow so the fumes and heat will permeate the soil. Gas lime can be used in the same way. All this is fall treatment for ridding the soil of insect pests and fungus diseases. Once catch the idea of doctoring the soil in the fall and it greatly aids your summer work. But such rank medicine must be applied long before the tender plants start.

2. Now, next to the blight, the cut worms are the most serious enemy of the Sweet Pea. If you have not given your ground vigorous fall treatment, and the cut worms are likely to be on hand, try planting alongside of your rows something inexpensive that they like. Try Lettuce seed or the old Sweet Pea seed that you saved, hoeing up what is left of it after all danger is past. Mix a water pail of dry bran and a tablespoonful of Paris green, and a handful of sugar, and sow this along the row. But the worms should also be hunted out, by early morning visits. They will almost always be found just hidden under the surface near where they have cut off a plant.

3. Quantity of Seed.—Of common seed, use about 1 oz. to 10 ft. of double row. But after all danger of blight and worms is past the plants ought not to stand nearer than 3 in. apart.

4. Eckford's sealed packets must, in our vigorous northern climate, be planted in boxes under glass, or in the house and transplanted.

5. For supports use either strong birch brush or some form of wire trellis, bearing in mind that Sweet Peas have a branching habit and do not like to be cramped. Brush should be cut 7 ft. long and set firmly in the ground.

6. Watering should be done sparingly previous to the time of bloom. After they begin to bloom, the vines are ready to feed and drink freely, and liquid manure or suds can be profitably used.

7. A new insect, very much like the red spider, but apparently a louse, and hardly visible to the naked eye is now troublesome. You will detect its presence by the whitish spotted look of the leaves from the base of the vine, up. The vigorous use of the hose with spray is the simplest treatment, but if taken in time, a tobacco tea will be effective. Ask your florist how to make and apply it.

8. Some necessary points.—Gives your vines a sunny location. Guard against tree roots that rob of food and moisture. Plant the earliest day that you find the frost out of the ground, the earlier the better, although an exception may be made of the *white seeded* varieties, which are apt to rot if planted too early. Run your rows north and south. Let no pods stay on the vines.—*W. T. Hutchins.*

[The above directions for the successful growing of Sweet Peas was written by the Sweet Pea specialist, the Rev. W. T. Hutchins, Indian Orchard, Mass., U.S.A., and forms a part of his "Sweet Pea Annual for 1897," in which he imparts many useful hints to cultivators or would be successful growers of this popular race of garden plants. The cultural directions apply specially to the prevailing climatic conditions of the northern parts of the United States, but they can be applied to cultivation in the United Kingdom, and to the drier southern counties in particular, as our experience tells us. We had the pleasure of meeting the Rev. W. T. Hutchins, on more than one occasion when he visited this and other European countries in 1895; and we had ample evidence that he was a great enthusiast in all that pertained to Sweet Peas.—Ed.]

LIVERPOOL HORTICULTURAL ASSOCIATION.

The annual meeting of this Society was held on the 30th ult., at the Free Library, Mr. Thos. White in the chair. The report for the year refers to the improvement in the financial position, which was attributed to the fact that the members decided to hold only two shows, and thus strengthen the financial position. The Committee regret the small attendance at each of the shows; that for the spring admissions was by ticket 1,800; by payment, 692; autumn by ticket, 2,317; by payment, 2,932; total, 7,741.

The spring show was considered as one of the best held under the auspices of the society, whilst the autumn still maintained its reputation as one of the finest held in the provinces, and this may be attributed to some extent to the action of the committee in making a special effort in providing a fine Silver Challenge Vase for competition.

The statement of accounts shows an income for the spring show, by cash and tickets sold, of £32 8s. od; special prizes £9 2s. 6d; entrance fees &c., £6 18s. 6d; total £52 9s. od. The payments were, in prize money, £91 3s. od; hire of hall, £37 16s. od; band, advertising, printing, staging, &c., £106 16s. 10d; total £229 11s 10d; loss, £177 2s. 10d. Autumn—by cash and tickets, £167 4s. 5d; special prizes, entrance fees, &c., £19 5s. od; total £186 13s. 5d. The payments were, in prize money, £144 18s. 6d; hire of hall and staging, £50 16s. od; music, advertising &c., £91 5s, 9d; total £286 10s. 3d.

General account – balance in hand, £58 17s. 10d; subscriptions, £395 5s. 8d; advertisements, &c., £11 14s. 4d; total £465 17s. 10d; payments in excess at the spring show were, £177 2s. 10d; summer show, £99 16s. 10d; salaries, £46 6s. od; subscription &c., the Gardeners' Benevolent Institution, and Orphan Fund, £5 5s. od; stamps, stationery, &c., £32 17s. 9d; balance Jan., 1897, £101 9s. 5d. The officers elected were—president, the Lord Mayor, of Liverpool; hon. treasurer, Win Fletcher Rogers Esq.; sub-treas., Mr. G. Blackmore; and secretary, Mr. W. Dickson.

Resolutions were passed that two shows be held during the ensuing year, viz., summer and autumn. The usual sum of five guineas was voted for the gardening charities, and the committee was requested to consider in what way the society can best help the proposed special Jubilee fund, in connection with the Gardeners' Royal Benevolent Institution.

The Teak Tree (Tectona grandis) forms but a small proportion of the forests of Burma, and that only as an upper story, so to speak. It likes an abundance of light, and accordingly, always grows in association with lower growing subjects, frequently with Bambcos of 30 ft. to 60 ft. in height, which form the lower story or undergrowth of the forest. The Teak trees often have a severe struggle in their earlier stages with their Bamboo associates, but after they get clear above the under growth so asto get the benefit of light, the Bamboos may then be regarded as their friends and useful companions. This is the experience of Sir Dietrich Brandis, K.C.B., F.R S., who has made a communication to *The Garden and Forest* on the subject.

READING AND DISTRICT GARDENERS' MUTUAL IMPROVEMENT ASSOCIATION.

The annual tea of this Association was held in the Abbey Hall (lent by Messrs. Sutton & Sons) on Monday evening, the 25th ult., when the newly-elected president, Mr. C. B. Stevens, presided. The party numbered about 100, including Mr. T. Neve (chairman of the Association) Mr. Dearlove (vice-chairman), Mr. James Martin (librarian), Mr. J. Pound, Junr. (hon. sec.), Messrs. Woolford, Turton, Dockerill, Atter Smith, Silver, Bright, Spencer, Stanton (Henley), Townsend (Wellington College), Webb (Beenham), Wise (Blackwater), Callaghan (Wokingham), Galt (Aldermaston), Chamberlain (Shinfield), Pcund, Farey, Collins (Caversham), Bearfoot (Mortimer), Prince (Aborfield), and Simmonds (Bearwood). After justice had been done to an excellent repast, the president read letters which had been received apologising for the unavoidable absence of Mr. Arthur W. Sutton, ex-president, the member for Reading (Mr. C. T. Murdoch), the Rev. Alan Cheales, Mr. M. H. Sutton, Mr. M. J. Sutton, Mr. G. W. Palmer, Mr. Herbert Sutton, and Mr. S. B. Stevens.

The second part of the meeting was a new departure as far as the Gardeners' Association is concerned. It was thought advisable to try and save the expense of engaging professional talent to carry out the entertainment, and to have a smoking concert, the programme to be sustained by the members, and with one or two exceptions, this was done. The new arrangement proved a great success, and was pronounced to be one of the most enjoyable entertainments ever held by the Association. In an interval in the programme, Mr. T. Neve took the opportunity of proposing a hearty vote of thanks to the president. This was seconded by Mr. Dearlove, and carried unanimously. Mr. G. B. Stevens in reply, thanked the members for the great honour they had done him in electing him their president for the year 1897, and said that although a stranger to most of them he hoped this would not long remain so. He confessed that he knew but little of the practical part of gardening, yet he knew that the gardener's was one of the most difficult of crafts, requiring a great amount of forethought, care, and knowledge, and he considered that these social meetings, and their meetings devoted to lectures were most valuable, as they enabled them to know each other better, and to obtain knowledge from one another, which would help them in their work, and in their association.

The programme was as follows:—Song, "Nancy Lee," Mr. J. Woolford; song, "My Old Friend John," Mr. James Martin; recitation, "Faithful unto Death," Mr. C. Bush; song, "The King's Own," Mr. Fitz Wren; banjo solo, Mr. J. Burness; song, "The Muddle Puddle Porter," Mr. H. F. Simmonds; song, "Peter Piper," Mr. A. F. Bailey; song, "Tom Bowling," Mr. J. Martin; piccolo solo, "Austria," Mr. Jacobs; song, "Where did you get that Hat," Mr. H. G. Cox; song, "The Scapegoat of the Regiment," Mr. Dell; song, "My Pal John," Mr. Fisher; song, "Our Jack's Come Home To-day," Mr. Fitz Wren; recitation, "Turn Him Out," Mr. C. Bush; song (banjo) "Eleven Hundred and Eleventy Eleven," Mr. J. Burness; song, "The Old Log Cabin," Mr. C. Burton; song, "Free and Easy," Mr. J. Martin. Accompanists, Messrs. Stevens and Burness.

GARDENING MISCELLANY.

HOYA CARNOSA VARIEGATA.

Hoya carnosa is an old favourite, and is often met with in varying conditions of health and vigour. The variegated form is more of a rarity, and it is not often that we see it. It is, however, a vastly pretty plant. Mr. Iceton has a healthy young specimen of of it in his establishment at Putney. It is growing in a rather higher temperature than that usually given the type, and this may account for the increased vigour. The habit of the plant is exactly that of H. carnosa, but the leaves are longer and narrower, being lanceolate, in fact. They are prettily mottled with blotches of yellow-white, which throws into relief the deep shining green of the greater part of the leaves. From its foliage alone H. c. variegata would be worthy a place in the stove.

ANTHURIUM ANDREANUM ATROPURPUREUM.

As seen in the stove at Kew the flowers of this Anthurium are remarkable for the deep colouring of the spathe, which may be described as being black-crimson. It is large, of great width, and as long as or longer than the spadix. The latter is tinged with yellow for a considerable distance below the tip. The leaves are narrowly cordate, about a foot in length, by 6 in. in width. This whole plant is possessed of a noble and distinct appearance.

SPARMANNIA AFRICANA FLORE PLENO.

The single form of this old introduction from South Africa is well-known in many gardens where it is grown as a greenhouse or conservatory subject. The double form is rare, for we do not remember seeing it till recently when it was flowering in the houses of T. McMeekin, Esq., Falkland Park, South Norwood Hill. We regard it as superior to the type, inasmuch as the flowers are perfectly double, resembling at a short distance a good truss of a double variety of Deutzia scabra. The great brush of curious looking stamens occupying the centre of the single form is very conspicuous Imagine then that all these stamens, or most of then, have been changed into white petals with a claret midrib and a golden-orange base, and you then get an idea of what the double form is like. White is the dominant colour; the claret midribs give a purplish tint to the centre, and the orange base is scarcely noticeable unless the petals are pushed aside to get a glimpse of the interior. It should be useful for cut flowers.

MYOSOTIS ALPESTRIS NANA.

Already there are several varieties of Myosotis alpestris in cultivation, including the beautiful and well-known Victoria with fasciated flowers, having numerous segments; also a variety with white flowers, and another, the blooms of which retain their primary rose colour as long as they continue fresh. Judging from a figure of M. alpestris nana in the *Revue de l'Horticulture Belge* for January, the plant is so dwarf as to resemble the alpine gem Eritrichum nanum belonging to the same family. In speaking of Myosotis generally, M. Fréd. Burvenich, père, says, "In the language of flowers, these speak to you, while looking at you from their beautiful celestial blue eyes: 'Love me! do not forget me! remember me'; and one cannot refrain from replying to them: 'The more I see you the more I love you, little blue one.'"

A NEW FRUIT.

Under the name of Casabanana, Mr. S. L. Watkins, Grizzly Flats, California, describes in *American Gardening*, what he considers a new fruit of great value. Botanically it is known as Sicania odorifera, and belongs to the Cucumber family, but might rather be compared to the Melon, seeing that it is utilised in the ripe state for making preserves, for which it is said to be very superior. The fruit is about 18 in. in length and 3 in. in diameter, becoming of a brilliant red when ripe, and possessing a strong Pineapple fragrance. In an unripe condition it enters largely into the making of various kinds of curry. The plant thrives under similar conditions to those accorded the Melon. It is a climber which will attain a height of 50 ft. in a season. The writer says that, in warm countries, the seed may be planted where it is to fruit in the open ground, but in cold climates it must be started under glass and planted out when the weather becomes fine. Whether it would succeed in the open ground in any part of Britain is a question, but it might very well be tried both under glass and in the open air by some enterprising gardener or grower.

OBITUARY.

Mr. Alexander Curle.—It is with much regret we have to announce the death of Mr. Alexander Curle, which on 5th January took place very suddenly at his beautiful residence of Priorwood, just overlooking the ruins of Melrose Abbey. Under its shadow he was laid to rest with all the honour his native town could give him, for over 300 mourners formed the funeral procession. Many women and children respectfully looked on from the churchyard railings, the bells of the Abbey and parish church were tolled, shops were closed for an hour, and the

whole town had a solemn Sabbath morn appearance. Space will not permit us to give details, we can only say these tokens of respect were well deserved. Mr. Curle took a keen interest in all matters pertaining to art, archaeology, agriculture and botany, and he had an observant eye for all things beautiful in nature, but it is more in our province to refer to him as a horticulturist. All his life long he loved his garden, that purest of human pleasures as Bacon styles it, and each month of the year brought with its buds or its blossoms a new interest for him—the yellow Crocuses, the Daffodils in all their exquisite varieties, and the Irises, were his favourites in springtime; the treasures of his herbaceous borders and the Roses occupied his attention in summer, while in autumn with the Carnations he would turn to his fruit trees.

About eighteen years ago he commenced the culture of Orchids with a good general collection. Cattleyas were his favourites and he was fortunate in securing some very fine varieties, his motto being that a good plant required as little space and attention as an indifferent one. Cypripediums and Masdevallias were his next specialties, and of these he has left a very fine collection. He was successful in crossing Mas. macrura with Mas. tovarensis, which has produced a lovely hybrid named in his honour Masdevallia Curlei.

Unlike many specialists he had a capital knowledge of all classes of horticulture, and his whole garden and grounds were an interesting study. He also paid special attention to the culture of fruit trees, and was well versed in their adaptability for various soils and temperatures.

We cannot close without referring to the willingness with which he placed his extensive knowledge at the disposal of any one, and the kindly welcome he gave to all who cared to see his garden, or were interested in his plants. But his unselfishness did not rest there, for, amongst many other charitable deeds for which his memory will long be cherished, he was most generous in sending flowers and fruit to those in sickness and trouble.

QUESTIONS AND ANSWERS

**** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Cubic Contents of Houses.—*J. W., Ealing*: In the case of house No. 3, which is 16 ft. long, 10 ft. high, 12 ft. wide, and 7 ft. to the eaves, the contents are 1,632 cubic feet. To get this multiply 16 by 12, and the product by 7. This will give you 1,344 cubic feet as the contents of the house up to the eaves. To get the contents of the top of the house, multiply 16 by 12 by 1½, which will give you 288 cubic feet, and that sum added to 1,344 cubic feet will give the contents of the whole house. The height of the house to the eaves is 7 ft., and that subtracted from 10 ft. (the whole height) leaves only 3 ft. as the height of the roof portion. The area of the roof portion being of triangular form it is necessary to take the half of 3 ft., namely, 1½ ft. as used above. In the same way you may find the cubic contents of house No. 4, which amount to 3,960 cubic feet. The two different heights to the eaves are curious, but add the two and you will find that 6½ ft. is the average, leaving 3½ ft. for the height of the roof portion. The floor of this house cannot be level. The cubic contents of house No. 1, are found in the same way as No. 3 and 4, by taking the lower portion of the house up to the eaves. The body of No. 1 will be 34 ft. multiplied by 12 ft. by 5½ ft., the latter being the height to the eaves. The roof portion will be 34 ft. multiplied by 12 ft. by 2¼ ft., the latter being half the height of the roof. The two sums added together will amount to 3,162 cubic feet. House No. 2 will come to 3,348 cubic feet.

Bedding Arrangements.—*Diagram No. 1*: The general arrangement of the plants in the bed, of which you furnish the diagram, should answer very well, if the details are properly attended to. You do not tell us either the height or colour of the new Begonia semperflorens compacta. If particularly dwarf, the four circles marked No. 3 should be slightly elevated so as to stand clear above the groundwork of Pelargonium Robert Fish. We presume the colours of the Begonia and the Pelargonium do not clash by showing to close an approach. By having these isolated circles sufficiently elevated above the groundwork, it would do away with the monotony of a flat bed, and show off the flowers of the Begonia to better advantage. You can also ensure this to some extent by pegging down Pelargonium Robert Fish, when planting it out in spring. We think a more telling effect would also be produced by planting a double line of blue Lobelia, as an outer edging, unless the moistness of the climate of your district causes Lobelias to grow rankly.

Hydrangeas in Tubs for the Open Air.—*T. West*: There is no necessity to hurry them on, nor even to start them as yet. A cool, well ventilated greenhouse, when the weather is favourable, is the best way of keeping plants of this class through the winter. Let the plants come on of their own accord as the temperature outside rises in spring. The plants under those conditions will be relatively hardy, and should be place out of doors in a sheltered position, but properly exposed to light and air as soon as the state of weather will permit without damaging the young foliage. Give an abundance of water when the plants are growing vigorously and the weather is warm. The wood will be short-jointed under those conditions, and the flowers more durable when they expand, than if growth had been hurried on. Place the plants in their summer position, if you like, from the first time of standing them out, or as soon as they are properly hardened. Give assistance with weak liquid manure when the trusses of bloom make their appearance.

Sowing Seeds of Maize.—*J. Alexander*: The first week in March would be a good time to sow seeds, as you would then have three clear months to grow on the seedlings before planting them out in June. But you should calculate upon having plenty of room to grow as many plants as you require and shift them into larger pots as this becomes necessary to prevent drawing them up in a spindly condition or checking free growth. They grow fairly rapidly when they have made a start and should not be allowed to get pot-bound. Better sow the seed a little later than allow that. The object in sowing early is to get a long growing season for the plants to make good growth and form large cobs. They are not particular as to soil, and should not be planted in too rich material in this country or growth may get too vigorous, and the flowering period retarded.

Propagating Ficus elastica.—*J. M'M.*: Yes you can do this by taking the eyes with a leaf attached, inserting each eye separately in a thumb pot, securing the leaf to a stake and plunging the pot in bottom heat. It takes some time to get plants of a useful size by this method, although you can quickly increase the number of your plants thereby. A better plan is to have a few old plants about the place for getting side shoots. Take the plants that have got too tall for you, and make a cut in a slanting direction, inwards and upwards, much in the same way as you would a Carnation layer, at a point sufficiently below the top to leave enough to form a useful plant as soon as rooted. Put a peg into the cut to keep it open; then bind some sphagnum round the cut and keep the moss moist till the top has rooted. Place the plants so treated in a warm or intermediate house. When rooted cut off the tops below the roots and pot the plants firmly. Retain them in heat till the roots take good hold of the soil. Some propagators push the point of their knife right through the stem, keeping the cut open and treating otherwise as above stated.

Names of Plants.—*F. Parker*: 1, Lomaria gibba; 2, Vitis (Cissus) discolor; 3, Allamanda sp. possibly A. neriifolia, but send flowers; 4, Onychium japonicum; 5, Fittonia argyroneura; 6, Appears to be Cyrtomium caryotideum, but the small specimen bears no spores, and is otherwise imperfect.—*J. C.*: 1, Panicum plicatum, apparently 2, Selaginella Martensi; 3, Selaginella emiliana; 4, Chlorophytum elatum variegatum; 5, Selaginella caulescens minor; 6, Selaginella Martensi robusta.—*Croton*: 1, Croton Queen Victoria; 2, Croton not recognised; 3, Appears to be Croton Youngii. It is difficult to name garden varieties of Crotons, being purely a matter of memory, unless one had a good collection of living specimens for comparison.—*T. W.*: 1, Erica carnea; 2, Choisya ternata; 3, Daphne odora; 4, Laelia anceps, a good variety.

Communications received.—A. D. Webster.—E. C. (possibly next week. It requires investigation).—Wm. Paton.—Ed. Webb & Sons.—C.—W. C.—A. L. K.—Eddie.—J. A.—M. T.—S. H.—B.—W. Johnson.—M.T.—Alfred.—Enquirer.—Woods.—N., Lewisham.—Y. G.—Amateur.—S O. L.

TRADE CATALOGUES RECEIVED.

JOHN E. KNIGHT, Seed Stores, Dudley Street, Wolverhampton.—Seed Catalogue.

W. ATLEE BURPEE & Co., Philadelphia, Pa., U.S.A.—Wholesale Price list of Garden, Farm, and Flower Seeds (for the trade only); also The Best Seeds that Grow (for Market-Gardeners and Florists).

W. T. HUTCHINS, Indian Orchard, Mass., U.S.A.—Hutchins' Sweet Pea Annual for 1897.

ED. WEBB & SONS, Wordsley, Stourbridge.—Webbs' Annual Catalogue of Farm Seeds, Manures, &c.

LONDON SEED TRADE.

February 2, 1897.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a slow trade in Agricultural seeds. Red Clover is in full supply. White Clover also offers more freely, at easier rates. Alsike and Trefoil dull. Ryegrasses firm.

COVENT GARDEN MARKET.

February 3rd, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bnshel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs.	50 0	
Grapes, per lb	1 0	1 9
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.		
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
ArtichokesGlobe doz.	2 0	3 0
Asparagus,per bundle		
Beans, French, per half sieve	2 6	2 9
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	
Cucumbers per doz.	1 6	3 0
Endive, French, doz.	1 6	
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 6	
Seakale...per basket		
Smallsalading,punnet	0 4	
Spinach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Turnips .....per bun.	3 0	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	4 0	6 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 9	1 0
Bouvardias, per bun.	0 6	0 9
Carnations doz.blms.	1 6	3 0
Chrysanthemums, doz. blooms	1 0	4 0
Chrysanthemums, doz. bnches.	3 0	6 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	4 0	8 0
Geranium, scarlet, doz. bunches	6 0	9 0
Hyacinths (Roman) doz. sprays	0 6	1 0
Lilium longiflorum per doz.	4 0	8 0
Lilac, White (French) per bnch.	3 6	5 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
MaidenhairFern,12bs.	4 0	8 0
Mimosa, per bnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums,12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 0
Roses (Indoor), doz.	1 0	1 6
" Tea,white, doz.	1 0	2 0
" Niels	6 0	9 0
" Safrano	1 0	2 0
" (English),		
Red Roses, doz.	1 0	1 6
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	4 0	7 0
Tuberoses, doz. blooms ...	1 0	1 6
Primula, double, doz. sprays	0 6	0 9
Poinsettia, doz blms.	4 0	9 0
Violets (French) per doz. bnches.	1 0	1 6
Violets (English) per doz. bnches.	1 6	2 6
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per bnch.	2 0	3 0

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Azalea, per plant.....	2 0	3 6
Chrysanthemums, per doz.	6 0	9 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis,doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens,Invar.doz	6 0	24 0
Erica Hyemalis, per doz.	12 0	15 0
Erica, per doz.	9 0	12 0
Ferns, invar.,per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	10 0	15 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety,each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Poinsettia, per doz....	9 0	18 0
Solanums, per doz.	9 0	12 0
Tulips, doz. pots.....	6 0	9 0

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PRIZE STRAINS OF

PRIMULAS.

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2s. 6d. and 5s. per packet, post free.

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2s. 6d. and 5s per packet, post free.

Where cut flowers are in demand, either for table decoration or for button-holes, these handsome new varieties will prove of the greatest value. Owing to the length of time the blooms last, they are also of great service for the conservatory.

WEBBS' NEW FIREFLY.
A beautiful Primula of compact habit of growth, and very floriferous. Its dark velvety crimson blooms are large in size, of good form and substance, and finely fringed.
2s. 6d. and 5s. per packet, post free.

See Webbs' Spring Catalogue, Post Free 1s.

WEBBS', Wordsley, STOURBRIDGE.

CARNATIONS.—See FORBES' NEW CATALOGUE, 1897, over 140 pages, for the best Malmaison. Tree, Border and Show Carnations and Picotees, including the oft-certificated "Buccleuch Clove" and "Yuletide." Free on application.—JOHN FORBES. Nurseryman, Hawick, Scotland.

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Seed saved from prize plants. Choicest mixed single or double varieties, 1s., 2s. 6d., and 5s. per packet; collections (seed) single, 12 named varieties, separate, 5s. 6d.; 6 ditto, 3s. Tubers, named singles, from 18s. to 50s. per doz.; choicest seedlings, 3s. to 30s. per doz.; bedding, choicest, 3s. to 9s. per doz.; choicest named doubles from 18s. per doz.; choicest seedlings, 6s. to 30s. per doz.; choicest mixed for bedding, 9s. to 18s. per doz. Catalogues gratis.

JOHN LAING & SONS, BEGONIA GROWERS, &c.
FOREST HILL, LONDON, S.E.

GOLD MEDAL BEGONIA SEED.

I can recommend this with every confidence as the finest Begonia Seed ever offered, being saved from specially selected varieties, with sturdy habit, round flowers of good substance, and size. I GUARANTEE this to be the same quality that I sow for myself, and the packets are made up in liberal quantity for money.

SINGLE ... ... per pkt., 1/-, 1/6, and 2/6.
DOUBLE ... ... per pkt., 1/6 and 2/6.

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Godfrey's Chrysanthemum Cuttings and plants produce better results than others, is because of the fact of their being grown in an exceptionally favourable climate and situation. The stools are kept in Roomy and Un-heated houses within a "stone's throw" of the sea.
With such surroundings can the growth help being strong and sturdy? Again many thousands of strong healthy plants are now standing in Un-heated houses ready for dispatch "QUALITY" is Godfrey's Motto, not a quantity of weak and sickly stuff, quickly propagated in heated houses with the object of quoting seemingly low prices. Catalogues Post Free.

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CARTERS MODEL CUCUMBER.
Many so-called new Cucumbers are brought forward every season, but little is heard of them afterwards. This fine variety still maintains its position as the handsomest in shape, the best in flavour, and the finest in cultivation.
In sealed pkts., price 2/6 and 3/6 each, post free.

CARTERS HOLBORN MODEL LEEK.
Grand, both for exhibition or table. A Welsh customer says: "They are the best we ever had."
In sealed pkts., price 2/- each, post free.

CARTERS RECORD ONION.
The largest Onion grown. A customer writes: "I cleared the whole roost in the Onion competition with 'Record.'" We have seen a specimen bulb that weighed 4½ lb.
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The very best for open-air cultivation we know of. Should be grown by everybody.
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A veritable giant, both in length and rotundity. Specimens exhibited at our establishment measured 2½ feet in length.
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The finest first early wrinkled marrow in cultivation, 2/- per Quart.

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The best for exhibition, 2/- per Quart.

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Unequalled for crop and quality as a forcing Bean, 2/- per Quart

Renton's Monarch Leek.
The best Leek for exhibition, 1/6 per Packet.

The Earl's Favourite Melon.
Green flesh; a sure prizetaker, sets freely, and does well in a cool house, 1/6 per packet.

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Queen's Seedsmen,
EXETER.

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, FEBRUARY 13th, 1897.

THE NEWER TYPE OF INCURVED CHRYSANTHEMUMS.—We were not a little suprised at the attitude taken by the Floral Committee of the National Chrysanthemum Society, during the months of November and December last, with regard to the newer type of incurved Chrysanthemums, represented by the popular C. H. Curtis, J. Agate, and Mrs. R. C. Kingston. These three do not, however, seem to have been under dispute; but we fail to see in what particular respect they differ from Duchess of Fife, Miss Louise D. Black, Perle Dauphinoise, and various others whose right to be included amongst incurved Chrysanthemums has been seriously disputed. We can admire the consistency of those who would zealously defend established canons and rules against violation by innovations that would be productive of chaotic disorder, where order should reign. The idea seems to have gained ground last autumn that a serious innovation was being made by the admission of varieties having something of the Japanese element in them, amongst the true old type of incurved Chrysanthemums. There seems also to be an impression that members of these two sections have been intercrossed thereby, breaking down the barrier between the two types. We think it hardly necessary to assume that such a thing has been done, thereby resulting in intermediates, though we do not deny that it might have been done. The two sections had one origin; or in other words we may say that

the incurved or so-called Chinese race was developed from forms that would be classed amongst Japanese varieties at the present day. From this point of view it can hardly be argued that the two races are so fundamentally and constantly distinct that neither would give rise to a variety (without intercrossing) that could with propriety be classed in the other section. We think it quite possible in batches of seedlings; and more easy for either incurved or Japanese varieties to give rise to forms, in all respects intermediate between the two sections.

To return to the innovation, we consider that if any has been made, it was the admission of the varieties first mentioned above into the incurved section. This was done by a majority of the voters of the Floral Committee of the N.C.S., when First-class Certificates were accorded C. H. Curtis and James Agate. As the event has proved, it is now too late in the day to enter a protest against the admission of these and others of similar type amongst the incurved section. Chrysanthemum growers and exhibitors all over the country are enamoured of these so-called new forms, as was evident by a simple examination of the premier stands at the Jubilee Celebration of the N.C.S., during the first week of November last, and a fortnight later in the Scottish capital, when Duchess of Fife was sanctioned as a true incurved variety by the judges, as was duly recorded by us at the time. A few dissentient voices might have been heard, but we are always prepared for such an occurrence. If the varieties in question be examined, it will be seen that they differ in no essential particular from the older types of incurved Chrysanthemums, except that the florets are slightly more pointed. But the gradation is very easy and natural if we look at Mrs. R. C. Kingston and then Princess of Wales. There are certainly rougher or looser types included in this section than several of those concerning which the dispute arose—varieties, in fact, that require to be taken from the second crown bud to get them in proper exhibition form. If the skill of the cultivator can get over a difficulty in this way, it redounds all the more to his credit.

There can be little doubt that the most attractive feature of the newer types is their superior size to the older favourites. This was, indeed, sorely needed to resuscitate the failing popularity of the incurved race, which for some years past has retrograding into the limbo of obscurity and neglect. Many cultivators have an idea that the old race is degenerating fast, but it may possibly be due to their failing popularity, and the consequent lack of enthusiastic cultivators to uphold their cause. The Japanese varieties are generally more easily managed, and their excessive variation both in size and colour will readily account for their widespread popularity. There are some who would even go further than this so as to include the Japanese incurved amongst the true incurved race; but the range of variation amongst varieties of the former type is too great for us to give our adhesion to it, seeing that it would altogether nullify the aim and purpose of classification.

To settle the vexed question of the classification of the disputed varieties, the Floral Committee of the N.C.S. made a recommendation, some time ago, to the General Committee to appoint a Special Committee of Growers to investigate the matter and submit a report. The latter was presented on the 25th ult., and accepted by the General Committee. The finding of this Special Committee is somewhat different to that adopted by the framers of the Jubilee Edition of the Society's Catalogue, but their decision was ratified, so that the society will not only abide by it, but the judges at their shows, as well as the shows of affiliated societies, will have to adjudicate the awards in accordance with the same. Duchess of Fife is recorded in the catalogue as Japanese, and the Egyptian as Japanese incurved. Both are now admitted as incurved Chrysanthemums, together with Perle Dauphinoise, Ma Perfection, Rena Dula, Miss Louise D. Black, Mrs. Airdrie, Rose Owen, Ideality, King of Orange, L'Amethyste, Golden Nugget, Miss Phyllis Fowler. Leonard Payne, Mr. J. Kearn, Mr. James Murray, Triomphe d'Eve, Percy Surman, Mrs. F. Hepper, Miss Dorothy Foster, Miss Violet Foster, and Mr. James Eadie, The classification of Harold Wells remains an indefinite quantity owing to the voting on both sides of the question being equal. This, at first sight, would seem strange if it is admitted to be a sport from Sir Trevor Lawrence, but it would not be difficult to prove that sports sometimes differ from their parents, not merely in colour, but also in form. In any case we congratulate the National Chrysanthemum Society in being able to agree upon the admission of the above list amongst incurved Chrysanthemums.

The Apple contains more phosphorous than any other fruit or vegetable.

Glasgow Chrysanthemum Society.—We learn that at a general meeting of the Glasgow Chrysanthemum Society, held on 16th January, it was decided that the society be discontinued. This has, we understand, been brought about owing to the unsatisfactory financial results of the show in November last.

The Scilly Isles are now sending us an abundance of cut flowers. In a few more weeks we shall be having early Potatos and Tomatos from thence. The trade between these islands and our own in garden produce is enormous. Speaking of their geographical position, Sir George Newnes says, "They are on the way to nowhere, and yet they are most interesting, and so far as this country is concerned, unique."

Cattleya Trianaei backhouseana.—This beautiful variety is still held in high estimation by growers, a fact that may be accounted for not alone by its admittedly handsome appearance, but because it is relatively scarce, and growers long to add it to their collections of choice and select Orchids. A piece of it turned up in the Central Sale Rooms of Messrs. Protheroe & Morris, at Cheapside, on the 5th inst., and found an eager buyer at fifteen guineas.

Illness of Mr. D. Dewar.—The many friends of the well-known Curator of the Botanic Gardens, Glasgow, Mr. D. Dewar, will regret to learn of the serious illness through which he has been passing since Christmas. We are glad to inform our readers, however, upon inquiries which were made last week, that the operation which the patient has undergone has been quite successful, and that he is now progressing towards recovery. We were distressed to hear that Mr. Dewar had been confined to bed for weeks with an abscess in the kidneys; but are now equally pleased to learn that the operation has been successful, and that Mr. Dewar is making good progress towards convalescence.

Ulster Horticultural Society (Belfast Show).—At the last committee meeting of the above society it was decided to celebrate the Diamond Jubilee of the Queen this year by offering £100 and three medals for competition in the class for forty-eight Japanese blooms, at the annual show on the 16th and 17th November next. The money is to be divided into seven prizes as follows:—1st, £40 and Gold Medal; 2nd, £25 and Silver Medal; 3rd, £15 and Bronze Medal; 4th, £10; 5th, £5; 6th, £3; and 7th, £2. The committee decided to open this event, along with a few others, to gardeners of the United Kingdom. The prize is to be called the Victoria Jubilee Championship, and is presented by the Lady Mayoress of Belfast and ladies of Ulster.

Early Primroses have been found in quantities as far back as January 17th, on banks and in ditches in the neighbourhood of the pretty bay of Lough-shinny, between Rush and Skerries, Ireland.

A curious Floral Design.—At the death of a lighthouseman, belonging to the United States, a local florist was somewhat non-plussed by receiving an order for a floral emblem made to resemble a breeches buoy. The floral artists were puzzled for a while, but finally set to work to construct something which, when finished, looked like a hybrid between a breeches buoy and a small schoolhouse,

Intense Frost in Aberdeenshire.—In the city of Aberdeen 19° of frost were registered on the 4th inst., but landwards the frost was much more intense. At Kintore the thermometer registered 40° of frost or 8° below zero. At Inverurie the thermometer was 2° below the record for that place on the occasion of the severe winter two years ago. In the early part of 1895 as many as 45° of frost were registered in some parts of the country, so that the severe weather of last week was not a record breaking one. Some of the rivers were partly frozen over, including the Ythan, at Ellon, where a child was accidentally drowned, by falling through and being carried under the ice.

Leighton Buzzard Horticultural Society.—At the recent annual meeting of this society Dr. Pratt presided. The secretary, Mr. A. Collier presented the financial statement for the past year. The total receipts from the August show, together with the subscriptions, amounted to £321 5s. 8d., and the expenditure, including £131 4s. 4d. as prizes, totalled £263 14s. 8d., leaving a balance of £57 11s., reduced from £65 11s. 5d. in hand after the last show. A loss of £8 was thus apparent on the year's working. Mr. A. Collier was then re-elected secretary, and further additions were made to the list of vice-presidents. Various alterations were made in the schedule of classes for the next show, which is to take place on August 12th, the two expensive classes in the open division for groups of stove and greenhouse plants being eliminated.

Gardeners' Royal Benevolent Institution.—A performance of the comedy-opera "Dorothy" in aid of the Victorian Era Fund being raised by this institution to commemorate the sixtieth year of Her Majesty's reign will be given (under distinguished patronage) at St. George's Hall, Langham Place, W., on the evening of Thursday, February 18th, 1897, by the members of the Westminster Amateur Operatic and Dramatic Society, with full orchestra. Amongst the list of gentlemen who have kindly consented to act as hononary stewards, we observe many names well known to horticulture. Mr. H. Morgan Veitch, 16, Clifford's Inn, E.C., is undertaking the duties of honorary secretary, and from him tickets may be obtained. A praiseworthy movement this, and one to which we wish an unstinted measure of success.

Popular Gardening at Halstead.—A lecture on popular gardening was given in the Halstead Assembly Room on Monday evening, January 25th, by Mr. C. Wakely, horticultural lecturer to the Essex County Council. The chair was taken by the Rev. T. G. Gibbons. Mr. Wakely commenced by dealing with the necessity for taking an interest in the land, and said that although the difficulties in the way of the cottager and allotment holder were considerable, they might be overcome. He then gave practical information with regard to the manuring and digging of the land. He recommended soil that was of a stiff character to be dug in the autumn or early winter months. Rotation of crops was also considered. Dealing with Potatoes he recommended the use of medium sized sets, planted fourteen inches apart, and 2½ feet between the rows. Such varieties as Abundance, Satisfaction, and Windsor Castle should be grown extensively, although Beauty of Hebron and Magnum Bonum still held their own against all comers. Mr. Wakely also detailed the cultivation of the Onion, Turnip, Carrot, Parsnip, and Beetroot. A few questions were asked at the close, and replied to by the lecturer. Mr. A. W. Kibble announced that four or five similar lectures had been arranged for, and would be given in a month or two's time.

A paying year's crop.—The vintage of 1893 obtained by Lord Bute from his outdoor vineyards near Cardiff, paid all the expenses of the eighteen years of experiment. It may well be asked after this, why should not grape growing become a British industry.

Robbery of Holly.—At the Borough Police Court lately John Bennett was charged with wilfully damaging a Holly tree, the property of Mrs. Radcliffe, at Parsham Plantation on December 18th. The value of the Holly taken was said to be 6d. A fine of 2/6 was imposed, and a week allowed in which to pay it.

Bunyard's Centenary Exhibition.—As a sequel to the Centenary Exhibition held by the firm of Messrs. George Bunyard & Co. The Royal Nurseries, Maidstone, on September 15th and 16th last, we understand that the firm has presented 5 gs to the Church Institute, Maidstone; 5 gs to the Royal Gardeners' Orphan Fund; and 5 gs to the Gardeners' Royal Benevolent Institution. The Centenary Exhibition we reported at the time, and as far as fruits and vegetables were concerned, our readers will remember what a marked success it was.

Dr. R. Hamilton Ramsay, of Torquay, Devon, attained his seventy-second birthday on the 13th ult., yet he remains as hale and hearty as ever. His hobby is confined to flowers, and football. Consistently with these facts, we find that he is president of the Torquay and District Gardeners' Association, and the first and only president of the Torquay Athletic Football Club, which was founded in 1875. He is as popular as ever with the gardeners and football players.

Garden Hints.—There is not much doing in the garden line, so we take the opportunity of giving a receipt for dealing with weeds. We only know of two trustworthy methods. One is burning, but there is no fun in this unless the wind is in the right direction and your neighbours' windows are wide open. We therefore recommend pulling them up and throwing them over the wall into the next garden. You can settle with the owner afterwards.—*Moonshine.*

Irish Gardeners' Association.—The annual meeting of this association was held in the Rotunda Buildings, Dublin, on the 27th ult., when there was a large attendance. The report and balance sheet for the past year were placed before the members and adopted. Mr. Campbell, The Gardens, St. Anne's, Clontarf, was elected president for the current year. The majority of the members were in favour of the chair being occupied by a practical gardener, so that the ex-president resigned in favour of Mr. Campbell. Messrs. Cranmer and O'Kelly were elected vice-chairmen, and Mr. Egan as treasurer. Mr. Shaw was thanked for his valuable services to the association since its inauguration and re-elected secretary.

Waterford Horticultural Society.—The summer show of this society is to be held on July 21st. Challenge cups are offered for the best four double, and the best four single Begonias, as well as for twelve blooms of Roses, distinct. The society is affiliated with the Royal Horticultural Society of Ireland, from which it receives two bronze medals. One is awarded to the gardener who secures the largest number of prizes in his own division, and the other to the most successful amateur. At the Chrysanthemum show on November 5th, a £5 Challenge cup and £3 are offered for the best twenty-four cut blooms, and a similar one for a group of Chrysanthemums. The honorary secretaries are Mr. W. Richardson, Prospect House, Waterford, and Mr. D. Cantwell, Newtown, Waterford.

Lecture on Town Planting of Trees and Shrubs.—On Monday evening last Mr. A. D. Webster delivered a lecture at the Oxford Club, Hemel Hempstead, on "Town Planting, and the trees and shrubs best adapted for withstanding smoke." The lecturer divided his discourse into the following headings:—(1) Importance of town trees; (2) preparation of the ground and planting; (3) excessive planting and choice of trees; (4) general management of town trees; (5) trees, shrubs, and other plants that have been found suitable for withstanding soot and smoke. An animated discussion followed the lecture, in which several moot points were satisfactorily cleared up by Mr. Webster, and to whom several hearty votes of thanks were given for his very interesting and valuable paper. The printing and general dissemination of the paper was considered advisable.

Not so Scilly after all!—It is estimated that between eleven and twelve tons of flowers from the Isles of Scilly were despatched by special train from Penzance on January 19th. The consignment comprised upwards of 2,000 boxes.

Bovey Tracey Horticultural Society's annual meeting was held on the evening of January 29th, at the Dolphin Hotel, to hear the statement of accounts presented by Miss Devett, by which it appeared there was a deficit of several pounds. Miss Devett, and Mr. A. Godsland, were re-elected hon. treasurer and hon. secretary, respectively. It was resolved to hold the next show on August 17th.

Mr. Byrne, in a lecture at the Imperial Institute Plymouth, averred that the descendants of the refugees from this country who had settled in Ontario were grateful for the wisdom of their forefathers in selecting a district with a good climate and a rich soil. He demonstrated the truth of this by exhibiting lantern slides of the country, showing views of pastures and orchards as attractive as those of Devonshire. He said that farmers had the best chance to turn their farms to account, as experimental stations were dotted here, and there over the country.

Tunbridge Wells Gardeners assembled at their annual meeting on the evening of Tuesday, January 26th, with Mr. A. Charlton in the chair. The accounts showed a balance on the right side of £2 9s. on the year's working. This would doubtless have been larger, but for the fact that many members have not fully paid up. The decision to give a sum of £1 per 100 points for members' point prizes was ratified, as was also the proposed gratuity to the secretary. Mr. W. Berwick takes the post of chairman for the ensuing year, and the secretary, assistant secretary, and collector were re-elected. Votes of thanks to the retiring officers closed the proceedings.

Hythe and Seabrook Cottage Gardeners.—The members of this Mutual Improvement Society lately assembled at their third annual dinner, Dr. Murdoch presiding. An excellent repast and lengthy toast list were got through. In responding for the society, Mr. W. H. Morgan, the hon. secretary, said that he was sorry to say that they were at present far from being in a good financial position. He was glad that they had been able to pay the prize money to those exhibitors who were not members, but there was still a proportion due to those exhibitors who were members. He trusted that they would be able to clear away these liabilities during the ensuing season.

Birmingham and District Amateur Gardeners' Association.—The fourth annual report of this influential body of gardeners is to hand. It includes a concise account of the aims and aspirations of the society, a record of the work it has accomplished, a list of the prize winners at the shows, and members, and the balance sheet, together with a schedule of special prizes, and the plans for the ensuing season. The whole makes a handy little pamphlet of twenty-eight pages, exclusive of the covers. The Chrysanthemum show in November proved a great success, far exceeding in the number of entries and the quality of the exhibits anything that has been done before. The lectures given, and papers read before the society have been uniformly good, and include "Roses," by Mr. W. Bliss; "Propagation of Plants," by Mr. John Pope; "Ferns and Carnations," by Mr. C. H. Herbert; "The Life History of a Seed," by Mr. J. W. Oliver," and the "Flora of Llandudno," by Mr. W. B. Child. The annual excursion was a most enjoyable outing, Stratford-on-Avon being the destination. The president, Alderman White, again invited the members to accept his hospitality at Caversham Villa, and another pleasant afternoon was spent. A visit to the Botanic Gardens, at Edgbaston, was made in July, so that the society has not been dull. We notice that in the ensuing year it is proposed to have a Flower Festival in July, the plants and flowers to be afterwards given to the Children's Hospital. We heartily wish this laudable effort a measure of success pressed down and running over, as it deserves. The balance sheet shows a totality of £25 7s. 8d. for expenses, and receipts amounting to £34 2s. 5d., with a balance of £8 14s. 9d. We congratulate the executive upon the satisfactory state of the finances and wish them continued prosperity.

The Middle of England is said to be marked by an Oak which stands in the centre of the high road leading from Warwick to Leamington.

The Welsh names for many flowers are connected with the Virgin Mary. It is surmised that the Cistercian monks who settled in the country at Abbey Cwm Hir, Tintern, and other places, were responsible for their introduction and naming.

Winter Fruit Crop in Arkansas, U.S.A.—Cherries were blooming here in October and November; Strawberries ripened in the open air; the second crop of some varieties of Apples were about half grown; and Pears were in bloom during the latter month.

Thinning Epping Forest.—The annual report of the Epping Forest Committee states that the moderate thinning of the woodlands has been continued with careful consideration. The committee publish the gratifying fact that no complaints concerning their work have been received since the publication of the experts' opinion two years ago. It is estimated that the expenses for the ensuing year will be £5,700, less £1,700 derived from the forest, or a nett expenditure of £4,000.

The Crow is the Gardener's Friend, a statement well borne out by recent experiments. The stomachs of nearly 1,000 crows have been examined and afforded undeniable evidence that the crow, instead of being the brigand many of us think him, fattening himself upon the crops of the farmer, and the gardener, is a valuable scavenger, clearing the fields, orchards, and barns of all manner of mischievous worms and insects. Let us then not grudge the labourer the toll he takes of our crops by way of payment.

Horticultural Institute for Scotland.—Mr. M. Todd occupied the chair, at the first meeting of the session of the Scottish Horticultural Association. The chairman, in his speech, dwelt upon the progress made by the association during the twenty years of its existence. Before technical education reached its present advanced state, the society had given lectures on the chemistry and physiology of plants, the theories of heating, and other scientific subjects which were not only profitable to gardeners, but a source of attraction to the general public. Discussing the future, he said that a Horticultural Institute was one of their early dreams. He saw no reason why by-and-by they should not have such an institute, and a faculty of gardeners, a certificate from which would be a guarantee of fitness to occupy positions of responsibility.

Handbook of the Flora of Ceylon.—This great task, which Dr. Trimen set himself to elaborate, was to have been completed in four volumes, the third of which was issued in 1895. It was to complete the fourth volume that the late lamented Dr. Trimen went back to Ceylon, in spite of the shattered state of his health. Sad to say, he was unable to accomplish this before the end came. When he was no longer able to sit up to work, the indefatigable botanist did so lying on his back. Of the 3,000 species native to the island, about 800 still remain to be tackled. They consist chiefly of grasses and Orchids. It is believed in Ceylon that the completion of the fourth volume may take place at Kew under the direction of Dr. Thistleton Dyer. Dr. Trimen had a good many years' local experience before he commenced his *Flora*, and it is much to be regretted that he did not live to complete it. His name will, however, be always identified with the botany of Ceylon. Mr. Willis, the new director, will have his hands full with the duties of his office for some time.

IMPORTANCE OF HYBRIDISATION.

Unquestionably one of the greatest triumphs of horticulture is in connection with the science of hybridisation, by which an almost endless variety of beautiful flowers has been evolved from original species, some even from the weeds of our fields and waysides, and very many from among the more interesting and beautiful introductions from other climes, notably Orchids, Dracaenas, Crotons, Pelargoniums, and Begonias, without instancing many more among hardy and half-hardy flowering plants, to be found among trees and shrubs and in our herbaceous borders. True, Nature has done some-

thing unaided by man; but the art of man has accomplished much more in the present generation than Nature unaided will in a century. Hybridisation is a most interesting and fascinating pursuit to all lovers of flowers, and presents a wide field for its pursuit to all who grow them and have sufficient leisure at command. They will find, no doubt, many discouragements, especially when treading on unbeaten tracks; but the success of past operators should fill all with hope and encouragement. Can there be a more pleasing pursuit, which has something akin to creative power in it, bringing into existence, as it is continually doing by the hands of workers in this field, new forms of beauty and we may add utility? For instance, the present race of tuberous Begonias, the result of judicious and painstaking industry, has in reality opened up quite a new industry; by the which not only have our own gardens been enriched, but owing to the immense exportations to other countries our own country has been, to some extent, it may be a small one, but still real, financially benefited. The same principal holds good with reference to many other things as for instance, Caladiums, Clivias, Orchids, Carnations, &c.—*W. B. G.*

CYCLAMEN AT READING.

With the advent of winter comes the flowering season of the Cyclamen, one of the prettiest of the modern races of plants in cultivation. The flowers are quaint and beautiful at all seasons, though never more appreciated than at the dull season of the year, when our skies are leaden and sunshine exceedingly scanty. Like the Primrose, the Chinese Primula, and many other members of the same family, the Cyclamen seems to enjoy that season of the year when the sun in our northern latitude is least powerful. In any case their flowers are most durable under those circumstances, so that herein lies their value to cultivators generally, and gardeners in particular, who want something bright in their houses to tide over the winter.

Giant Strain.

We quite recently inspected the collection of Cyclamen in the houses of Messrs. Sutton & Sons, in their Portland Road Nurseries, at Reading. The plants had, however, been flowering profusely for weeks previously to our visit, and are not only gay now, but will continue so for weeks to come. When the giant strain originated, the flowers were convincingly large, but they were scantily produced. Anyone who may chance to see Messrs. Sutton's grand strain now, will have ocular and ample demonstration that the initial difficulty with regard to freedom of flowering has been completely surmounted. The favourite of the strain is Sutton's Giant White, which has huge, yet compact flowers of the purest white, produced on stout stems, that need no support, yet carry their flowers in a snowy mass, clear above the beautifully variegated and marbled foliage. What a contrast is produced between this and Vulcan! The latter belongs to the C. persicum type, of which more anon. There is a Giant Crimson, however, that well merits attention on account of the size and rich colour of the flowers. The plants as well as the flowers can be grown to great size by those who give them the necessary attention. The colour of Giant Purple is well expressed by the the name, for the beautiful purple flowers are of majestic size.

Amongst novelties we mention Giant Pink, a variety notable for the delicacy of its pink hue. The flowers are also beautiful in form and attractive by way of contrast either to white or dark colours, or for binding the extremes in one harmonious gradation of tints and shades. Giant Crimson and White is an older variety with white flowers and a crimson mouth. With regard to size it is on a par with all others belonging to this section. By a process of selection, the prominent and distinct varieties are saved from the general batches of the annual crosses that are made. They are then propagated by seed and for the production of seed after sufficient time has elapsed for them to become fixed. Several of the intermediate shades are passed over so as to render the selected ones amply distinct, and capable of producing distinct effects. Therefore to the above colours we find one that is named Giant Rose, which is several shades darker than Giant Pink. Giant Cherry Red was another and a very bright colour which we noted in passing through the houses, which were literally ablaze with flowers from the purest snowy white to the richest and most intense crimson. All of the above colours may be had separately or in mixture according to the option of the would-be cultivator. No greenhouse or conservatory need be without a display in whatever shade or mixture of shades that may be desired.

Persicum type.

This name is still adhered to, simply for distinguishing the modern improved race of Cyclamen persicum from the Giant strain. We did, however, note the wild type grown in the houses at Reading, and which was picked up in woods in Palestine, where it is known as the Persian Crocus. The flowers are small, with narrow, much twisted segments, but graceful withal and extremely fragrant. It is to be regretted that most of the modern races are almost if not completely devoid of scent.

The improved race has size, colour, and quantity of flowers to recommend it, as well as ornamental foliage. The richest and most intensely coloured of all the Cyclamens is that named Vulcan, the flowers of which are of a fiery crimson when young and maroon-crimson as they get older, there being several intermediate shades on the same plant. The flowers show up dazzlingly under artificial light. If perfection can come in anywhere in the persicum type, surely it must be centred in White Butterfly, which produces a superabundance of snowy white flowers above the richly marbled foliage. It bears the same relation to the strain as Giant White does to that section; and both are indispensable for winter work. No stronger contrast can be made in the genus, than between these varieties and Vulcan.

No more distinct break in colour has appeared amongst Cyclamens for many years than that presented by Salmon Queen, for the more we see of it the better we like it. The flowers are of a charming rich salmon colour, and abundantly distinct from every other shade whatever. Sutton's Purple, Rose, and Crimson and White, all explain or describe their respective colours and their *raison d'etre* in a collection. The plants are dwarf, floriferous to an extreme degree in all cases when well-grown; and the flowers are self supporting when the plants have been grown under suitable conditions, leaving nothing to be desired. Size of plant is merely a question of culture and age, and each corm will produce from 50 to 200 flowers accordingly.

Miscellaneous.

We have already mentioned the original Cyclamen persicum. A recent departure in development is a double strain in various colours, the flowers of which are made up of six to eight segments each, and appear totally distinct from the ordinary types. Another strain has the segments of the flower spread out horizontally like a wheel, without a rim. Picotee edged and striped varieties have made their appearance, and may develop into something fanciful and attractive in the near future. A curious result in its way was that in which Salmon Queen was crossed with three other varieties as pollen parents. The reverse crosses gave rise to three different batches of seedlings, the flowers of which were all of the same or identical shade of purple.

SPECIMEN CHRYSANTHEMUMS.

Now, "'Mum," you have got your back up, pray for what reason? not because I said (p. 314) perfection should be left out? Was it because I said I do not believe in a plantation? I think, "'Mum," if you had not been so hasty in taking the "hig," which your note clearly shows you have done you might have shown up better. Now, my friend, you seem to think I have had a lot of perfection in my mind. Can you find any place in my note in which it says "I have seen an absolutely perfect specimen?" What I had in my mind was the difference betwixt a quantity of plants grown, perhaps, up to a given date in pots of their own, and afterwards ram-jammed into a pot or tub, and then staked out to any size the grower (no, not that, anything but grower) may desire. The contrast was (p. 314) a single plant with a clear stem, plenty of bloom, and foliage as well.

Now, "'Mum," take particular notice here, you do not believe in pleasing judges in their own particular towns, but call it jockeying. Well! we will say for the fun of the thing that it is, mind I do not say you would do it, oh, no! We will say you bring your bundle of plants to Harrogate, and I take my single specimen; you get disqualified, and I get the prize, in proportion of merit. You are, in a word, disgraced, there is no other word for it. You would be the laugh of the show, and then you would ask the reason why: simply because you did not know what the judges wanted. Our schedule does not definitely state single specimen, but one specimen Chrysanthemum.

In view of the above facts what use would it be for me to say what is perfection in specimen Chrysanthemums. The everlasting flow of new varieties forms additional food for the variation of judges' tastes, and those who do not follow in the fashion will very soon be out of it. Who would have been so bold, a very short time ago, as to predict the very quick downfall of many of the then best varieties? but I forgot these are side issues.

In conclusion, I may at some future time give a definition of what is, in my opinion, a near approach to a perfect Chrysanthemum, in the meanwhile I shall continue to long for a sight of those with so many in a pot, although I shall certainly keep my single plants away from them, providing I know where they are. Now, "'Mum," do you see the need for getting to know the judges' tastes?—*J. G. Pettinger, Strawberry Dale Nursery, Harrogate.*

In perusing Mr. J. G. Pettinger's article on this subject (p. 314), I was struck with its somewhat illogical character. First of all he says that "perfection is a thing desired by many, but that it is seldom attained;" and a little further down—"the idea of perfection should certainly be left out." Strangely enough, however, he cannot take his own physic, and "leave the idea of perfection out;" since perfection is evidently the standard by which he judges other plants, for speaking of certain plants he says "if they are as near to perfection as possible." Again, in concluding, he says "I have two plants in my eye yet, and have not seen their equal since."

In common with both "Mum" and "Mr. J. G. Pettinger" I deprecate the practice of growing more than one plant in a pot, and for the same reasons as they have already stated. Too great height is, of course, a disadvantage, if the symmetry of the plant is thereby endangered. The bush form varying in height from 2 ft. to 3 ft. 6 in. certainly has the best effect. A clear stem of from 4 in. to 6 in. is also necessary. The head of the plant must be well balanced and even in outline. To be well proportioned a plant should have a diameter equal to its height. Naturally it would not be possible to have the flowers up to the standard seen upon show tables, still they should be uniform in size, and development, that is to say they must all be open together. They must also be evenly distributed over the whole of the area of the head. Training must receive the closest attention, all stakes being kept as much out of sight as possible. Healthy foliage of good colour and substance is an admirable foil for the bright colours of the flowers, and points would have to be deducted in competition from plants which had poor and ill-coloured foliage.—*Beche.*

COMPETITION BLOOMS OF THE CHRYSANTHEMUM.

Large blooms have always excited wonder, more than admiration, but now they have come to be so common, that they are ceasing to be a wonder, and a desire has set in for blooms with less of the monstrosity, and more of the beautiful in them. This is a commendable desire on the part of the public, and I have no doubt has been brought about by the refining influence of Chrysanthemum shows; and the public are re-acting beneficially on the shows by being pleased only with a higher standard of beauty. Cultivators are already showing signs of rising to the occasion.

One of the commonest ideas about a competition bloom is that it cannot be too large; in fact size with the average judge weighs about as much as all the other qualities put together. This straining after size is quite overdone, not only with Chrysanthemums, but with a great many other horticultural subjects. A good cook will tell you that your first prize Leeks, Onions, or Potatos are not much use for cooking, thereby missing the purpose for which they should be grown—utility. Now is not "beauty" for which we grow Chrysanthemums, in some danger of being destroyed by this straining so much after size. I do not think size has anything to do with the mental enjoyment of beauty; but I admit that we should grow blooms big enough to see their beauty

with the unaided eye, and to go much beyond this is not only not adding to their beauty but is in some danger of destroying it; for large blooms are inclined to lose beauty in form, colour and refinement of petal.

How chaste and pleasing is a bloom of Mdlle. Marie Hoste, about 6 in. in diameter, from a late crown bud, compared with the out of colour, damp-inclined big bloom from the early crown bud. Again Viviand Morel is just a case of "Beauty and the Beast" on late and early crown buds; the late blooms are always more beautiful in form, richer in colour, and more refined in petal than the larger and earlier blooms. This condition of things holds good throughout the thousands of varieties that are grown for competition. If we have a bloom about 6 in. in diameter, with proportions according to type, it is quite large enough to reveal all its beauty, and that is all the length intelligent culture should go in trying to meet the end in view. Therefore, to increase the size is quite unnecessary, and should not be considered a merit.

In competition blooms there are three outstanding features (and all the others usually enumerated come under them), namely, form or general outline, quality of petal, and colour. The form varies with the different types, each type having a form of its own; the form is generally truest to the type in medium-sized blooms. A pleasing outline is one of the best features of a good bloom; many of the Japanese type which are devoid of any particular form could well be dispensed with. The petal should be firm, free from roughness and broad, with graceful outline. Colour is one of the most attractive qualities of a good bloom; bright clean colours seem to be most appreciated. Individual taste, however, seems to vary on this quality more than on any other —*'Mum.*

EALING GARDENERS' SOCIETY.

On the 3rd inst., at the Municipal Buildings, Ealing, the chairman of the society, S. A. Sewell, Esq., F.R.H.S., gave an interesting and humorous lecture on "A Trip to Brittany and Normandy," which was remarkably well received. John Hughes, Esq., F.R.H.S., presided. Mr. Sewell, first of all, compared the coast lines of Brittany and Normandy with that of the South of England, and showed how much more irregular and broken up the former were. As to the flora of the two countries, he insisted that the difference was rather one of degree than number of species, for he said that those plants which were comparatively rare in our own country were often found growing much more luxuriantly on the opposite shores. Some of the most abundant species were Diplotaxis tenuifolia, a yellow cruciferous plant, which spread over sand-hills and waste ground in great profusion; Convolvulus Soldanella, the Sea Bindweed; Eryngium maritimum, the Sea Holly; Euphorbia Paralias, the Sea Spurge; Althaea officinalis, the Marsh Mallow; Cakile maritima, the Sea Rocket; Beta maritima, the wild Beet, etc. As to shrubs, Tamarix gallica, of course, was present, France being the land of its birth; while the Bladder Senna (Colutea arborescens) claims a similar origin.

The towns of St. Malo, Dinard, and Cancale were described in turn, and some of the habits and customs of their inhabitants humorously and vividly received *recherché* notice. In the former place some strange combinations of carpet bedding were duly observed; and, as an instance of what can be effected by a grotesque people, it may be stated that one of the designs represented a man with a cat. The plants used were Achyranthes, Alternantheras, Gnaphaliums, Sedums, Echeverias, etc. The man's boots, for instance, were red with yellow tops, while his breeches consisted of Echeveria. A hand of another colour emphasised his body, a single plant of Echeveria doing duty for each eye. The cat was also composed of Echeveria, but with red head and yellow eyes. Other animals were likewise treated, and thus the poor plants were rendered grotesque and bizarre by association. Bedding-out plants were still gay, although the year was on the wane, the most conspicuous being Cockscombs, Petunias, and zonal Pelargoniums.

From Brittany Mr. Sewell took his audience into Normandy; noticed the Apple orchards, the Blackberries, the Buckwheat, the Beeches, Oaks, and Chestnuts, and many more things natural and artificial. Some disastrous results of the great gale, which culminated on September 24th last, were given. Thence Mr. Sewell travelled home by way of Jersey, where he saw Gunnera scabra growing in great luxuriance, and appearing naturalised. The lecture was listened to with evident pleasure, and a hearty vote of thanks duly accorded.

FRUIT UNDER GLASS.

Pot Vines.—The thinning of the berries must be carefully looked to before they have become so crowded that it is difficult to get in the point of the scissors amongst them without pricking some of the berries that it is desired to save. As the berries commence to swell especial care will have to be taken, for a very little neglect may cause a severe check. The temperature should be kept up to about 68° Fahr. by night, with a rise of 5° if the day be dull, and 10° if it be bright and sunny. The fermenting material will require looking to, as it is important that the bottom heat should not be allowed to decline. A little fresh material worked in with the old will assist greatly. Keep the evaporating troughs full of water, and damp the walls and passages frequently. Ventilation is, perhaps, the most important point of all, since it is by carelessness or incapability in this respect that the Vines are most likely to receive a check. Cold draughts must be avoided at all costs, and it often happens that this is a matter of some difficulty when the sun is bright, and the wind cold and piercing.

Early Permanent Vinery.—The shoots should now be quite long enough to be tied down. This must be a very gradual process, or there will be much ado over broken shoots. It not infrequently happens that where too much pressure has suddenly been put upon vigorous growths in the early part of the day, a few hours' bright sunshine will cause a lot of damage. All ligatures therefore should be tied with a running knot, which will allow of the strain being increased or lessened according to necessity. Stop the longest shoots two or three nodes in front of the bunch.

Peaches and Nectarines.—In the earliest house the chief work will be the removal of foreright and other shoots which are not needed for succession. It does not do to allow the trees to go too far before a start is made with this part of the programme. Too many growths must not be taken away at one time, for this is apt to greatly weaken and check the trees. As soon as the fruit is the size of small marbles the temperature may stand at from 50° to to 52° by night, with a correspondihg rise during the day. Keep the syringe well to work morning and afternoon, using clear soft water of the same temperature as the house itself.

Trees in Flower.—Here a rather drier atmosphere than has been maintained up to the present will be necessary, and the work of artificial pollination must proceed apace. The middle of the day is the best time for this. Each flower that is open should be lightly touched over by a camel's hair brush. A more bulky tool, but one which is quite as effectual, is a rabbit's tail, fastened upon a stick. This is very soft, and hence its use will not cause the bruising of the stigma which is too often the reason for a bad set. By going over the flowers each day from the time at which they first open until the time when the petals drop the stigma is bound to be caught in a receptive condition at some period. Another plan that is adopted by some gardeners, and one that saves a good deal of work, is to stand a hive of bees in the Peach house. A good set is thereby secured, but the poor bees induced to try to get outside by the brightness of the sun, perish in considerable numbers by knocking against the glass.

Figs.—As the earliest fruit on the pot plants should be swelling away quickly, maintain the heat of the house up to 70° by renewal of the fermenting material, as well as by fire-heat. Syringe copiously, and thus keep the plants clean, and the atmosphere charged with the moisture that the Fig loves at one and the same time. If the trees are carrying good crops of fruit and have not been recently potted, liquid manure at every alternate watering will render good service.

Earliest Permanent House.—As soon as the shoots reach a length of about 9 ins., or in other words, as soon as they are bearing four or five good leaves pinch the tops out. This will encourage the formation of fruit in the axils of the leaves. Meanwhile syringe well and regularly to keep down red spider.

Late Houses, which were started at the beginning of this month at a temperature of 50° by night, may now stand at 52°. Figs will stand a high temperature very much better than Vines. Moreover there is nothing to be gained by keeping them back, for loss of time now means that the second crop will be too belated to ripen thoroughly.—*A. S. G.*

THE FLOWER GARDEN.

The copious rains that have fallen of late have penetrated deeply and have come by way of compensation for the dry time that we had for the first six months of last year. Everything with us is so sodden, that it will be some time before it will be possible to get upon the land either for planting or cleaning purposes. This is a more or less serious consideration, since the planting of various shrubs will be in full swing at the end of this month.

There is also the pruning of evergreens, and the pruning and training of climbers, including Roses, to be thought about. Laurel hedges and clumps must occasionally be looked over if they are to be kept within proper bounds. Laurels grow pretty freely, and soon commence to get bare at the bottom if not kept well dressed. It will be advisable to put off cutting these back until the end of the month in the northern counties, and the same remarks will apply to the pruning of climbers on the walls, but in the southern counties the knife may be set to work as soon as possible.

Labels.—It is a most important point to have herbaceous and Alpine plants legibly and correctly labelled. The dull weather may be turned to good account in writing these. For ordinary purposes a zinc label written upon with special metallic ink is the handiest and cheapest. Those who wish for something more elaborate have oval plates of zinc fastened to iron pins. These look very nice indeed, but they come rather expensive. The same might be said of labels formed of strips of lead with the letters stamped in. These are practically indestructible, however, and are very suitable for trees or shrubs. They also have a nice effect when attached to climbers. In this case, the best way is to nail them to the wall near the centre of the plant.

Potting Bedding Pelargoniums.—It is now time that a start should be made with potting up the bedding Pelargoniums. This is usually a long job, and unless there is plenty of strength to put to the work, must not be delayed. Usually the cuttings are struck in boxes, less frequently in pots. They must now be shaken out of their old quarters and potted up singly into large sixty pots. This size will be found very handy and quite large enough. Pot moderately firmly, and do not fill the pots too full of soil. Watering will prove a heavy item presently, and it will be well now to allow space to hold the water. Not infrequently a sufficiency of pots is not to hand, then boxes have to be utilised. Certainly a shift may very well be made this way, but all practical gardeners know that it is much easier to bed out from pots than from boxes, and besides, the plants do not suffer so much. Crocks will not be necessary, and will only be in the way presently. Their places may be taken by a little rough soil put in the bottom of the pot.

Vase Plants.—Where zonal Pelargoniums are used for filling ornamental vases, it is necessary that they should be of a good size, in order to make a show directly they are put out. It is sometimes difficult to get old plants of this size. The plants that were saved from last year should be looked carefully over now, any dead pieces that may be present, cut out with a sharp knife, and if necessary a further pruning given to reduce them to shape. Pot them into as small pots as will comfortably contain them, and place them in a gentle heat, where they will not be long in making strong growth. Plants that were grown on last summer in pots for autumn and winter flowering within doors, will make capital stuff for vases if they are taken in hand now, pruned fairly hard, and potted up. Older plants, however, bloom rather more freely, although the individual flower trusses may not be quite so fine.

Carnations which were planted out in the autumn should be given a look over at the earliest opportunity. The recent frost, coming as it did, when the ground was wet, will be likely to have lifted some of the plants partially out of the ground. When exposed in this way they fall a ready prey to cold biting winds, of which we are almost sure to obtain a share in the coming spring. A little care now in pressing these disturbed plants back into their places may save a few deaths presently.—*A. S. G.*

HINTS FOR AMATEURS.

Forcing Strawberries.—There are some fruits that require rather more attention than the amateur is able to give them in order to force them properly, but it may he said at the outset that the Strawberry does not belong to this number. There is nothing difficult in its treatment, and one advantage is that there is no need to trouble about the condition of the plant after the fruit has heen gathered, for as soon as a plant has developed and perfected a good crop of fruit it has fulfilled its life's work, and may be thrown away immediately. With other fruits, such for instance, as the Vine, and the Peach, the consequences to the plant have seriously to be reckoned with, and here it is that the difference between a good fruit grower and a had one is so evident. The former will get as much out of his trees as he can without permanently weakening them, the latter is so blinded hy the ideas of the present that he loses sight of the requirements of the future, and it may be by one very heavy crop, drives his trees to death or ruin.

Many amateurs force Grapes and Peaches pretty early in the season, and we are led to pen these notes in order to give a timely warning against trying to do too much. Now a shelf near the glass in an early vinery is a capital place to grow Strawberries, in as far as heat goes. The same might he said of shelves in Melon pits; hut in both these instances there is an element of danger to creep in.

Experienced cultivators know full well how fond red spider is of Strawherries growing under glass. Let but the plants get dry at the root, and the little pests are sure to make their appearance. In such a case the Vines or Melons soon get infested—a most serious matter, as it is a task of great difficulty to get rid of the offenders.

Wherever Strawherries are placed, therefore, it should always he in a position where they can be syringed regularly. Clear water only should he given at the root until the fruit has set, but after that plenty of liquid manure must be given.

From the foregoing remarks it will be seen that where possihle, a small house entirely devoted to Strawherries is a very desirable feature. If this is properly fitted up with shelves it will hold a lot of plants. After the season is over it may he fumigated thoroughly hefore any other suhjects are brought in.

Shallots.—These are preferred by not a few people to Onions, especially for pickling purposes. They have a peculiar flavour of their own, and this is doubtless the reason for the preference. In some rural districts in the southern counties it is always laid down as a rule hy cottagers that Shallots should be planted on the shortest day, and taken up on the longest. In very few places, however, is it possihle to plant at such an early date. The condition of the ground at the end of December is very rarely such as to warrant heing trodden on. Sometimes it is well on towards the end of February before a chance occurs to get on the ground. The present season, for instance, has heen rather unfavourahle in this direction hy reason of its wetness. Every day now is of consequence, and the bulbs should be got in as soon as possible. If large bulhs are required the divisions should be planted separately in rows, about a foot apart, nine inches heing allowed between each set in the rows. For ordinary purposes the hulhs may be put in whole, a heavier crop being then forthcoming, and one that will be more useful for general purposes.

Like Onions, Shallots love a deep rich soil. If a quantity of woodashes can be obtained this makes a capital dressing. Spread it evenly over the ground, and fork it well in, afterwards treading the ground firmly with the feet. It will be seen that in order to carry out these instructions the ground must he fairly dry.

Campanula isophylla alba.—The present is a capital time to strike cuttings of this handsome little Campanula. Old plants which were cut back last autumn after hlooming was over, and have passed the winter in cold frames, have hy this time thrown up numhers of strong young shoots from the bottom. These make capital cuttings. If inserted now in sandy soil, and given a gentle heat they will root very readily in the space of a few weeks. Suhsequent attention to potting on will insure a supply of plants that will come into bloom in July and August. A large sixty pot will be quite roomy enough for them. Larger specimens are easily ohtained by potting up last year's plants into 48's or even 32's if they are strong enough. Overpotting, however, is a mistake, for not only is the size of the pots a direct disadvantage in using the plants for derorative purposes, but pot-hound plants always flower more freely than others which have not had their root-run so restricted. It will be best to leave the potting up of these larger plants until the beginning of next month.

Zonal Pelargoniums, that were grown on last summer for winter flowering and commenced to bloom about the beginning of November, are now getting very "leggy." They will continue to throw a few flowers for some weeks yet, which will be useful; hut they look rather an eyesore, and hence they should be taken out of the conservatory and placed in a frame or pit where they can be protected from the frost. These old plants must on no account be neglected, as they will be useful in a variety of ways. First of all, the cuttings have to be thought ahout, in order to supply stock for the coming winter. After they have been cut hack slightly, shaken out of their old pots and re-potted into a size larger, they will grow into capital stuff for filling ornamental vases in the flower garden during the summer. Meanwhile, the plants will not require very much water after the cuttings have been taken from them, and, of course, no manurial stimulants whatever should be applied.

Snowdrops in Pots.—Although the Snowdrop can scarcely be said to look happy when grown in pots or pans, and flowered indoors, there is no doubt that a few pots of it come in very useful. The hulhs should have heen potted up in the autumn and covered with ashes for five or six weeks to make roots. They will not hear forcing in the same way as Hyacinths, hut by merely giving them the shelter of a cold frame, they come into bloom very readily by the middle of January. Galanthus Elwesii is, perhaps, the best for this sort of work. Some people like the double forms, hut really their stiffness seems to he aggravated when they are grown in pots. Still they usually flower freely, and there is plenty of room for difference of opinion upon the point.

Cocos weddeliana—Young plants of this pretty Palm are in great request for decoration in the drawing-room, where, sad to say, they suffer terribly. Sometimes, only a few days are sufficient to cripple them, the delicate young fronds heing fairly curled up. Instead of throwing them away they may be brought round again hy careful treatment. If a corner in a warm house is available, a hed of cocoanut fibre refuse should be made up, and the cripples knocked out of their pots and planted in it. An occasional sprinkle with the syringe on favourable occasions will greatly assist them, and they will root freely into the cocoanut fibre, and will make new fronds at the same time. By the beginning of the summer they should have sufficiently recovered to he ready for service again, and as they will then have brighter weather, and be less suhject to the weakening influences of fires and gas, they will last longer in condition.

Gloxinias.—Throughout the winter months the tubers have been reposing peacefully in their pots beneath the stage just as they were dried off at the end of the season. In order to start them into growth, they must be brought out to the light and placed in a temperature of ahout 60 Fahr. Do not attempt to knock them out of their pots just yet, but give occasional waterings so as to gradually reduce the soil to a state of moistness. It is a mistake to deluge the plants with water at frequent intervals. Afterwards they should he gently sprinkled with the syringe twice a day, and then in a week or two, when they have made growths about 1 in. long, pot them off.

Seedlings may be flowered within six months from the date of sowing. Hence there is no need to resort to such methods of propagation as leaf cuttings, except in cases of specially good varieties that it is desired to increase. A sowing may be made now to flower about the end of July. Raising plants from seed has always a charm attached to it, as there is the chance of securing new and improved varieties. Use shallow pans, well drained, and filled with light sandy soil to within 1 in. of the top. Sow thinly and cover the pans with a piece of glass. Stand them in a temperature of ahout 60° Fahr. Gloxinias love a moderate amount of heat and moisture. As the sun's rays have more power, a light shading of the seed pans in the middle of the day may be necessary.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

A Geranium Wall is what *Amateur* wishes to obtain and asks for advice as to how to get it. The first thing to do is to see that a bed or border of good soi is made—say two parts of loam to one of old horse droppings, and that it is well drained. This latter is a most important consideration, and if it is not attended to, the plants will not last in condition for very long. The wall should be wired, as this gives greater facilities for tying the growths. The back wall of a vinery may be turned to account thus. Plenty of flowers will be forthcoming in the early part of the year, but the plants will look rather sickly when they are deprived of light owing to the Vines breaking into leaf.

Smilax.—Will you tell me how to grow Smilax. I can keep my greenhouse up to a temperature of 50° through the winter months,—*Y. G.*

You may either grow the Smilax in pots, or plant it out in a prepared bed of loam and leaf soil. The latter way is very much the better. A warm greenhouse such as yours will suit it admirahly. Smilax may be propagated either hy seeds, cuttings, or divisons of the root. Strings are the best material for it to climb up. The growths take more kindly to it than they do to wires, and besides, when required for table decoration, it is very easy to cut the strings without troubling to unwind them.

Planting Nymphaeas.—*Enquirer* has a small pond in his garden in which he would like to have some Water Lilies growing. He asks how he shall plant them, also when will be the best time to plant.

If you can let the pool run dry without much trouble, the plants may be buried straightaway in the mud at the bottom. In such a case, however, it will be necessary to see that they are firmly planted, otherwise the stout rootstocks of the yellow Lily (Nuphar luteum) will float to the top. A capital plan is to put the roots into baskets or boxes filled with soil, and plunge them in the water. This will admit of shifting them from one place to another if desired. Planting may be done at any time before growth commences, but as the latter will not take place for some time yet, there is no hurry.

Figs out of doors.—You may plant a Fig against the south wall, *M. T.* During ordinary seasons you should obtain a good crop of fruit from it. Brown Turkey is far and away the best variety for outdoor planting.

Potting Adiantums.—A capital season to perform this, *Y.*, is about the end of the present month. The sun has not then got enough power to try the plants very severely. If your plants are commencing to throw up young fronds that is a sign that they may be potted very soon. If you wish to divide the plants you must make a start a little sooner, and before the fronds have got very advanced, otherwise the check will work considerable damage.

Planting out Peas.—*Woods* has sown some Peas in pots and wishes to know when they will be fit for planting out.

It will not be safe, at least before the middle of March, and perhaps not then, as we sometimes get a gentle reminder in the shape of frost and snow that winter is not yet over at that particular season. It is well, therefore, to spare the plants such a trying experience. Another thing! do not plant when the ground is wet.

Stock Seeds.—There is absolutely no reason why your own seed of Stocks should not be good, *N. Lewisham*, particularly if you were careful to pull out all the plants with single flowers and weedy appearance. By all means give it a trial. Clean the seed at once for you may soon start to sow some under glass.

Poor Cyclamens.—The blooms you sent us *T. B.*, certainly deserved to he called poor. There may be several reasons for this. Perhaps your plants were badly treated in the earlier stages, or they may be old ones, and the flowers small on that account.

Certainly, we should not advise you to attempt to grow the plants on for another year. It is now rather late for seed sowing, and you should purchase a few plants for next season and sow seed next autumn to supply stuff for the following year.

Potting Cinerarias.—It is too late now *J. O.*, to pot the Cinerarias as they are coming into flower. Instead, give them liberal supplies of liquid cow manure, and the plants, although in small pots, will throw some good flowers. Pot-bound plants will take a great deal more feeding than others which are not in such a condition.

Chrysanthemum Edwin Molyneux.—Can you give me any information respecting the growing of Chrysanthemum Edwin Molyneux for exhibition purposes. A few facts concerning it would be greatly appreciated round here.—*J. G. P., Harrogate.*

Gas Tar for Rabbits.—My garden lies close to a wood that is infested with rabbits. During the recent hard weather these have done considerable damage in the garden. Amongst other things they have gnawed the bark off some young Apple trees. A neighbour of mine assured me that if I anointed these trees with gas-tar, the rabbits would not touch them again.—*R. O.*

Probably not! but gas tar would greatly damage these young trees, especially if the bark is already stripped from the trees close to the ground. The best plan will be to enclose the stem with a cylinder of 1 in. mesh wire. A capital preventive for rabbits is to paint the stems of the trees for a distance of 3 ft. above the ground with a mixture of lime dissolved in milk.

Banstead Loam may be easily obtained from any respectable vendor of horticultural sundries, *Clio*, but we question if it would pay you to get it in the small quantities you require from any other than a local depot.

Apricots.—Either the south or the west wall will suit the Apricot in your locality, *J. Boysgood.*

Early Cauliflower.—Will you tell me when to make a sowing of Cauliflower for early work.—*T. M.*

Seed may be sown at once in a pan and placed under glass in a gentle heat. This will furnish plants for putting out under handlights in March and April.

TOMATOS, VICEROY AND SENSATION.

Both of these fine Tomatos belong to the same group or section as the well-known Perfection. Viceroy is a new variety, which has been raised and just put into commerce by Messrs. Ed. Webb & Sons, Wordsley, Stourbridge. The fruit of Viceroy is somewhat flatter than that of Perfection, but larger, and ripens earlier. In the latter respect it should prove more serviceable for outdoor culture than Perfection, by those who have no greenhouse in which to forward the large types of Tomato which are received with so much favour by exhibitors. Gardeners who intend to exhibit, will grow it under the usual method of treatment for exhibition purposes. The fruit is large, perfectly smooth, beautifully shaped, and of a rich scarlet colour, while the flavour is considered excellent. The accompanying illustration shows the smooth and beautiful appearance of the fruit, but not its characteristic flattening, owing to the disposition or closely packed condition of the samples when photograped.

The variety Sensation (see p. 379) is older and better known than the above. It also belongs to the Perfection type, than which it is a little larger, and darker in colour, though closely similar in shape. Its rich colour and smoothness make it a favourite with those exhibitors who have given it a trial. The weight of crop produced by it has given even more universal satisfaction; for, after all, the greater number of gardeners in private establishments require a heavy and continuous supply of Tomatos from the earliest period of the year at which they can be matured, till the latest. The culture of the variety both in pots and in the open air has given great satisfaction, the fruits attaining a large size without having been thinned. The perfectly matured fruits are of a rich red, and the flavour equal to the best in this section. The joints of the stems are short when grown under proper conditions, with regard to light and ventilation, so that the bunches are produced relatively close together. The fruits also set well and continuously all through the growing season. We are indebted to Messrs. Webb & Sons for this opportunity of illustrating the varieties in question.

Webbs' New Tomato Viceroy.

The Palm House at Kew contained but half-a-dozen scraggy and half-dead specimens of Orchids in 1810, says *The Daily Mail.* Since that date Orchid culture has become *the* feature of nineteenth century horticulture.

SIDBURY MANOR, DEVON.

This, the residence of Sir Charles Cave, Bart, stands in an exposed position between Sidmouth, a favourite winter resort, and Salcome Regius. The view from the mansion down the Sid Valley to Sidmouth is a splendid bit of Devonshire scenery; and which, with the large herd of fallow deer and Welsh sheep feeding side by side in the large undulating park, the waterfalls and cascades, the writer thinks would make an excellent picture. Notwithstanding that the gardens and grounds are rather exposed to the east and westerly winds, many of the choice Conifers thrive admirably here. Abies, Piceas, Pinus, Cupressus, Thujopsis, Retinosporas, etc., look quite at home. The soil is of a rather heavy, retentive nature and cannot be worked if at all wet.

I think the mansion was built about fifteen years ago, and the gardens and grounds were laid out soon after—the glass is very extensive and built upon terraces. There are several vineries, and the Vines, therein look very strong, those in the earliest house showing their bunches. Peaches are not forced here, so only one to lean-house is devoted to this fruit. At the time of my visit, February 3rd, I found the plant houses fairly gay and all looking clean and healthy. A very nice show of Cyclamen (Sutton's strain) was in full bloom, and had been flowering since November. One house was filled with Gardenias, which were very promising and showing their flower buds. In another house a good batch of Freesias was in flower. Freesias are always acceptable on account of their fragrance. I also noticed a healthy lot of Carnations, the majority of which consisted of Mrs. Leopold de Rothschild, a beautiful deep pink and very sweet, a variety which should be in every collection.

There is a goodly number of Orchids grown, Cypripediums, Dendrobiums, and Calanthes predominating. The latter had just finished flowering, and had made some fine bulbs, which augur well for another season. Another house is devoted to Crotons, which are grandly coloured and include old as well as new varieties. Another house is mainly devoted to Ferns. Bananas are grown in one or two of the structures and carry good bunches of fruit. Stephanotis floribunda does remarkably well on the roof and yields a profusion of flower a little later on. I also noticed a large batch of Hymenocallis macrostephana looking very strong. I understand this species is not very common.

In the conservatory, adjoining the mansion, is a miscellaneous collection of flowering plants, including several plants of the late 'Mum, Princess Blanche

which is nearly a pure white at this date. I send a few blooms for you to see. Before leaving the glass structures, notice ought to be taken of the new seedling Orange, Edith Cave, which was certificated about two years ago. Small plants in 6-in and 7-in. pots are carrying three and four fruits respectively, and I learned they were exceptionally good eating.

A house of Tomatos was quite a sight, dozens of ripe fruits were hanging, and hundreds in a green state to come on. Quantities have been gathered almost daily during the past three months. They were all in 9-in. and 10-in. pots and by name Challenger. A few Pines are grown, but not in quantity, while the Fig house had just been started. The pleasure grounds are not very extensive, though a good sized piece was taken in last year and planted with Conifers and flowering shrubs. These, in spite of the severe drought last summer, were all thriving nicely.

The kitchen garden is of good size and had been relieved of its various winter crops, and all vacant ground had been dug and in readiness for spring cropping. The family do not reside here very much, their longest stay being about three months from August. The produce is sent them twice a week when at Stoneleigh House, Clifton. The whole place reflects great credit on the able young gardener, Mr. Reynolds, who took charge here a little over two years ago, and came from Gunnersbury Park, Acton, the seat of Messrs. de Rothschild, where he gained good experience, especially with their favourite flower the Carnation.—*J. M., B.*

[The flowers of the Chrysanthemum still in bloom at Sidbury Manor, as related by our correspondent, duly reached us. They are of moderate size, as becomes a purely decorative variety, and of the purest white till getting old, when a few of the outer florets assume a blush tint. The variety belongs to the Japanese section, and has curled and twisted florets, reminding us somewhat of Florence Percy. It has every appearance of being a valuable late variety.—Ed.]

DECORATIVE PLANTS IN SMALL POTS.

(*Concluded from p.* 363).

Let us take the case of Palms or other decorative plants of large size to be used as single specimens in vases. When it is known what is the maximum size of pot these will take, it is not at all advisable to come up to this size by at least one shift. By keeping to the smaller pot there will be room for a lining of moss around the outside of the pot, which must act favourably to the roots, and to the plant itself, by reason of the protection in a measure from extreme variations of temperature. When plants from the stove or temperate house take water pretty freely, there is less need of any apprehension of harm coming to them. Decorative plants should be potted at various seasons, so that there is always a stock in hand with their pots full of roots. Where it is possible, those fit for use should have the more airy situation and less atmospheric moisture accorded them. In other words, there should be a pit for growing the plants up to a certain stage, and then a house in which to keep them afterwards. It always pays to have such a pit to supply the stove in any case. This does not imply that a surplus over and above what is needed should be grown; it is a mistake, and one which most of us, I think, make in some form or other of growing more plants than we actually need to do. It should be borne in mind that three well-grown plants are better than four average ones, or half-a-dozen indifferent ones, the latter frequently taking the most room.

After all, in regard to table plants (*i.e.*, those for the dinner table) more particularly, but which I have not hitherto alluded to for this special purpose, I must say that in my opinion the size of pot is often excessive. Anything beyond 4½-in. pots (48's) is not needed. Plants large enough for all average dining tables can be grown in this size of pot. If 6-in. pots (32's) be used, it means that the size is doubled and about twice the amount of soil used in which to grow the plants. Horticultural societies are, in a measure, responsible for the 6-in. pot; but it is for all practical purposes an absurd limit to permit. (Plants of uniform size, as usually shown for this purpose generally carry the most weight, but most certainly they ought not to do so. We never think of using such plants all of one height at home—why, therefore, show them?) Many good plants of useful table size can be grown in 60-pots, being better suited to small tables in the smaller size of vases. Small Crotons, Aralias, and Palms can be used in these small pots with good effect. Plants of the slender growing Palms, such as Cocos weddeliana, Chamaedorea glaucifolia, &c., when in these small pots make excellent centres to dwarf arrangements of cut flowers.

Plants used for dinner tables are frequently left too long at one time in the room, and thus they more easily suffer. No doubt others besides myself have noted that the dining-room, when not in use, has its windows (and doors frequently) thrown open; and this is done quite irrespective of the season of the year. This must be trying to the constitution of any comparatively tender plant. In supplying plants for this purpose my plan has been to change them every day at the time most convenient; so that with these precautions there will not be much fear of harm. By this means it is always possible to give greater variety, and also to select such, day by day, during severe wintry weather, as are best suited to withstand the cold. As a protection to table plants, whilst being taken from their growing quarters to the dining room, I have used a long box in which each one could be laid down.

When the Kentias were first introduced in any quantity for decorative purposes, I recollect seeing a batch of well-grown half specimens in extremely small pots compared with the size of the plants. That sight impressed me more than ever of the mistake made when over-potting or any approach to it was tolerated. Kentias are particularly well adapted for confining in quite small pots. They make more fibrous roots than some Palms, appearing to penetrate every atom of soil. Of course everyone who has any acquaintance with decorative Palms knows the great, and quite indispensable uses, that are now made of the Kentias. They are most accommodating plants, lasting a long time in good condition, under adverse circumstances, being quite at home in a cool house, a temperate house, or a hot-house. I have grown small plants in a house, that every night with sharp frosts, falls to 40° and even lower.

Cocos weddeliana is another instance in which overpotting is a mistake. With less pot-room the growth is hardier, and thus the plant will withstand a lower temperature that in which it is usually grown. Cocos plumosa under the same conditions makes a far more useful plant. This, too, I have kept in a minimum temperature of 40° during the winter, but the pot itself stood immediately over the hot-water pipes. Of other plants, I would briefly allude to the species of Chamaedoreas, such as C. glaucifolia and C. graminifolia, two most useful species, particularly in exhibition groups, both being of slender, elegant growth, thriving well under small pot culture. Euterpe edulis and Areca lutescens are two other examples. Since the advent of the Kentias, however, these and other good Palms do not find so much favour, yet they are equally as beautiful and quite distinct also. Grasses in pots, such as Eulalia japonica and the varieties of Carex and Cyperus are all more enduring when confined at the roots. If they be overpotted, the growth will exceed what is actually required. The varieties of Asparagus, such as A. plumosa and A. deflexus will both be of good service when pot-bound, the growth thus made rendering them better suited for the purpose.

Of plants of rapid growth, the Coleus affords an example of the futility of over-potting when required for use as decorative subjects, this being the special purpose for which many grow them. With the pots full of roots and the growth not quite so luxuriant, but the colour oftentimes better, the chance of injury is more remote. Take again of annuals, the Celosia. Unless large plants be aimed at, by far the best results will be secured by keeping to 4½ in. and 6 in pots.

Looking at decorative plants in the widest aspect possible, I am fully convinced that over-potting only aggravates the case and hastens the end of the plants themselves, reasons for which have been given. The mere fact of needing more frequent waterings is as nothing compared with the corresponding advantages in other ways. The length of time during which some plants will endure in pots of confined size is quite remarkable. I had an Aralia elegantissima in a 4½ in. pot which was about 5½ ft. high, with healthy, well-developed foliage within a foot of the pot. Crotons will carry their leaves down into the soil as struck from the cutting until they reach a height of 2 ft. and upwards on the single stem. Firm potting and good soil are ample until the pots are full of roots, then it is necessary to feed them pretty freely. I have tried most of the artificial manures of past years for Palms, but after all no better results have been accomplished than when using Standen's Gardeners' and Amateurs' Friend, for some fifteen years back. This manure is highly concentrated, hence less is needed; but as it penetrates the soil it does specially good service. As a change of stimulant I advocate the use of soot and liquid manure from the farm yard, used of course in a clear state. Once a week for each of these stimulants will be sufficient, it being borne in mind that it is a very easy matter to *overdose* the plants and make the soil in time *sour*; this means a decline in health and vigour before long.

Bulbs.—I have not alluded thus far to bulbs, but here again the evil of over potting is quite manifest. These, taken as a class of plants, are predisposed to make excessive leaf growth when over-potted, particularly such as are given entirely fresh soil every season. Besides imported bulbs, Tuberoses, Begonias, and Gloxinias are cases in point. Those of more permanent character, such as Clivias, Pancratium fragrans, and Eucharis, all evergreen kinds, will flower more freely when not over-potted, being likewise of more sturdy character.

Primulas from amongst plants annually raised from seed are instances of what may be accomplished under small pot culture. Plants of these useful decorative subjects will do better service in 48-sized pots than in 32's. Grow them in the latter of course for large plants to stand in conservatories, &c., but keep to the smaller pots when their use is chiefly in request in the house. Instances could be multiplied, if it were needed, but the chief point at which I have endeavoured to direct my remarks has been the culture of decorative plants generally. I have not attempted to give lists of suitable plants; these are I think sufficiently well known amongst most of us. —*Jas. Hudson, Gunnersbury House, Acton, W.*

CANFORD MANOR WIMBORNE.

Extensive improvements have recently been made in the beautiful gardens here. The pleasure grounds have been greatly increased and well-planted. A splendid new Rose garden has been formed; many hundreds of all the leading varieties have been planted. A beautiful rock-work garden is of additional interest; and is well-formed and planted with plants suitable for that purpose. When it looses its new appearance, it will be a valuable addition to the many features of interest here. Lady Wimborne is an enthusiastic gardener, and takes great interest in the garden. She is well-supported by Mr. Wilfred Ward, who has charge of this important part of the estate. The grounds are well kept, and well planted with numerous hardy trees, shrubs and Coniferae. Herbaceous plants are extensively planted in suitable positions. All parts and places in the garden seem to have been studied, receiving the necessary attentions to make the same interesting.

Additions in the way of plant houses have recently been erected. A large imposing house, divided into sections, now contains useful plants for decorative work, and cut flowers. A grand lot of Palms occupies one division; various other foliage plants another. A splendid lot of Gardenias fills another, and these are very well done, abundantly set with buds, and should produce a fine lot of flowers about Easter. Another range of span-roof houses contains a grand collection of stove flowering and foliage plants, grown principally for table work. A few good useful Orchids are noticeable, also; not rare sorts, but those which one can make good use of.

A special feature here is Carnations. How popular these have become, and justly so when done as seen here. One span-roof house is full of the Malmaison varieties, which are grand examples of cultivation. The plants have twenty to thirty and forty shoots, all clean, strong and vigorous; in fact for strength and cleanliness I have never seen them excelled. These are giving some grand flowers, and will continue to do so for months. In another house are all the leading varieties of tree Carnations, which are equally well done, and producing grand flowers, which are cut in great quantities.

Speaking of winter-flowering plants, Poinsettias are as well done here in pots as one could wisb. I saw the remains of a fine batch in 6-in. pots, which were producing enormous heads of tbeir bright scarlet bracts, nearly 2 ft. through. Cyclamen: oh such a sight! About 300 plants in one house are perfection, well-grown, and profusely flowered, many with three and four dozen expanded flowers of such grand varieties as Sutton's Butterfly, Vulcan, Salmon Queen, &c. How vastly improved is the Cyclamen! and what a favourite it has become witb gardeners! wbo seem to understand tbeir treatment and useful qualities more freely. Primulas, Calceolarias, and Mignonette are also extensively and well done. A large house has just been planted with Roses. All the best varieties for forcing and cutting purposes are represented in quantities. From their appearance, they will give a good and useful account of themselves. Forcing bulbs and other plants for cut flowers are grown in enormous quantities, and are cut and sent in large batches to her ladyship wherever she may be. Tbey are greatly appreciated I am sure.

The fruit houses are extensive, and the early houses are bearing evidence of activity, for tbe Vines have broken well, and the Peaches are well in flower. The kitchen garden is also very extensive, and early crops of vegetables are appearing satisfactory. These brief notes I made in a hurried look round, on a gloomy wet day, in compauy with Mr. Wilfred Ward, her ladyship's *fac totum*, who is full of energy and practical knowledge, which he is constantly displaying in the various departments of Canford Manor Gardens.—*Rusticus.*

WEBBS' SENSATION TOMATO.

AMONGST THE PAXTONIANS AT BRADFORD.

THE annual dinner of the Bradford Paxton Society was held recently at the Market Tavern Hotel, when the various members and guests, approaching 100 in number, sat down to a well-served menu, provided by Host Roder. Dr. H. Smith occupied the chair, faced in the vice-chair by Mr. Wm. Moorby and Mr. R. Eichel, wbo did duty for Mr. Raper in the absence of tbat gentleman. There were also present delegates from the various Paxton Societies in the district, namely:—Mr. G. Parkin, and Mr. Wassel, Wakefield; Mr. C. Goff, and Mr. G. Thomas from the Morby Society; Mr. W. Wright, and Mr. J. Shaw from Batley; besides whom we also noticed Mr. Tbos. Horsman, of Ilkley and Bradford; Mr. Wm. Horsman, Frizinghall; Mr. W. Martindale, hon. treasurer; Mr. Keiling, Mr. B. Spencer, Mr. Councillor T. Williams, Mr. A. E. Benney, Mr. W. Wilkinson, Mr. Marlow, Mr. G. W. Catton, and Mr. H. Midgley, Bankfield, Bingley.

After tbe removal of the cloth the evening was devoted to speecb and song; the president having first read letters of apology for non-attendance from the Rev. F. D. Horner, Councillor Dowson, and from the Leeds Society's delegates.

Due honours having been paid to the customary loyal toasts, the hon. secretary, Mr. J. Collier, read the tenth annual report, which was of a satisfactory nature, and which showed that the society's programme for the past year bad included some eighteen essays by various authors and various excursions to places of horticultural interest, the last of whicb was to the fruit grounds of Mr. E. J. Bradley, of Enderby, near Leicester. The membership had increased satisfactorily, and special reference was made to the allotment scheme in hand, which it is proposed to put before the County Council.

On the motion of Mr. Wm. Horsman, the report was received and adopted, and tbe cbairman added some congratulatory remarks upon the growth of the society. Mr. Thos. Horsman, in an able speecb, proposed the "Town and Trade of Bradford," stating tbat they would probably all agree that Bradford during the past twelve months had been passing through a critical period; but he was convinced there were still men of a proper grit ready to hold their position with the keenest competition in the world. He referred with satisfaction to their municipal and other public buildings, and observed that Bradford was wealthy in public parks and other breathing spaces, which had the advantage of being situated at fairly equal distances and could be easily got at and appreciated by their large population. Mr. Horsman also paid tribute to the foresigbt of those who had municipalised the water supply, holding that good pure water was essential to every business. Councillor T. Williamson responded, and referred with satisfaction to the cbaracteristic spirit with wbich some £16,000 had been raised in connection with the park avenue; and Mr. Wyatt also spoke to the toast.

The President, in rising to reply to tbe toast of "The Bradford Paxton Society," very succinctly traced the history of tbe illustrious horticulturist from whom the society took its name, whose life afforded them all an excellent example to follow.

Tbe remaining toasts were as under;—

Mr. Benney—"Kindred Societies," replied to by Mr. G. Parkin (Wakefield), and Mr. Goff (Morley).

Mr. W. Wilkinson—"The Essayists," replied to by Mr. B. Spencer.

Mr. Marlow—"The Press," replied to by Mr. A. E. Stubbs, for THE GARDENING WORLD.

Mr. G. W. Catton—"The Host and Hostess, replied to by Mr. Roder.

The programme was pleasantly interspersed witb songs by Mr. Ivison, Mr. Power, and others, Mr. J. H. Yewdall ably presiding at the piano. The Ichthemic Guano Company, as usual, sent for each guest one of tbeir tastefully illuminated boxes of cigarettes.

Tbe following is the syllabus for 1897:—January 9th, Inaugural Address, by the President; January 23rd, "The Mushroom," by Mr. W. Shepherd; January 28th, Annual Dinner; February 6th, "Life 4,000,000 Years ago," by Mr. A. E. Benney; February 20tb, "Tbe Pancratium," by Mr. Ben Baxter; March 6th, "Early Forcing of Lily of the Valley," by Mr. W. Horsman; and March 20th, "The Experiences of a Park Gardener," by Mr. F. Hardisty.

SOCIETIES.

ROYAL HORTICULTURAL.—*Feb. 9th.*

CONSIDERING the period of the year, flowers were very well represented at tbe meeting on Tuesday last. Orchids were particularly prominent, and Cyclamens and Chinese Primulas also occupied a considerable amount of staging, being now in their best condition. Stove and greenhouse plants, including much forced material, such as Azalea mollis, and Lily of the Valley, were also attractively staged.

A large group of Orchids was staged by Messrs. J. Veitch & Sons, Ltd., Chelsea, who set up the flowering specimens very attractively with Palms and Maidenhair Ferns. Dendrobiums and Cypripediums were very conspicuous, including, amongst tbe former, D. Editbiae, D. Cordelia, D. C. flavescens, D. euosmum roseum, D. e. virginale, D. Dominii, and D. subclausum, all being hybrids except the last named, and beautifully flowered. Laeliocattleya Pallas was also present, the flowers being handsome. Angraecum sesquipedale, Cypripedium Prospero, C. leeanum, C. Euryades, Pbalaenopsis schilleriana, and P. stuartiana, were also notewortby (Silver Flora Medal).

Messrs. F. Sander & Co., St. Albans, also exhibited a group of Orchids, including good pieces of Oncidium splendidum, Odontoglossum hystrix nobilis, Phaius Marthae, Cypripedium Calypso, C. insigne montanum var., Lycaste Skinneri, and various Dendrobiums. Alongside of this group were finely-flowered pieces of Sarracenia flava with green and yellow flowers. Palms and Asparagus plumosus were interspersed amongst the plants (Silver Banksian Medal).

Messrs. Hugh Low & Co., Upper Clapton exhibited a group of Dendrobiums and Cypripediums. Amongst the former they had fine pieces of D. Hillebrandii, D. wardianum, D. primulinum giganteum, and D. crassinode, all well-flowered. They also had large and well-flowered pieces of Miltonia Roezlii, Oncidium tigrinum and Angraecum sesquipedale (Silver Banksian Medal).

A group of Orchids was also staged by Messrs. B. S. Williams & Son, Upper Holloway, wbo had large well-flowered pieces of Cypripedium Boxallii, C. villosum, C. Nitens, Lycaste Skinneri, Lycaste fulvescens and some pieces of Coelogyne cristata. These large plants were mixed with Ferns.

Sir F. Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen, S.W., exhibited cut flowers of Phalaenopsis scbilleriana, P. s. vestalis (with white flowers), P. Casta and P. leucorrhoda, all beautiful

and interesting of their kind, some of them being rare. Welbore S. Ellis, Esq., (gardener, Mr. W. S. Barrett), Hazelbourne, Dorking, exhibited Laelia glauca, Odontoglossum harryanum Ellis's var., Lycaste gigantea and Epidendrum Ellisii.

Messrs. J. Veitch & Sons, Limited, also staged Cypripedium Schroderae candidulum, C. Leonidas, Phalaenopsis Hebe, Laeliocattleya violetta and Dendrobium Cybele elegans, on the table devoted to new kinds. W. W. Appleton, Esq., Weston-Super-Mare, exhibited some Cypripediums. Messrs. F. Sander & Co. staged Dendrobium nobile-wardianum, Pleurothallis Roezlii, Phaiocalanthe Brandtii, and several other hybrids.

The Hon. Walter Rothschild, Tring Park, Tring, showed the hybrid Cypripedium Enid. The Right Hon. J. Chamberlain (gardener, Mr. H. A. Burberry), Highbury, Moor Green, Birmingham, exhibited Dendrobium burberryanum. Another hybrid named Cypripedium Rolfei (C. bellatulum x C. rothschildianum), also C. Rubens, and C. Triumphans, all very distinct were exhibited by Thos. Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, Whitefield, Manchester. Some Cypripediums in pots, and Odontoglossum Hallii leucoglossum Corndean var., were exhibited by T. W. Swinburne, Esq., Corndean, Winchcombe.

Messrs. Linden, L'Horticulture Internationale, Parc Leopold, Brussels, exhibited a group of very distinct and beautiful varieties of Cattleya Trianaei, including C. T. Imperator, C. T. eximia, C. T. illustris. C. T. Miss Linden, C. T. Lindeniae, C. T. princeps, and some others. Several of the above named varieties were very much admired, particularly C. T. Imperator (Silver Banksian Medal.)

Messrs. Hugh Low & Co. staged Dendrobium Hillebrandti Harefield var., Paphiopedium (Cypripedium) insigne Youngae, and Odontoglossum Valentinei. Messrs. Heath & Son, Cheltenham, showed a large plant of Dendrobium nobile Heathii.

Mr. James Cypher, Cheltenham, was accorded a cultural commendation for a large and well-flowered plant of Dendrobium Ainsworthii Cypher's var., and a like award for Dendrobium splendidissimum grandiflorum. The former was most floriferous, and the latter had stems about 4 ft. high.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., set up a very attractive little group of foliage and flowering plants. Amongst the former were some shapely specimens of Cocos Weddeliana, Livistona altissima, Eurya latifolia variegata, and Dracaena Lindeni. Of the flowering plants some well-flowered specimens of Prunus sinensis flore pleno were very conspicuous. Lilies of the Valley, Cyclamens, Primulas, Begonia Gloire de Lorraine, and B. Gloire de Sceaux, were likewise included (Silver Flora Medal).

Stove foliage plants and ferns were well shown by Messrs. John Laing & Sons, Forest Hill, S.E. A pan full of the showy little Bertolonias were a chief feature here, such forms as Margaritacea Argyraea, Souvenir de Gand, and Van Houttei were well represented. Bougainvillea glabra variegata was interesting. Rhopala corcovadensis elegans is a fine foliage plant that is all too rarely met with. Ardisias, Dracaenas, and Crotons were all very bright and showy (Silver Banksian Medal).

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., had a charming little group of early spring-flowering plants in pots. Iris reticulata purpurea and Leucojum carpaticum were represented by well-flowered pans. Iris histrioides, I. bakeriana, and Narcissus monophyllus, were a few more gems. A batch of Veltheimia viridiflora must not pass without mention. Both flowers and foliage are distinctly ornamental (Bronze Banksian Medal).

An effective display was made near the doorway by Mr. Wythes, gardener to Earl Percy, Syon House, Brentford, of forced material, for which a Silver Banksian Medal was awarded. Staphylea colchica, Azalea mollis, Prunus sinensis flore pleno, Roman Hyacinths, and Tulips made up the bulk of the group.

Messrs. Cannell & Sons, Swanley, Kent, staged a magnificent array of Chinese Primulas that filled a table that ran the whole length of the hall. Many different and various types of this useful flower were on view, the plants throughout being characterised by remarkable health and vigour. The quantity of flower, and the size and substance of the bloom were everything that could be desired, pink, white, rose, purple, crimson, and blue varieties were all shown with a number of intermediate shades. Eynsford Purple, White Perfection, Dr. Nansen, Emperor Improved, Defiance, Swanley Giant, Swanley Blue, My Favourite, Future Queen, and Eynsford Red were some some of the finest named varieties. Turning from these dwarf-habited plants to the taller and more elegant type represented by P. pyramidalis rotundiflora alba, P. p. grandiflora striata, and Pink Lady, a great difference was manifest. The latter, section however, is steadily growing in popularity A Silver Gilt Flora Medal was deservedly awarded the Messrs. Cannell for their grand exhibit.

A Bronze Flora Medal was voted Messrs. B. S. Williams & Son, Upper Holloway, N., for a batch of well-flowered seedling plants of Azalea mollis. A Bronze Banksian Medal fell to the lot of Messrs. Barr & Son, King Street, Covent Garden, for a small group of early spring flowering plants, Iris reticulata histrioides, I. r. Krelagei, Scilla bifolia, Narcissus minimus, Chionodoxa sardensis, and Cyclamen ibericum rubrum were all well represented.

A unique feature was an exhibit from the Floral Preservation Company, Limited, 14 and 15, Coleman Street, E.C., of preserved Fern fronds, Roses, and sprays of autumn foliage treated with chemicals, and the colours thereby fixed. The patent possessed by the company is evidently a valuable one, for material thus chemically treated cannot fail to be of service in the winter months. An award of "Highly Commended" was given.

A Silver Flora Medal was awarded to Mr. Charles Turner, Slough, for a capital batch of Cyclamen persicum. The plants were stocky and well flowered, whilst the individual blooms were of more than average size and substance.

Messrs. Young and Co., Stevenage, Herts, contributed a nice lot of cut sprays of Lily of the Valley, arranged with their own foliage. P. Purnell, Esq., The Woodlands, Streatham, received a Bronze Banksian Medal for a group of Daffodils in pots. A Bronze Flora medal went to Mr. Willard, gardener to Baroness Burdett Coutts, Holly Lodge, Highgate for half a dozen fine specimens of Begonia Gloire de Sceaux. The plants were accommodated in 8 in. pots, and the dark bronzy green foliage was of wonderful size. The plants measured well over 3 ft. in height, by nearly as much through.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, made a rare show of Cyclamen. The most conspicuous and central feature here was a basket of the new white Bushhill Pioneer, with the characteristic feathering running up the centre of each segment of the flower—a curious and quaint departure (Silver Flora Medal).

Messrs. James Veitch & Sons, Ltd., showed baskets of Rhodora canadensis and Spiraea confusa in full flower; also trusses of blooms of the Javanico-jasminiflorum section of Rhododendrons. Violet Amiral Avellan was shown by Messrs. T. Cripps & Son, and Iris histrioides and I. eticulata Krelagei, by Messrs. R. Wallace & Co., Colchester.

The exhibits of hardy fruit were very good considering the advanced state of the season.

Thirty grand dishes of Apples were shown by Messrs. T. Rivers & Son, Sawbridgeworth, in superb condition. Belle de Pontoise, Annie Elizabeth, Northern Spy, Sutton Beauty, Golden Reinette, Sandringham, Blenheim Orange, Cox's Orange Pippin, Fearn's Pippin, Buckingham, Baxter's Pearmain, Melon, Bailey's Sweet, and Bijou, were some of the most notable varieties. A collection of Oranges was also sent by the same firm (Silver Knightian Medal).

A Silver-Gilt Knightian Medal was awarded to Messrs. J. Cheal & Sons for a larger collection of sixty dishes of Apples and Pears. Of the latter, Nouvelle Fulvie, Verulam, Glou Morceau, and Catillac were the best. Cox's Orange, Mabhott's Pearmain, Prince Albert, Mere d'Menage, Hormead's Pearmain, Jubilee, Warner's King, Ottershaw Pippin, Newton Wonder, and Hoary Morning were some of the best Apples.

Sixteen dishes of Apples were forthcoming for the Veitch Memorial Prizes for the best flavoured fruit. Mr. W. H. Divers, The Gardens, Belvoir Castle, was first with Blenheim Pippin; and Mr. J. Hudson, The Gardens, Gunnersbury House, Acton, W., second with scarlet Nonpareil. Pears showed a falling off as may only be expected at this time of the year. Eight dishes were shown; the first award going to R. Leigh, Esq., Maidstone (gardener, Mr. Woodward), with Passe Crassane. Mr. O. Thomas, gardener to Her Majesty The Queen, took second place with Ne Plus Meuris.

Two plates of Lemons sent by Major Thornhill (gardener, Mr. G. Harvey), Stanton Hall, Bakewell, received a "Cultural Commendation," and well they deserved it, for they were exceptionally fine fruit.

Messrs. Young & Co. showed a collection of Potatos comprising close on forty varieties, the only exhibit of vegetables in the hall.

The Annual Meeting.

The annual general meeting was held at 3 p.m. in the Lindley Library, 117, Victoria Street, Sir Trevor Lawrence in the chair, and a fair company present. The secretary, the Rev. W. Wilks, M.A., then read the minutes of last year's general meeting, which were then put to the meeting and signed by the president in the usual way.

After the election of fellows Mr. Cheal and Mr. H. Turner were appointed scrutineers of the ballot. On Mr. Owen Thomas' proposal a cordial vote of thanks was passed to the retiring members of the council.

Sir Trevor Lawrence then rose to address the meeting and congratulated the society on having accomplished a lot of useful work during the past year. The gardens at Chiswick have not only been maintained properly, but a large sum (£2,400) has been spent in improving them. He also felt that he should only be doing right in testifying to the fact that in Mr. S. T. Wright they had obtained a most excellent superintendent, and that the gardens already looked the better for the exercise of his care and skill. It was 10 years ago nearly to a day since they left South Kensington, and he ventured to say that none, looking back, could fail to see that such a step was necessary. Speaking of the number of awards given, Sir Trevor assured his audience that they were anxious to maintain the value of these awards. A departure that had been made during the past year had been the arrangements made for taking the portraits of Orchids that had received First-class Certificates at the time the award was made. Curiously enough the Horticultural Society of France had recently made a similar departure. The deputation that had been sent to York and Chester had been well received, and had proved a success. Sir Trevor also offered a few remarks on several items which appeared in the printed report that had been issued to the fellows. Amongst these was the proposed catalogue for the Lindley Library. He also desired to express the thanks of the society to those fruit-growers who had assisted them in completing the collection of fruit trees at Chiswick; also to the readers of papers for the trouble they took to impart some of their knowledge. They had lost several valued old friends in Mr. Bruce Findlay, Sir F. Von Müller, Dr. Trimen, Mr. Anthony Waterer, and Sir Robert Warner. The financial arrangements were satisfactory. They were very sorry that they could not see their way clear to found a Horticultural Hall. According to Baron Schroder's calculation they would need to have £40,000 in hand before they attempted such an institution. He passed an encomium upon the value of the society's officers, including the secretary and the assistant secretary. In conclusion he moved the formal adoption of the report.

Professor Michael Foster rose to second. He spoke to the suggestive nature of the statement that had been made with regard to the absence of dissension. At one time such a statement could not have been made, or, if made, would only have spoken of a deceitful calm that would have been worse than open dissension. With regard to the portraiture of the certificated Orchids he would like to suggest that other plants besides Orchids should be thus treated. He would also impress upon them the necessity of having a competent portrait, for an incompetent one was enough to drive a gardener wild, if he might be allowed to make use of the expression.

The report, on being put to the meeting, was carried unanimously.

Dr. Masters asked if it could not be arranged to have a meeting at Chiswick. He was aware that the members of the committee went occasionally, but as he did not belong to any of the committees now he had not a chance to go, but would go if summoned.

The results of the ballot were then made known by the scrutineers, and it was found that the gentlemen nominated by the council to take the places on the council of those retiring were duly elected without opposition.

A vote of thanks to Sir Trevor for presiding, proposed by Mr. Bunyard, and seconded by Dr. Masters, was carried by acclamation.

All having been satisfactorily settled, the proceedings then terminated.

OBITUARY.

THE LATE EARL OF KINNOULL.—George, eleventh Earl of Kinnoull, died at Torquay, January 31st, and was interred in the family burying ground on Saturday, February 6th, at Dupplin Castle, near Perth. This popular nobleman was seventy years of age, and long held a distinguished position in the county of Perth—was much esteemed among the agricultural arboricultural and horticultural communities. The splendid policies at Dupplin give tangible proof of the love which the late Earl and his Countess (who died two years ago) had for the adornment of the grounds around the beautiful castle. By the picturesque drives and even by the highways specimen Coniferae were planted for effect; and many fine Picea nobilis, Cedrus Deodara, Abies Douglassi, Cupressus and others grew into handsome trees during the proprietorship of the late Earl and Countess.

Dupplin has long been familiar to gardeners by reason of the extensive gardens which are a landmark when viewed from the railway on the line to Perth, and the able gardener, Mr. Browning, who is also manager on the estate, is one of the best known and most respected gardeners in the north. By him the funeral arrangements were directed with consummate care.

The floral display in the private chapel at the castle and in the graveyard was elaborate, but chaste and beautiful. It was said there were about 200 wreaths, crosses, and sprays. Seldom such a floral display of the most popular flowers of the season is seen. Many had come hundreds of miles from relatives and friends, as well as from the leading families of the district; not only variety of flowers but very varied colours were much in evidence; as examples we noted a few wreaths as follows:—with a margin of crimson and green Croton leaves; with Callas and Lily of the Valley; Violets set in bunches among Niphetos Roses, and Lily of the Valley; Callas, Lily of the Valley interspersed with Violets; Lily of the Valley set in pink heath; Dendrobium nobile and Lily of the Valley banded with Ferns; Camellias and Cypripedium insigne; one of Dendrobium nobile, Cattleyas, Coelogynes and Eucharis interspersed with Lily of the Valley; one very distinct was pink Tulips set in Violets; a large one was composed of Lilium Harrisii, Callas and Lily of the Valley interspersed with Violets; two were composed of crimson and white Tulips which were somewhat brilliant among the lighter shades of colour.

When all were arranged in the burying ground, under the shade of one of the largest Walnut trees in Scotland, the effect is more easily imagined than described. Lord Hay, of Kinfauns, is the eldest surviving son of the late Earl, and is successor to the title and estates. Those who know his lordship best indicate that the fine taste manifested at Dupplin by generations of ancestors is not likely to be lacking at this princely seat in the future.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Bedding Arrangements.—*Diagram No. 2*: The Begonia mentioned in your last communication is not the typical B. semperflorens but B. s. Vernon's var., or a dwarf form of it. We shall be pleased to assist you with carpet bedding designs. Please forward your communications by the beginning of the week to ensure insertion the same week. As to Diagram No. 2, we may say that Lobelia cardinalis associates well with almost anything that has green foliage, flowers of other colours than scarlet, and is not too tall. The Lobelia should stand well above the other plants forming the groundwork in the bed. We doubt, however, if L. cardinalis is the proper name of it. If the foliage is of a dark purple, the variety is almost sure to be L. splendens Victoriae. It would associate well with varieties of Begonia semperflorens having light green foliage, also with Violas; with Pentstemons, if the latter are not planted too thickly; with silver or variegated Pelargoniums; pink or white-flowered Pelargoniums; dwarf light-coloured Fuchsias, and various other moderately tall plants. If you use yellow Calceolarias as a ground, do not plant them too thickly, otherwise the Lobelia will get crowded and spoilt.

Grape Vine Roots.—*G. Harvey*: We have examined the roots sent, and they are in very bad way. They have evidently, however, made good growth during the season, but since then have been losing ground. We should suspect that the drainage is in bad condition, and that the roots have been suffering from lack of oxygen or proper aeration, owing to the close and wet soddened condition of the soil. The vines, including their roots, would make vigorous growth during the dry summer months, but as soon as the wet weather sets in during autumn, they would begin to deteriorate, simply as a result of the changed conditions, the borders being wet and continuing to get worse with the long-continued rainfall, as well as with the melting snow more recently. Possibly the evil might have been aggravated by much feeding and watering of the vines in summer. Growth, we are afraid, will be weak for some time in spring, until fresh roots are formed. It would be worth your while to examine the state of the borders and put them right before the Vines are started into growth. We should not force too hard, but allow the vines to come along gradually.

Propagation of Eryngium.—*A. L. Sinclair*: Some of the species can readily be propagated by division, particularly those which readily multiply their crowns, and those which throw up suckers. The division should be effected earlier or later in March according to the state of the weather, and the workable condition of the soil. To economise the crowns, the whole plant should be carefully dug up, and after removing the soil, the crowns should be severed from the parent stock with as many roots, and as little mutilation as possible. To effect this use a strong knife, and cut at those places that will least expose the issues to the action of the cold, wet soil. These crowns would have time to get well established before winter. Save seeds from those species that ripen them, and sow in boxes of light soil, stood in cold frames, where the plants may be kept till they attain some strength, when they may be transferred to their permanent positions.

Rust on Plants.—*E. C.*: Some of the specimens sent are certainly very peculiar in the markings upon them, particularly the Cyclamens and the Angraecum flowers. We cannot imagine, however, that the zinc tanks for holding water for them have anything to do with the trouble. Neither is there any evidence of fungoid diseases upon them. We think it is more than likely that thrips were the cause of the injury to the Cyclamen leaves. They are very liable to attacks from thrips in their young and tender stages, when it is extremely difficult to detect the pests. These creatures would be liable for the injury to the flowers of Angraecum sesquipedale when in bud. As the injured leaves and flowers expanded, the injury done to them seems to become magnified. Thrips would also be responsible for the injury to the leaves of Aralia and Azalea. Those sent were not much damaged, however, and the Crotons were even less injured, and the discolorations possibly accidental. The summer is the best time to look for cause and apply any remedy; and we should be pleased to help you, if you send fresh, young specimens packed in damp moss when you see the evil commencing. There were no insects on the specimens sent, except a few scale on the Crotons, and not sufficient to do much harm. Examination of the flowers of Angraecum showed that the injury is quite on the surface and that the contents of the cells had been killed when the flower was quite young, and turned brown. A mite, not unlike red spider, but smaller and paler, sometimes does a deal of damage to stove and greenhouse specimens. Send us leaves of Begonias when the rust is beginning to show, and we will help you.

Names of Plants.—*J. B.*: 1, Asplenium marinum; 2, Asplenium Hemionitis; 3, Scolopendrium proliferum vulgare spirale; 4, Aspidium angulare; 5, Pteris quadriaurita argyrea.—*J. M. 'M.*: 1, Oncidium praetextum; 2, Dendrobium findlayanum; 3, Odontoglossum constrictum; 4, Cypripedium callosum.—*T. B. W.*: 1, Begonia rex var.; 2, Fittonia Verschaffelti; 3, Coleonema album; 4, Coleus aromaticus, not a Nettle; 5, the seed pods of a Colutea, probably Colutea arborescens; 6, Rosmarinus officinalis.—*G. B.*: 1, Cupressus nutkaensis; 2, Thuya gigantea; 3, Juniperus recurva.

Name of Fruit.—*J. Gold*: There was some variation amongst the Apples sent in shape and colour, but all were the same variety—namely, Brabant Bellefleur.

Communications Received.—W. Atlee Burpee & Co.—H. Cannell & Sons.—Sutton & Sons.—Ed. Webb & Sons.—T. & A. Constable.—Charles Sharpe & Co., Ltd.—John Baxter & Son.—Daniels Bros.—J. L. Reynolds.—J. L., P.—P. M.—A. P.—A. Upstone.—A. Hope.—Devon.—W. M.—Nestor.—James.—F. G.—Excise.—G. T., Hendon.—Maori.—L. C.—B., Cambridge.

TRADE CATALOGUES RECEIVED.

DICKSON, BROWN & TAIT, Seed Merchants, 43 and 45, Corporation Street, Manchester.—Catalogue of New Farm Seeds.

JOHN COWAN & Co., Ltd., Garston, Liverpool.—Cowan's Garden Seeds.

SUNSET SEED AND PLANT Co., San Francisco, California.—Sunset Seeds and Plants.

SUTTON & SONS, The Royal Seed Establishment, Reading.—Sutton's Farmers' Year Book.

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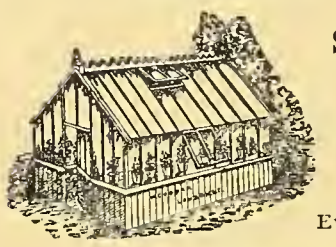
For Cucumbers, Tomatos, Melons, &c.

Everything Complete.

Lot.	Length.	Width.	Usual Price.
1	7 ft.	5 ft.	£2 10 0
2	8 ft.	5 ft.	3 0 0
3	9 ft.	6 ft.	3 10 0
4	10 ft.	7 ft.	4 10 0
5	12 ft.	8 ft.	5 10 0
6 to 7	15 ft.	10 ft.	7 15 0
8 to 9	20 ft.	10 ft.	10 15 0
10 to 11	25 ft.	10 ft.	15 5 0
12	50 ft.	10 ft.	27 0 0
13	100 ft.	10 ft.	45 0 0

21-oz. for Roof 5 per cent. extra.



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Lot.	Long.	Wide.	Usual Price
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20	10 ft.	7 ft.	5 0 0
21	12 ft.	8 ft.	6 0 0
22 to 23	15 ft.	10 ft.	8 10 0
24	20 ft.	10 ft.	12 0 0
25 to 26	25 ft.	10 ft.	17 0 0
27	50 ft.	10 ft.	30 0 0
28	100 ft.	10 ft.	50 0 0
29	30 ft.	10 ft.	20 0 0
30	45 ft.	10 ft.	28 0 0
Lean-to.			
31	7 ft.	5 ft.	2 8 0
32 to 33	9 ft.	6 ft.	3 10 0
34	12 ft.	8 ft.	5 10 0
35	15 ft.	10 ft.	8 0 0
36	20 ft.	10 ft.	11 10 0
37	25 ft.	10 ft.	16 10 0
38	30 ft.	10 ft.	19 0 0
39	50 ft.	10 ft.	28 0 0

21-oz. for roof 5 per cent. extra.

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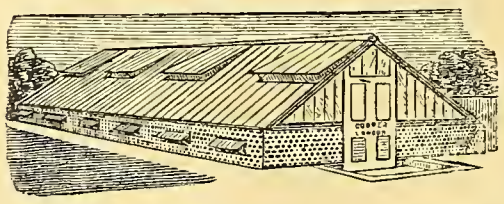

Lot.	Span-roof.	Usual Price.
40 to 41	20 ft. by 9 ft.	£9 0 0
42 to 44	20 ft. by 12 ft.	11 0 0
45	20 ft. by 14 ft.	14 0 0
46	40 ft. by 9 ft.	17 0 0
47 to 48	40 ft. by 12 ft.	21 0 0
49	40 ft. by 14 ft.	25 0 0
50 to 51	100 ft. by 9 ft.	40 0 0
52 to 55	100 ft. by 12 ft.	48 0 0
56 to 57	100 ft. by 14 ft.	55 0 0
Lean-to.		
58	20 ft. by 9 ft.	7 10 0
59	20 ft. by 12 ft.	9 10 0
60	20 ft. by 14 ft.	12 10 0
61	40 ft. by 9 ft.	14 0 0
62	40 ft. by 12 ft.	18 0 0
63	40 ft. by 14 ft.	21 10 0
64	100 ft. by 9 ft.	33 0 0
65	100 ft. by 12 ft.	40 0 0
66	100 ft by 14 ft.	47 0 0
67 to 90	Ventilating Boxes for Side Walls	0 4 9

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Roof in Sashes, Double Lined Panels, Footpath, Gutter, etc.

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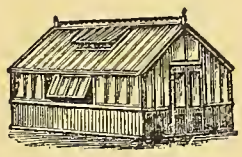
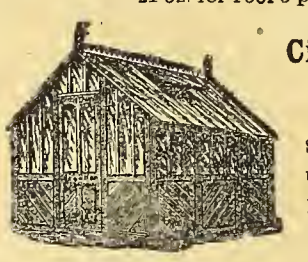


Lot.	Long.	Wide.	Usual Price.
91	9 ft.	6 ft.	£7 10 0
92 to 93	12 ft.	8 ft.	10 0 0
94	15 ft.	8 ft.	12 0 0
95 to 97	20 ft.	9 ft.	16 16 0
98	25 ft.	9 ft.	21 0 0
99	50 ft.	9 ft.	40 0 0

21-oz. for roof 5 per cent. extra.



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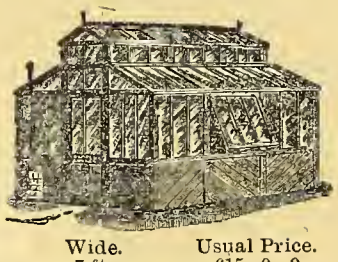
100	10 ft.	7 ft.	£9 0 0
101	12 ft.	8 ft.	12 10 0
102	15 ft.	10 ft.	18 0 0
103	18 ft.	10 ft.	21 0 0

Lantern Roof Conservatory.



A very elegant and highly finished structure.

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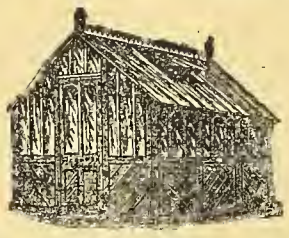
105	12 ft.	7 ft.	16 0 0
106	15 ft.	9 ft.	20 0 0
107	20 ft.	10 ft.	26 0 0
108	25 ft.	12 ft.	38 0 0

If preferred for Brickwork, these houses will be altered free of charge.



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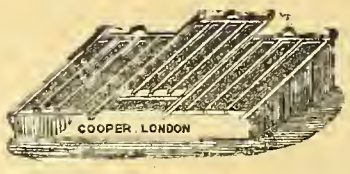
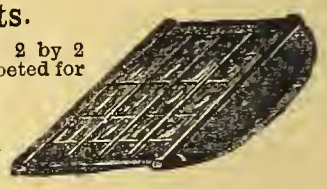
Lot.	Length.	Width.	Usual Price.
109	15 ft.	9 ft.	£25 0 0
110	20 ft.	12 ft	42 0 0
111	25 ft.	14 ft.	65 0 0
112	30 ft.	15 ft.	80 0 0
113	40 ft.	16 ft.	100 0 0



Melon and Cucumber Frames.

Lot.		Usual Price. £ s. d.
114 to 116	1 Light 4 ft. by 3 ft.	0 18 0
117 to 120	2 „ 6 ft. by 4 ft.	1 12 0
121 to 122	1 „ 6 ft. by 4 ft.	1 10 0
123 to 124	2 „ 8 ft. by 6 ft.	2 14 0
125	3 „ 12 ft. by 6 ft.	3 15 0

Garden Lights.



Framework made of 2 by 2 stiles and properly rabbeted for glass, with good 2 in. sashbars. The glazed lights are nailed and bedded in good linseed oil putty.

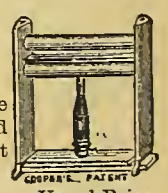
Lot.		Usual Price. s. d.
126	3 ft. by 2 ft., painted and glazed	5 0
127	4 ft. by 3 ft. „ 21 oz.	7 6
128	6 ft. by 4 ft. „ „	10 6
129	6 ft. by 4 ft. unglazed	4 0

The Rapid Propagator.

The only perfect Propagator for raisiug plants from seeds, slips, or cuttings.

Lot.		Usual Price.
130	1 ft. 8 in. by 1 ft. 6 in.	£1 5 0
131	2 ft. 6 in. by 1 ft. 10 in.	1 10 0
132	4 ft. by 2 ft.	3 0 0

Cooper's Hygienic Heater.

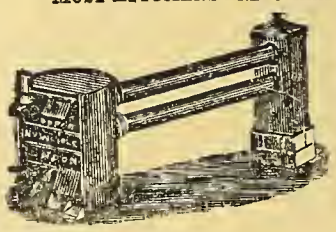


Burning paraffin or gas without smoke or smell. These Heaters are constructed as a means of heating by hot air without the use of hot water or fire.

Lot.		Usual Price.	Lot.		Usual Price.
133	No. 0	£1 0 0	136	No. 3	£3 5 0
134	„ 1	1 10 0	137	„ 4	3 10 0
135	„ 2	2 5 0	138	„ 5	4 0 0

Invincible Hot-Water Apparatus.

MOST EFFICIENT AND CHEAPEST IN EXISTENCE.



Requires no sunk stokehole and uo brick setting. Will last all night without attentiou. Will burn house cinders, therefore costs next to nothing for fuel. Anyone can fix it. A child can stoke it. Success guaranteed.

Lot.		Long.	Wide.	Usual Price.
189	No. 1 Boiler only will heat 75 ft. 4 in pipe Complete Apparatus, with 4 in. flow and return pipes aloug one side cut and fitted for house—			£2 15 0
140		7 ft.	5 ft.	3 12 0
141		9 ft.	6 ft.	3 14 0
142		12 ft.	8 ft.	4 15 0
143		15 ft.	10 ft.	5 10 0
144		20 ft	10 ft.	6 10 0
145		25 ft.	10 ft.	7 10 0
146	No. 2 Boiler only will heat		100 ft. 4 in pipe	3 10 0
147	„ 3 „ „		200 ft.	5 0 0
148	„ 4 „ „		275 ft.	7 0 0
149	„ 5 „ „		375 ft.	7 15 0
150	„ 6 „ „		500 ft.	9 0 0
151	3 ft. Saddle Boiler, with 2·4 in. sockets			5 5 0
152	5 ft. „ „ 2·4 in. „			14 0 0
153	2 ft. „ „ no sockets			3 10 0
154	2 ft. „ „ nearly new with 1·3 in. flow and 2·3 in. return sockets			4 10 0
155	About 1,000 9 ft. lengths, 4 in. socket pipes each			0 6 0
156	Handsome Coil Case, uew, with top, 4 ft. by 3 ft. by 1 ft. 3 in.			5 5 0
157	H. Valves ... ... each			2 0 0

Materials Required for Span-Roof 100 ft. by 12 ft. Cucumber House.

LOT 272 to 275.—Best Red deal, all plaued, rabbeted, &c., ready for use. Door and Ventilators made. 105 ft. 1½ by 6 Ridge, 105 feet 1½ by 4 Capping, 230 feet 3 by 3½ Plate, 210 feet ⅞ by 3 Drip, 4·8 feet 2½ by 3 Eud Rafters, 120-8 feet 1½ by 3 Bars, 15 Ventilators about 4 feet by 2 feet, 15 Vontilators, Seats about 60 feet, 1 Door and Frame. 6 feet by 2 feet 6 inches. Usual price £9 10s.

Lot		Usual Price. s. d.
276	—15,000 ft. run, 1½ in. sashbar, per 100 ft. run	3 0
277	—22,000 ft. „ 2 iu. „ „ „	3 9
278	—16,800 ft. „ 2½ in. „ „ „	5 0
279	—37,000 ft. „ 3 in. „ „ „	6 6

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3s 6d per Peck of 14 lbs ; 12s. per Bushel of 56 lbs.

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"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, FEBRUARY 20th, 1897.

THE GARDEN PEA (PISUM SATIVUM).—Most botanists reckon that there are two species of Pea, namely the Field Pea (P. arvense) and the Garden Pea. We content ourselves with a notice of the latter, for it is of greater antiquity than most gardeners would give it credit for. The celebrated O. Heer states that a very small-seeded form of the Garden Pea was found in the lake dwellings of the bronze age in Switzerland. He is less positive about finding it amongst the relics of the stone age at Mooseedorf. If so, it would be evidence that it was cultivated there prior to the immigration of the Aryans. Only one botanist speaks of finding the Garden Pea wild in Europe, namely, in the Crimea. This, however, is regarded as doubtful, and Alphonse de Candolle says it "seems to have existed in Western Asia, perhaps from the south of the Caucasus to Persia, before it was cultivated." He considers that the Aryans introduced it to Europe. In any case, from the bronze age and the Aryans to the famous experiments made by Andrew Knight, is a

far cry. That experimenter crossed the Field Pea with the Blue Prussian, a well-known variety of the Garden Pea, with the result that he got a fertile progeny of greatly increased vigour. Some botanists would argue from this fact that the two are only forms of one species. Be that, as it may, Andrew Knight continued his experiments, and succeeded in raising wrinkled or marrowfat Peas, from which all the modern varieties of that type have descended.

From that time till the present, improvements have been carried on amongst Peas, with greater or less ardour. It would appear that the raising of something strikingly distinct and meritorious, at intervals of some years, fires the enthusiasm of gardeners and experimenters, with the result that we get an overwhelming number of varieties. This pressure is, of course, relieved by the disappearance, from time to time of the less valuable sorts. The periods at which numerous good varieties come on the scene, coincide with the names of certain raisers, so that after all, it really means the "hour and the man," especially the latter, as our friends across the Atlantic would say. The Royal Horticultural Society has made periodical trials of Peas from 1845 downwards; but according to the latest published list of Plants Certificated by the society, that body does not seem to have granted certificates for Peas before 1872. In that year twelve First-class Certificates were accorded to Peas, a large number of which are still fairly extensively cultivated. We do not observe that any certificate has been granted to Veitch's Perfection, still one of the most popular marrowfat varieties for general culture, and which was raised in Messrs. R. Veitch & Sons Nursery, at Exeter, nearly forty years ago.

The durability of varieties of Peas is a matter of great interest. As long ago as 1799, Andrew Knight had observed that Peas kept true to character, because they are not crossed by insects. They are, of course, self-fertilising. Darwin in trying to prove the truth about the constancy of Peas or otherwise, was informed by Mr. Masters, of Canterbury, that some varieties keep true to character for a great many years, while many others are short lived. The causes to which the latter owe their short life, are, doubtless, many; but we have no doubt some of them are put into commerce before their character has been properly fixed by roguing out those that sport or revert. Other cultivators are more careful in this respect, and grow their new varieties for a number of years before sending them out. The work done amongst new Peas by such men as Mr. Andrew Knight, Mr. Cormack, Dr. Mc Lean, Mr. Thomas Laxton, and Mr. Wm. Culverwell, will be remembered and recorded long after their varieties are superceded or disappear from cultivation.

The great nutritive value of Peas as human food has long been recognised—in a certain sense, since the bronze age at least. We refer, however, to their relative value as compared with other vegetable foods. In comparatively recent times, the various members of the Pea family have been brought into prominence, as compared with all other cultivated plants, on account of their unique method of fixing the free nitrogen of the atmosphere through the agency of various species of bacteria to which the collective name of nitragin has been given recently. A crop of Peas taken off the ground leaves the latter richer in nitrogen than it was previous to the sowing of the Peas. Gardeners might well take advantage of this in arranging their crops to secure a proper rotation. In some parts of America, Peas are grown to restore the fertility of exhausted soils. The idea is very old, however, for we find that Virgil says:—

"At least where vetches, pulse, and tares, have stood
And stalks of Lupins grew (a stubborn wood),
The ensuing season, in return, may bear
The bearded product of the golden year."

Bill of Fare.—Peas and plenty, Peas with haulm (ham), Marrowfat Peas, Peas with honours, and Sweets—Pois sans parchemin or Sugar Peas.

Gunnera scabra.—In the notice of my paper in your issue last week, the locality for this plant was incorrectly stated as Jersey, whereas it should have been Guernsey.—*A. Sewell.*

Kew Guild.—The annual general meeting of the Kew Guild will be held in the Lecture Room of the Royal Gardens, Kew (entrance by Melon Yard Gate), on Thursday evening, February 25th, at half-past seven.

National Chrysanthemum Society.—We are informed that the annual general meeting of the members of the above society will take place at Anderton's Hotel, Fleet Street, E.C., on Monday next, February 22nd at 7 o'clock —To receive the annual report and statement of accounts, and to transact any business pertaining to the annual general meeting of members.

The Royal Horticultural Society of Ireland held a meeting at 61, Dawson Street, Dublin, on the 8th inst., George W. Carson, Esq., in the chair. Judges were then nominated for the Daffodil show to be held at the Royal Uuiversity Buildings on April 1st. It was decided to call a special meeting to decide upon the new rule regarding uniformity in the size of show boxes. The Council gratefully accepted the offer made by Mr. J. Hume Dudgeon to present a cup, value 5 gs., to be competed for at the society's shows this season. Mr. Cumming also handed in a list of subscribers to the "gardeners' cup."

A Grand Oncidium Papilio.—Lively interest was created by a magnificent variety of this Oncid, which turned up at the Sale Rooms of Messrs. Protheroe and Morris, Cheapside, on the 13th inst. The lip was of huge size, while the upper sepal and the petals, known as the antennae of the Butterfly Orchid, were about 4 in. long. The colours were also very rich, and those who saw the variety declared that a better had never appeared at the Sale Rooms, since they were opened about four years ago. It was knocked down to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, for £7 17s 6d. It was sold in the Sale Rooms, as an imported piece, last year, for the matter of a few shillings, possibly not more than 4s. or 5s.

Death of the Worksop Rose Society.—At the last meeting of this society it was found that notwithstanding the exertions of the president and committee, and the valuable assistance of friends, that there had been a loss on each year's work. It was, therefore, decided to wind up ,as there was no prospect of betterment. For two or three years the Rose Show has had to be supplemented by a Chrysanthemum Show in order to make up deficiencies incurred over the summer exhibition. The £13 which was found to be in hand was held over to be given to assist any horticultural society started in the neighbourhood within three years. Failing this the amount will be paid over to the funds of the Gardeners' Royal Benevolent Institution.

Juno Cycles and The Juno Cycling School.—The house, whence these well-known machines emanate in Bishopsgate, has added to its many attractions in the shape of a large and commodious riding school —no small boon to that ever-increasing number of beginners who wish to learn the gentle art of cycling. And, from the point of view of the good of the many, no more convenient spot could be chosen than the neighbourhood of the City Railway Stations, Liverpool Street and Broad Street. The Juno new models for 1897 more than maintain the reputation of the Metropolitan Machinists' Co. for sound workmanship and excellence of finish. The Juno safeties for the "fair riders" are particularly neat and pretty; they are light and very free running; and, thanks to the pneumatic tyre, ladies who may live ten miles apart or more become near neighbours. The cycle is at once a promoter of social feeling and of vigorous health of mind and body.

Useful Even in Decay.—A poultice made of rotten Apples is a cure for weak eyes, in the opinion of the rustics of Lincolnshire.

Ower the gairden wa'.—Jeems: "What Pea is that ye're stakin'?" Geordie: "Mac Thnnder's Giant." Jeems: "The stakes are ower short, man." Geordie: "The length o' the stake mak's nae odds. A' my Piz gang to the tap, an' syne come doon, syne up again, wi' ilka ither shooer that fa's." Jeems: "Nae want o' growth in your gairden, Geordie!"—*Snaggs.*

Orkney Horticultural Society.—Sheriff Armour presided at the annual meeting of this Society, which was held in the Municipal Buildings, Kirkwall. The statement of accounts submitted by the hon. treasurer, Mr. C. H. Liddle, showed a loss sustained on last year's operations of £5, due mainly to the decrease in the receipts for admission to the show, for which the bad weather at the time was responsible. There still remains, however, a balance of £20 4s. 6d. to the good. Mr. A. A. Wallace resigned the secretaryship, and it was agreed to make an entry in the minutes testifying to the value of his services. It was also decided to hold the show this year in the Town Hall, Kirkwall, on the last two days of the Lammas Market. Mr. G. M. Louthit, is the new secretary.

Decorations at the Mistress Cutlers' Ball, Sheffield. —On the occssion of this annual function on the 3rd inst., the work connected with the decoration of the Cutlers' Hall and the various apartments was entrusted to Mr. J. Keeling, of Mount View Nurseries, Glossop Road, Sheffield, who, in conjunction with Mr. Manuel, is to be congratulated upon the very beautiful and pleasing effect produced. The drawing-room where the guests were presented to their host and hostess was most daintily and tastefully draped in art muslin of various hues of yellow, from the deep orange to the pale shade, and the globes of the electric light were similarly covered, thus softening the light and producing an exceedingly pretty effect. The mantelpieces were covered with Daffodils and other flowers, and here it should be said that the floral decorations throughout the whole suite of rooms were selected and arranged with very good taste and effect, so much so that in future balls at the Cutlers' Hall it will be exceedingly difficult to surpass or even to emulate the decorations which supplemented the architectural beauties of the rooms. The ball-room, known officially as "the banqueting hall," presented a striking appearance as one passed through the tastefully-decorated corridor to the main entrance door. The raised dais at the top of the room was very nicely arranged. A warm, red carpet covered the floor and steps, luxuriant couches were placed amid stately Palms and beautiful flowers. The large portrait of the Queen, which is such a well-known feature of the Cutlers' Hall embellishments, hung as usual in the centre, and on either side were groups of flowers surrounding, exceptionally fine Palms, some 15 ft. high. A festoon of red flowers—Tulips, etc.,—ran around the ledge, and mirrors in the angle were draped with orange and lemon, with variegated Indiarubber Plants on each side. The flowers used at the base of the Palms, between the couches, and in other parts of this raised portion of the room, were a very choice selection of Orchids, Arum Lilies, and other beautiful exotics. The corridors and vestibule were not less tastefully decorated than the ball-room; the former were festooned with Cyclamen and other flowers, the windows being also covered with Ivy. In the vestibule little alcoves were formed by the aid of tall Kentia Palms—on one of which was arranged a beautiful Monstera deliciosa in bloom, with a magnificent Orchid of sixty blooms springing from the stem. At the base of the Palms were Arum Lilies and other flowers, Orchids in bloom were arranged over the fireplace, festoons hung round the walls, a huge Mistleto bough was suspended in the centre, and the decorations as a whole had converted this part of the building into a charming resting place. The main entrance and the stairs were also prettily decorated, and in the centre of the grand mirror was a beautiful floral pyramid. In speaking of the plants and flowers, too, mention should be made of a magnificent Palm in the ball-room above, which is probably one of the finest plants of its kind in the country.

"Sticke plentie of bowes among runcival Pease,
To clamber thereon, and branch at their ease."—
Tusser's Calendar of Operations for February.

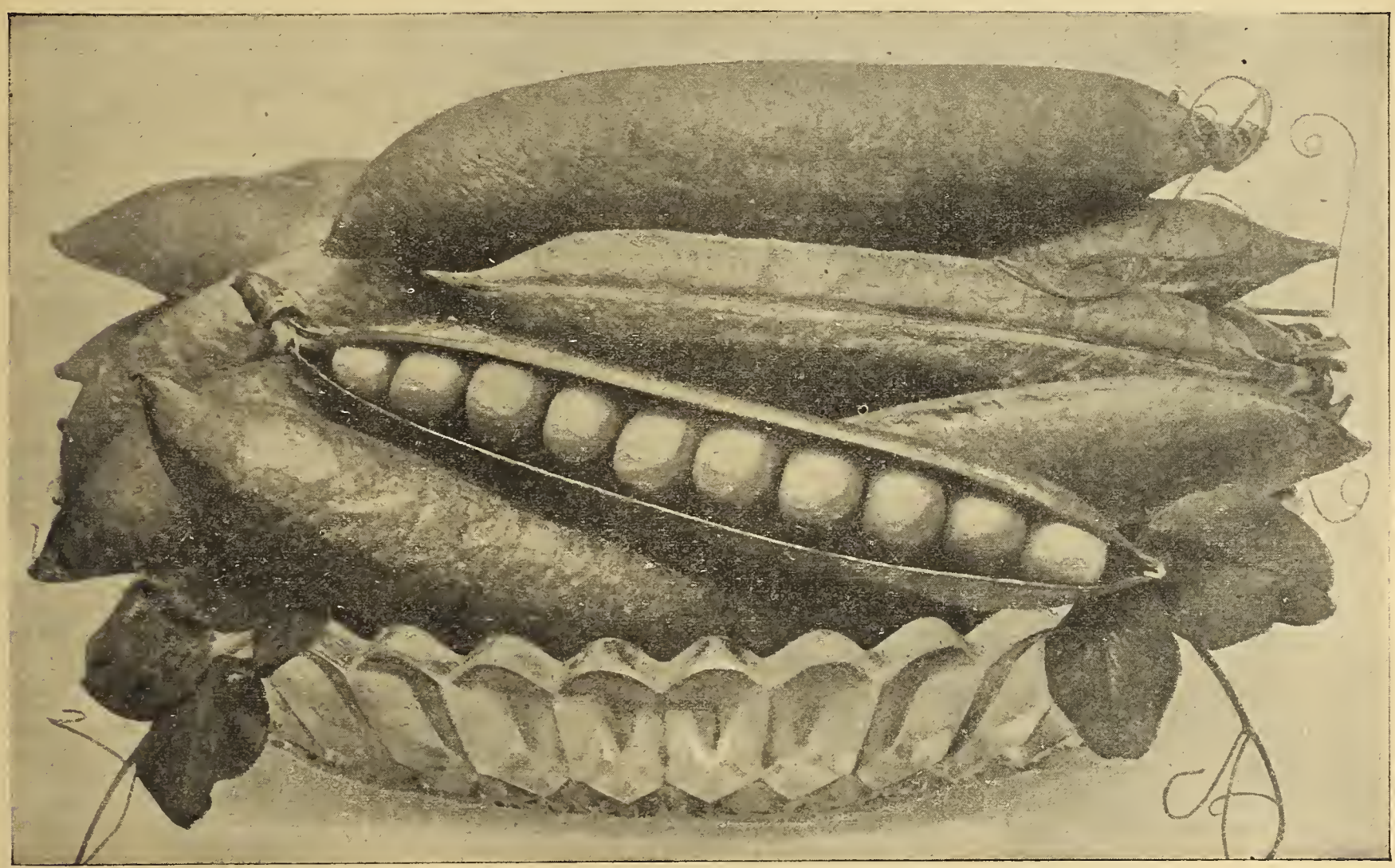
Telegraph Pea, the forerunner of nearly all the varieties having long pods, was raised by Mr. W. Culverwell, The gardens, Thorpe Perrow, Bedale, Yorks.

A Fine Exhibition Pea.—One of the best exhibition Peas that I am acquainted with is The Alderman. noted it at Edinburgh for the first time two years ago, very fine in the collection of that famous Scottish grower, Mr. Donald McBean. It appeared to me to be better than Duke of Albany, being longer in the pod, and a fine dark green colour. I had a very small quantity of seed to try it last season, and from what I know of it I would advise those who want a really good show Pea to try it. It is also a fine cropper.—*J. Gibson.*

Lewes Chrysanthemum Society.—The annual dinner of this well-known society took place at the King's Hotel, Southover, the Mayor (Alderman Flint) presiding. After an excellent repast had been discussed, the toast of the evening, the "Lewes Chrysanthemum Society and Subscribers" was submitted by Councillor G. J. Lenny. In a few well-chosen words that gentleman said it was a pleasure to wish success to a society that had been so instrumental in cultivating things of beauty and joy to those who came in contact with them. He, personally, was no judge, but to his untrained eye the flowers shown at the last Chrysanthemum exhibition were the best he had ever seen, and they were all glad that the men of Lewes had made such progress. The Mayor briefly acknowledged, and Councillor Weightman also replied, saying that the society from the first had been a great and successful one, and went on improving year by year. Their show last year was the best ever held. Mr. J. Adames proposed the "Mayor and Corporation," thanking them for the kind way in which they had enabled the society to use the Assembly Room and Corn Exchange for the past two years. He hoped the favour would be continued. Other toasts that were duly honoured were "The Visitors," "The Hostess," "The Chairman," and "The Vice-chairman." Vocal and instrumental music enlivened the proceedings.

SUTTON'S PRIZEWINNER.

This is one of the many acquisitions, in the way of dwarf Marrowfat Peas, upon which Messrs. Sutton and Sons, of Reading, have been working for many years. It was put into commerce by the Reading firm in 1896 as a novelty, and has already taken a firm hold upon public favour. The haulm is only 2½ ft. high, and bears a heavy crop of large, slightly curved pods, covered with a deep bloom such as gardeners delight to see on the exhibition table. The accompanying photographic illustration, put at our disposal by Messrs. Sutton & Sons, will enable our readers who may be unacquainted with it, to grasp its leading characteristics. The pods are of handsome breadth and great thickness, but not in any way inflated like some of the large-podded Peas we have seen in cultivation, their thickness being absolutely necessary in this case to accommodate the large peas they contain. There are eight to ten of large size and delicious flavour in each pod; hence the variety will be welcomed at the table as well as for exhibition purposes. An Award of Merit was accorded it by the Royal Horticultural Society, July 18th, 1896, and will even become more appreciated as it gets better known. Some idea of the rigid selection to which Peas are subjected at Reading may be gleaned from the fact that 600 varieties, new and old, in the course of being proved, were under trial there last summer. The labour attached to these trials, and the attention given to details must be very great in order to pick out those of superior merit to already existing varieties in Messrs. Sutton and Sons' collection alone. Dwarf Peas, of otherwise meritorious character, are every year becoming more and more a desideratum. The variety under notice succeeds the first early ones.



Sutton's Prizewinner

GARDEN PEAS IN 1896.

I am sorry to say that the summer of 1895 proved very hot and dry; therefore tall Peas were a failure with me. Many sorts that I had to try proved useless, and I gave them up, and commenced in 1896 on dwarf sorts. To my surprise they did remarkably well; and I will just give you a list of varieties that proved the best, and the way I treated them.

In the first place I planted English Wonder on some good land, rather light, well-manured, well-dug, and trodden afterwards. Then the back of a wooden rake was drawn over the surface to make it ready for the line. The piece was marked out, four rows in a bed, at six inches from row to row. I then missed a row and commenced another bed, leaving a small alley or walk between each four rows. I drew the four slight drills with a hoe, and then took a dibber and commenced making holes one inch deep and six inches from hole to hole down each drill, taking care not to make the holes in lines with those of the other rows, but triangular, zig-zag, or "mocking," as the Suffolk men call it. This done, I dropped two peas in a hole till the bed was done. I then raked the whole over and filled all the holes.

By planting in this way all hoeing and weeding can be properly done from these alleys, without treading on the Peas till they are pulled up. The gathering is all done from the walks, one in each walk, gathering two rows each, turning them all back from the sun as they go over them the first time, and the other way the second. By this treatment I am pleased to say I never saw a better crop of Peas in my life. We gathered great quantities from these of splendid pods well filled with beautiful peas. The weather being dry they were quite clean. Had the season being wet I should have used short sticks to have placed amongst them to keep them off the soil. Anyone trying this plan will be well repaid for their trouble.

I also had a trial of Peas on another piece of land, rather inclined to be sandy. I dug in plenty of manure here. I had single rows. My first was a splendid variety, growing about 3 ft. with sticks, and known as Sutton's Bountiful, a very fine variety, with large pods, slightly curved, of fine colour, and well-filled with splendid large peas. This is a fine addition to our dwarf Peas both in size and flavour.

Next in order came Sutton's Seedling Marrow, growing about one foot high; haulm strong, and branching, producing an abundance of large pods, filled with splendid marrow peas of fine flavour. I think this will become a favourite with all Pea growers.

My next is a Wonder, and I must say the Wonders are splendid Peas. Last season I grew American Wonder, English Wonder, Witham Wonder, and Wordsley Wonder; and although I like them all

very much I must give Witham Wonder as the best of the Wonders here grown together. Haulm strong, heavily podded, well-filled with fine Marrow peas of a most delicious flavour. Many of the pods were so full that they burst open on the ground before they were gathered. Here English Wonder did well, but did not produce so fine a crop as on the other soil, though far before American Wonder both in growth and the pods, which were larger and better filled.

Wordsley Wonder proved a splendid variety with me, and needs a word of praise, for I consider this a grand Pea. Although growing a little taller, I am open to say no one wants anything better than this to grow for a second crop Pea, if treated properly, that is, if given good land, properly dug, and manured. Sow it in single rows in broad drills, 3 ins. wide at the bottom, and put in the peas so that when they come through the soil they each have room to grow singly, and not come up like a row of Cress, each struggling for breath and air. Then the Peas will come strong, healthy, and branching, and a good crop may be expected. On the other hand, they must not be planted thickly, like the first row of Wordsley Wonder I ever saw, and which I condemned at once. This row was about thirty yards long, and as thick as a fence. Half the haulm was stifled and weak, the pods were crippled, half-filled, and altogether a poor looking lot. My opinion is that had three rows been planted with the seed instead of one, they would have had more peas of better flavour on half the one row, say 15 yard long, than of the whole row of 30 yards. I would advise all lovers of Peas to dig deeply, put in plenty of manure, have good seed, sow thinly and carefully, and if sticks are needed use them early, keeping them well open at the top. Attend to keeping the haulm well between the sticks, mulch and water in dry, hot weather, and a fine crop will be the result.—*J.L.,P.*

CARTERS' SEEDLING.

CARTERS' SEEDLING PEA.

THIS fine marrowfat is one of Messrs. Carters' latest development of the same famous family as their Stratagem, Telephone and Daisy. It is a seedling, the result of two distinct crossings with Stratagem, Queen and Autocrat made with a view to amalgamate the best point of these three popular varieties,

and blend them into a single Pea. As will be seen in the illustration, Messrs. Carter seem to have accomplished their endeavours, and they look upon the new introduction as a very fine advance in the main crop section. Being a seedling and not a sport or freak, it is constant and not nearly so liable to run back, as many of the large podded Peas now before the public. Its height, 3 ft., is convenient, and the pods are enormous in length, of a rich green colour, and sometimes containing as many as thirteen fully-developed Peas, of the brightest colour and best flavour. Its robust growth and healthy character must tend to make it popular in all the best gardens. The size, rich colour and handsome appearance of the pods will make the variety popular with gardeners for exhibition purposes. They are straight or slightly curved, rather flattened, but broad and well-filled, all of which characters carry their own recommendation. It is also well adapted for market garden purposes, and is being used in that way. The illustration was supplied us by Messrs. Carter & Co., High Holborn, London.

WEBBS' SENATOR

SECOND FLOWERING OF PEAS.

THE time of seed sowing for our summer crops is again upon us, and not the least interesting operations are those upon which depend our vegetable crops; and amongst such crops few are more important or more highly prized at the dinner table than Peas. Early or late good Peas are always acceptable. In connection with early crops, perhaps, more especially, it should be borne in mind that the Pea, if grown under suitable conditions, is a branching plant, and therefore requires more room than is frequently allowed, in order to properly develop. Indeed, this branching habit may be turned to account by securing a second crop of pods.

Such is my experience with the variety, American Wonder, which I generally grow to secure a first crop. For this object I sow in pots, placing 5 seeds in a large 60, growing them as hardily as possible, planting out at the foot of a south wall as soon as weather permits, protecting against frost by means of laurel houghs, and assisting by plentiful waterings after setting of the blooms. Noting a tendency in this variety to produce a second stem below the fruiting stem, I allowed the plants to remain, continuing the watering, with the result that I was able to gather a second crop about a fortnight or so, after clearing the main stem. The pods were not quite so large, but were well filled. I propose trying other varieties this year on the same plan, in order to determine whether second flowering is peculiar to this variety.

I have never seen a similar second crop from any other variety. Some of my friends were of opinion that the frequent and copious waterings were responsible for this extra development, but I think thin sowing, and the fact they were grown against a wall, favoured branching, this second crop being borne upon secondary or later stems. I may add that with me this variety (American Wonder) seldom exceeds 6ins, or 9 ins. in height and requires no sticks. I have sometimes attached a string to the wall, and caught up the plants, when the pods are swelling, to keep them clean. Although most people admire a thick row of Peas, it is true economy to sow seed thinly, allowing a little for depredation from birds and mice. An old friend, a farmer, used to tell us, when lads at home, that the peculiar coo-cooing of the Ring-dove or Wood-pigeon in spring was an intimation that it was time for him to "Sow Peas, sow; sow two, one to eat and one to grow."—*A P.*

[It is our opinion that all the "Wonders" possess this branching habit, and that many other varieties would do so provided they were sown less thickly than is the all too prevalent custom in gardens. See the illustration of English Wonder p.397, and Senator on this page. An article on "Garden Peas in 1896," bears testimony to these statements. All garden Peas, Sweet Peas, and many others have made provision for sending up three stems at least, besides the leader. This may be seen by noting three buds in the axils of the scale-like leaves below the first true leaf on the main stem. This is independent of the branching of the upper portion of any of the stems.—ED.]

Phosphates and potash are valuable Pea Manures.

WEBBS' SENATOR.

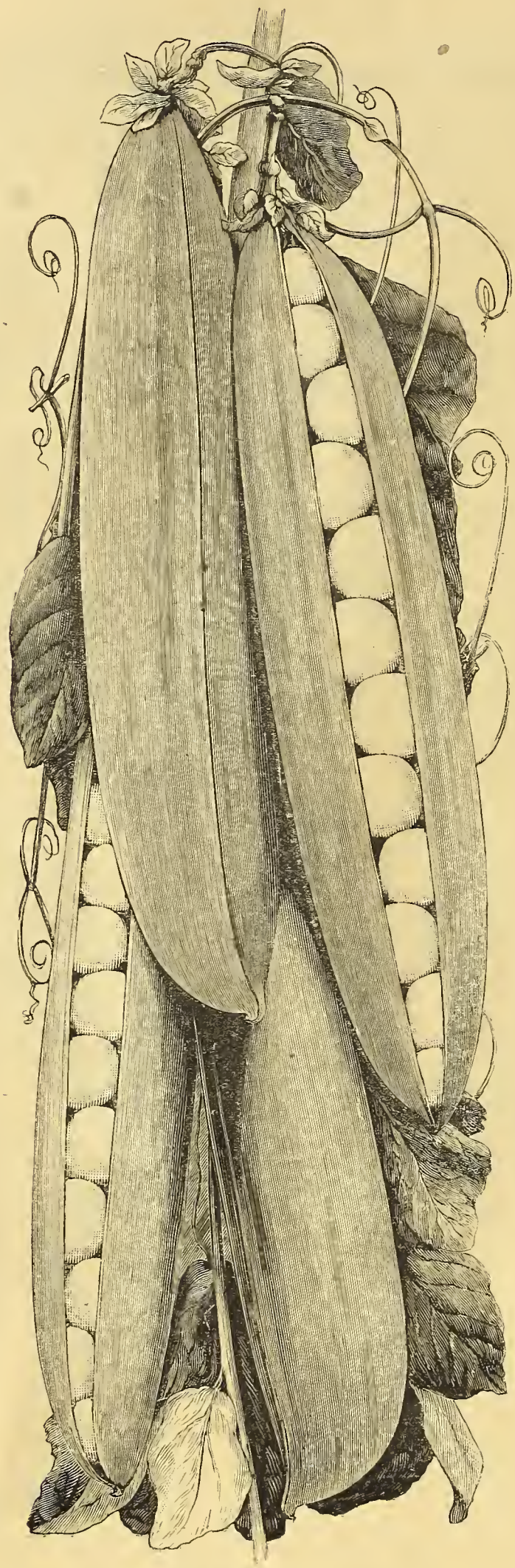
THIS new Pea was the result of crossing the two well-known varieties Prince of Wales and Culverwell's Giant Marrow. It is a main or general crop Pea of moderate height, but varying from 2 ft. to 3½ ft. in height according to the nature of the soil in which it is grown, and the season. The haulm is vigorous but short-jointed and sturdy, and bears an abundance of pods generally in pairs. The pods are more or less curved and well-filled with seven to ten large Peas of good colour and excellent flavour. The variety is, therefore, well adapted for table use, in private establishments, and owing to its dwarf habit, and prolific nature it is well suited for market garden culture. Many gardeners have grown it under different conditions, and some of them testify to its constitutional vigour from the fact that it has resisted mildew under the very trying circumstances of a droughty summer. Seed sown on April, 13th gave pods fit for use on July 1st, and under other circumstances a sowing made on March 15th was

ready for use on July 15th. The variety was raised by Messrs. Ed. Webb & Sons, Wordsley, Stourbridge, at their Kinver Trial Grounds, where they have had it under trial for a number of years. Webbs' Senator heads the list of Peas tried in the Corporation Allotments, Richmond, as well as at Chertsey, where numerous varieties were under the supervision of the Technical Education Committee of the Surrey County Council in 1896. The accompanying illustration of this useful Pea was placed at our disposal by Messrs. Webb & Sons.

Potatos in Greenland are said to grow never larger than a marble.

DANIELS' MATCHLESS MARROW.

This fine Pea takes its place amongst the second early and main crop section. The haulm is very robust, attaining a height of 4 ft. to 5 ft., according to soil and situation. The pods are straight, of handsome appearance, and vary from 4 in. to 6 in. in length, according to treatment and soil, the latter size being attested by gardeners who have grown it for exhibition. Each pod contains from ten to twelve Peas of first-class flavour. The constitutional vigour of the variety stands it in good stead in droughty seasons when weeker varieties are likely to succumb to mildew. Under ordinary treatment it crops heavily, and such produce gives every satisfaction for table use; but to grow it to its finest form for exhibition purposes, it must not be sown too thickly, either in the lines or from row to row, because being a tall grower it requires plenty of space for exposure to light and air. For a late supply it has also given great satisfaction. The accompanying illustration, furnished us by Messrs. Daniels Bros., Norwich, will give an idea of the fine appearance and handsome size of the pods.



Daniels' Matchless Marrow.

FORCING PEAS.

There are various methods by which Peas may be forced, but as a profitable venture I doubt very much whether they can be made to pay. However, happily it is not a question of profit with the private gardener in all things, and it is just as well, when he is expected to keep up a supply of Peas from, say the end of March, until the crop is fit in the open ground for gathering.

The usual method of forcing Peas is by means of frames placed on a prepared hothed, and the frames are best prepared in the beginning of January, and may consist of litter from the stable and fresh leaves in equal portions. After the material has been frequently turned over, the bed should be built regularly to the depth of 2½ ft. or 3 ft. and of any dimensions suitable to the size of the frame at hand, not forgetting to form the bed 3 ft. each way wider than the frame. A foot of any ordinary garden soil, if fairly rich, should be placed on the bed and allowed to become warmed throughout before the Peas are planted. In the meantime, the Peas will have been sown at the end of November or beginning of December, in 5-in. pots, six or seven seeds being placed in each, and brought along gently in a temperature of from 45° to 50°. Finally they should be planted in the frame after the heat has risen, and is on the decline to about 70° bottom heat. The distance between the rows will be regulated by the height of the variety: but in any case it is better to err on the safe side and not plant too thickly, as a better crop is secured. The advantage of sowing in pots and transplanting is that the roots and growth get slightly checked in the operation, and are not so liable to grow so rank, but are more fruitful. Water should be given when required, and on no account should they become dry after they begin to open their flowers, or the pods may not set well, and may only contain a few Peas instead of being full.

Covering of the frames with mats will require consistent attention, and the ventilation will also require equal care; but if the temperature can be maintained from 50° to 60° the growth should be satisfactory. Staking should be early attended to. I have found it a good plan to lay a few rough branches between the rows flat down, instead of the usual method of staking upright, as very often the growth is apt to become too tall for the space allowed. This arrangement affords a means of support that is the next best to being upright.

Another method which was amply demonstrated at the last Temple Show, by Messrs. Sutton & Sons, is that of growing in boxes or troughs. These boxes may be made in lengths of 3 ft. to 4 ft., 15 in. wide, and the same in depth, and filled with suitable soil after being well drained. The seed can either be sown in the box or transplanted as before mentioned. One advantage gained by this method is that the boxes can be removed to any structure found necessary to secure a suitable temperature. Then again, Peas can be grown successfully in pots of 10 in. to 12 in. in diameter, and, like the boxes, can be shifted about at will, only more care is necessary with water. When the roots become bound, and the pods well set, frequent waterings of soot water will help to give colour to the Peas.

To afford a succession, a crop can be easily secured by sowing in a cold frame, and this plan of growing Peas is usually the most profitable, requiring little trouble. The crop is usually as abundant and good as that grown in the open ground. Green fly, in the early stages of growth, may give a little trouble, but a slight fumigation with Richard's XL All, I have found, speedily removes them and does no damage to the growth of the Peas.

Tall varieties, it need hardly be said, are not at all suitable for forcing; in fact, anything over 2 ft. should be left out, although I have had a fine crop of Duke of Albany early in April, but only by way of experiment, having had at the time plenty of space.

As an earliest forcing Pea, "The Sutton Forcing" must take a high rank, followed by Excelsior. Both are of very dwarf growth and splendid croppers. For boxes and pots Carter's Daisy is a type that should not be overlooked, as well as Sutton's Giant, and all being marrowfats should please the most exacting palate.—*James Gibson, Devonhurst, Chiswick.*

EDIBLE PODDED PEAS.

THE ordinary, or "shelling" Peas, as they are termed, have been accorded so large a measure of popularity that the attentions of growers this side of the Channel have been chiefly, if not wholly confined to the improvement of this section. Our Gallic friends, on the contrary, prompted by the exquisite tastes of the *gourmet*, have assiduously developed the Edible-podded, or Sugar Pea section, called by them *Pois sans Parchemin*. They have thus obtained a delicious vegetable which is in great favour in France, part of Germany, and the Netherlands, Belgium particularly, but which is, to all intents and purposes, unknown in England. It would be rather hazardous to attempt to explain the reason for this—possibly our tastes as a nation, as we have been told over and over again, are too coarse to appreciate true finesse and delicacy of flavour. Be that as it may, Edible-podded Peas are certainly worth cultivation, if only for the sake of the variety thus afforded.

As most of our readers are doubtless aware, the pod of the ordinary "shelling" Pea is lined with a thin, but tough and stringy membrane, which renders it unfit for food, although it possesses a sweet and pleasant flavour. In the class under notice, this membrane is absent, having been converted into a fleshy succulent substance that remains soft and tender for a long time. The pods will thus snap in half like a Kidney Bean upon the application of a little pressure. They are, therefore, cooked whole whilst yet the contained seeds are small, and are considered a great delicacy.

The following are some of the best varieties in cultivation upon the Continent, and it will be seen from the short descriptions attached that there is a considerable range of difference in habit amongst them.

Pois sans Parchemin de Quarante jours (Forty Days Edible-podded Pea)—Stems, slender, rather long jointed, and commencing to flower from the fourth or fifth joint: Habit seldom branching, but the plants carry from fifteen to eighteen tiers of pods produced in pairs, and in succession: Pods, straight, slender and pointed at the end: Seeds white, nearly round: Height from 3¼ to 4¼ feet. This variety flowers for a period often extending over 2 months, thus producing a succession of young pods.

Pois Beurre (Butter Pea)—Stems slender, and long jointed: Pods usually in pairs, but occasionalty solitary: Height 3¼ to 4 ft. The distinguishing feature of this variety is the great thickness of the pods, which soon become as thick as they are broad. This is one of the very best varieties.

Pois Gourmand Blanc à Large Cosse (Large Crooked or Scimitar Sugar Pea)—Stem, branching, long jointed, and commencing to flower at the 12th or 13th node: Pods very large, whitish, often twisted, four or five inches in length by an inch in breadth: Seeds large, round, pale green: Height from 4 to 4½ feet. This is a mid-season variety that is a great favourite in the eastern districts of France and in Switzerland.

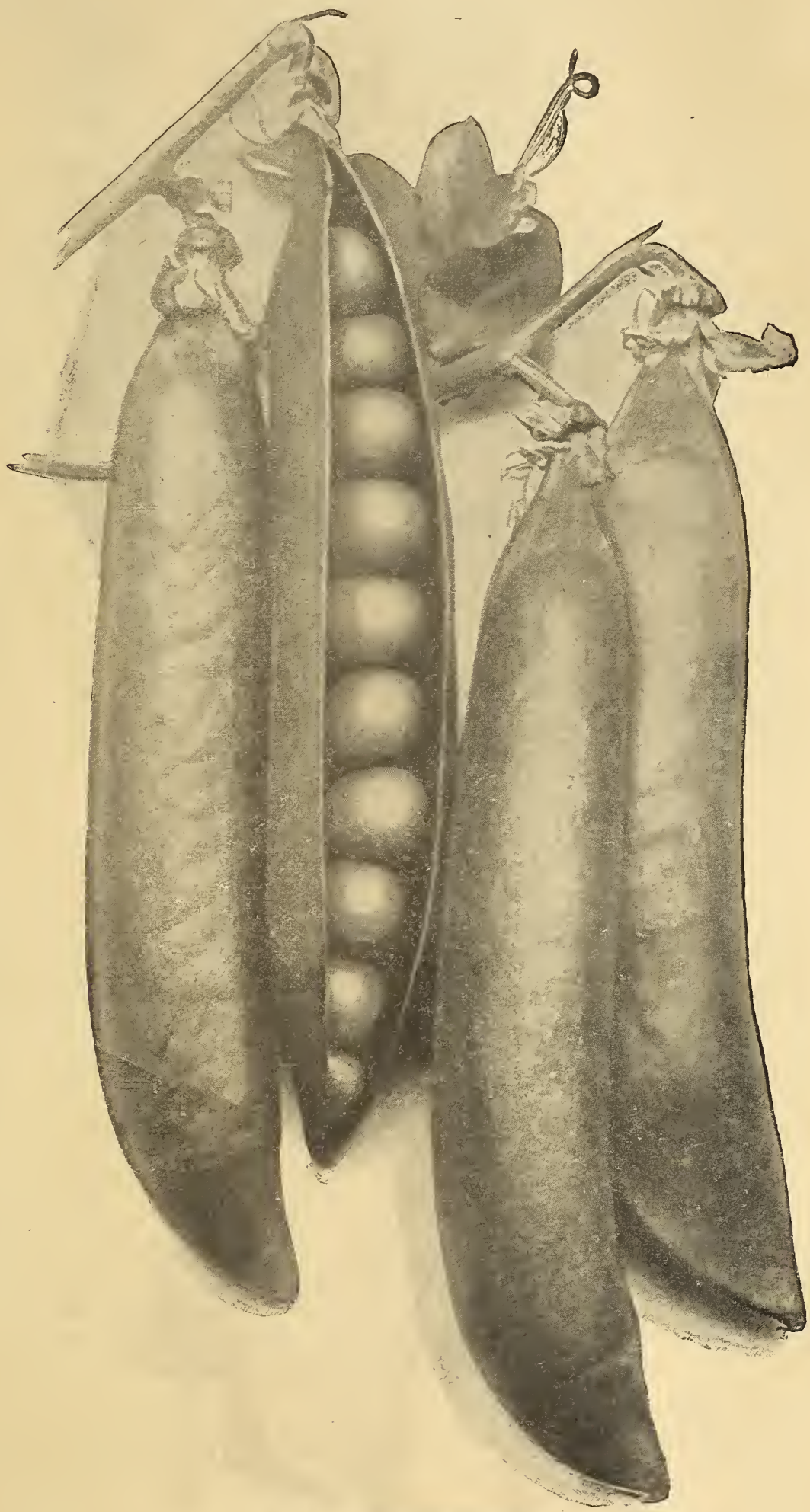
Pois Géant sans Parchemin (Giant Sugar Pea)—A very vigorous variety running to about 4½ feet in height, with huge pods fully 6 inches in length, over an inch in width, and very much twisted. The two halves of the pods appear to be joined together except in the areas occupied by the seeds, which consequently stand out as little protuberances on both sides.

A variety which is much grown in Germany is known as the White-flowered and White-podded Sugar Pea, a sufficiently cumbrous title. It is very tall, averaging nearly 6 ft., and also very late. The quality, however, is second rate.

Pois sans Parchemin Nain Hatif Breton (Early Dwarf Brittany Sugar Pea).—This is a semi-dwarf variety, about 2½ ft. high. The stems are stout and strong, and by means of the interlacing tendrils the plants mutually support each other, so that no stakes are needed. Pods produced in pairs, gray-green in colour, and about 2 in. in length; seeds nearly square in shape at first, but rounding off as they ripen; seeds 5 to 7 in a pod.

Pois sans Parchemin Nain Capuchin (Capuchin Dwarf Sugar Pea).—This bears a resemblance to the preceding variety but is rather dwarfer in habit. It is very hardy, productive, and a great favourite in the north of France.

Pois sans Parchemin Tres Nain Hatif (Dwarf Dutch or Crooked Sugar Pea).—This is the dwarfest of all, only growing to a height of from 8 in. to 10 in. The stems exhibit a curious zigzag growth, and are extremely short-jointed. It is specially recommended for forcing purposes.



SUTTON'S PEERLESS MARROWFAT.

Protecting the Robin.—Horticulturists in California are championing the cause of the Redbreast. A meeting at San Jose passed a formal resolution to protect the birds from being shot, because they eat insects.

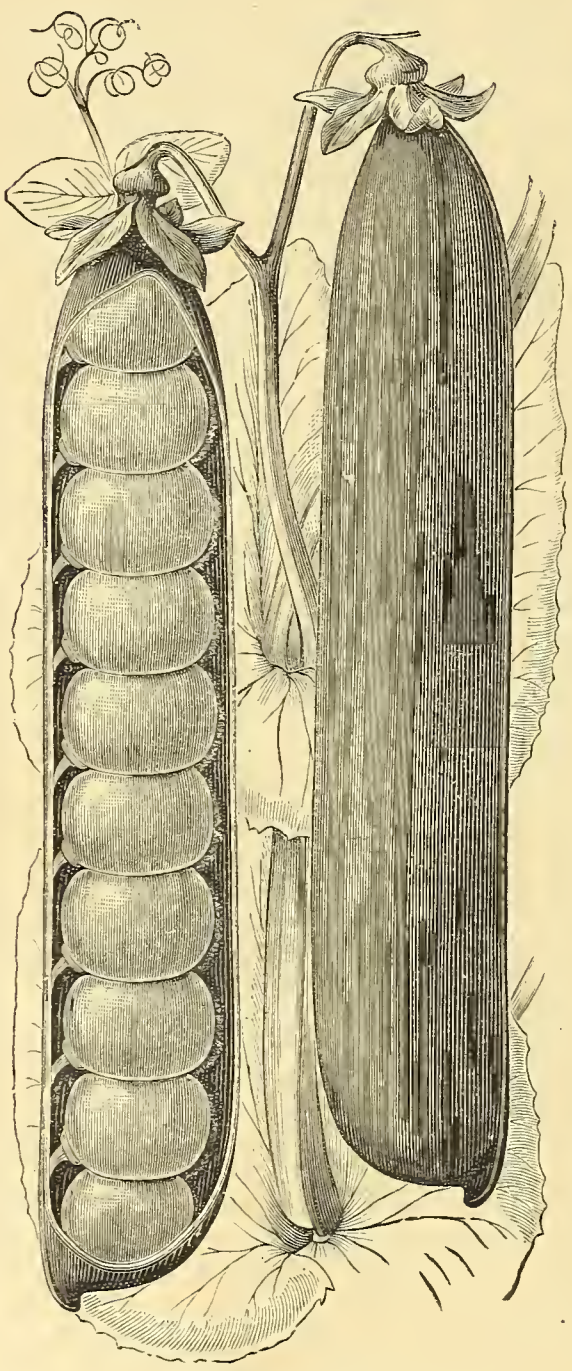
SUTTON'S PEERLESS MARROWFAT.

FOR mid-season and main crops this variety has already taken a good hold on popular favour. It is one of a series of dwarf, but large-podded, Marrow fat Peas which have been placed at the command of gardeners, either for table use or exhibition purposes, being well adapted for either. The variety was put into commerce as a novelty in 1895, by Messrs. Sutton & Sons', Reading, after having been well-tested in their trial grounds, where we noted it in the above year. The haulm is only 3 ft high but very robust, and producing crops of pods of enormous size. It becomes fit for use about a week later than the Duke of Albany when sown in the open under the same conditions. We measured pods 5½ in. long, as grown in the gravelly soil at Reading in that dry season. They are broad, flattened, covered with a deep glaucous bloom, and densely packed with nine to

eleven large peas of a rich, glossy, green hue, and excellent quality. Gardeners who have tried it are loud in their praise of it as well they might be, on account of its fine appearance, fertility, utility, and robustness, for it resists mildew under conditions where more tender varieties are liable to succumb. The accompanying photographic illustration, for which we are indebted to Messrs. Sutton & Sons, shows four pods of the natural size.

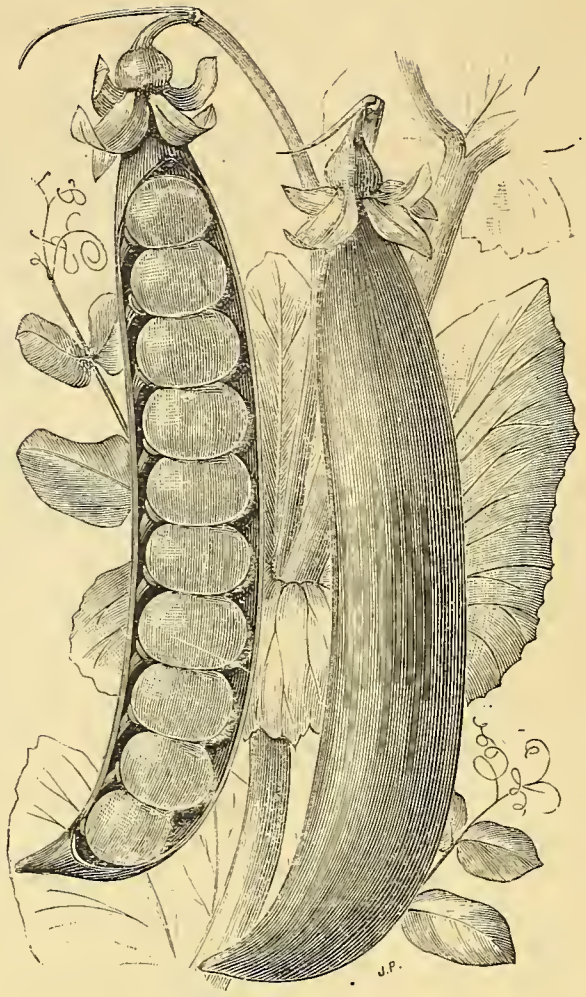
VEITCH'S AUTOCRAT.

Many gardeners have long been familiar with the excellent qualities of this grand late Pea, belonging to the blue wrinkled-marrow section. A First-class Certificate was accorded it by the Royal Horticultural Society, July 10th, 1885, about which time it was put into commerce by Messrs. J. Veitch & Sons, Limited, Chelsea. The haulm usually grows 4 ft. high, being of great constitutional vigour, and branching habit. Cultivators should bear this in mind when sowing it to make provision for its proper development, by allowing sufficient space between the lines. Its vigorous constitution enables it to ward off mildew in droughty seasons, and to keep on bearing a succession of pods for a considerable period. The pods are 4 in. to 5 in. in length, of great breadth, perfectly straight, covered with a deep bloom, and densely packed with about ten peas on an average. As may be seen by reference to the accompanying illustration, placed at our disposal by Messrs. Veitch, the pods are of handsome appearance, and therefore very telling for exhibition. For table use the peas



Veitch's Autocrat.

are no less satisfactory, for they partake of the character of Ne Plus Ultra, being of superior flavour and high quality generally. They possess likewise the rich green colour of that variety and retain it for a long period, making the variety a valuable one for main and late crops. The peas swell at the same rate as the pods, which are never unduly inflated at any time, hence they bulk well when shelled. According to the experience of many cultivators, sowings of this Pea made late in the season, say about the beginning of June, give a better harvest of pods than Ne Plus Ultra, sown at the same time



Chelsea Gem.

and under the same conditions. Sown at various times, it is a profitable cropper.

VEITCH'S CHELSEA GEM.

In an extensive trial of Peas made a few years ago at Chiswick, Chelsea Gem took a very prominent position for its earliness, dwarfness, and fertility, and was accordingly awarded a First-class Certificate. Since then it has been tried by many gardeners all over the country, and found worthy of the many high encomiums given it; indeed, the gardeners themselves have been loud in its praise. The haulm is usually about 15 in. to 18 in high, but short jointed, so that the pods are produced in close succession, and being borne in pairs the total quantity produced is very considerable. While the variety is as early as American Wonder, it is a much heavier cropper. For an early Pea, the pods are remarkable in being half as long again as most, if not all, of the very early dwarf Peas; and they are closely packed with eight to ten seeds of good size and first-class quality. They are more or less curved, as will be seen by reference to the accompanying illustration, for which we are indebted to Messrs. J. Veitch & Sons, Ltd., Chelsea. We noted it in the trial at Chiswick, when it was brought prominently before the public, and were impressed with the dwarf habit, earliness, and prolific nature of the variety.

TELEPHONE.

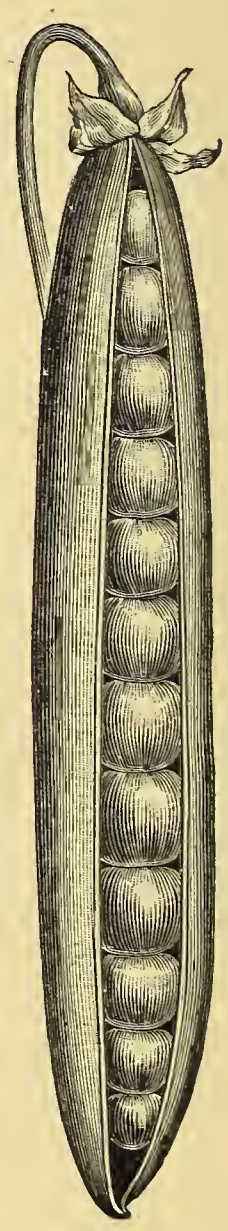
This well-known wrinkled Pea is highly prized for second and general crops. Its beautiful form and general appearance have made it a great favourite with exhibitors, and its excellent qualities have made it a desideratum for many years for table use. It is rather tall (5 ft.), and should, therefore, be sown widely enough apart to give it all the advantages of light and air. The pods are long and well filled with ten to twelve Peas of exquisite flavour. The accompanying illustration, lent us by Messrs. H. Cannell & Sons, Swanley, Kent, will recall to mind the beautiful form and fine appearance of the variety. It was originally a selection from Telegraph, which has the honour of being the forerunner of all the long-podded Peas now in cultivation, and which deservedly receive a large share of attention from gardeners and growers everywhere. Telephone was accorded a First-class Cestificate by the Royal Horticultural Society as long ago as June 27th, 1878.

PEAS FOR SCOTTISH GARDENS.

I have not found successful Pea culture in the North to differ materially from what I have practised in the East, West and South of England. High altitude is often a means of retarding the crop somewhat, but where sheltered borders can be used for very early, and latest crops, the season of Pea gathering may be prolonged considerably. In a few Midlothian Nurseries I have seen Peas in great quantity, (which were protected from frost) as late as the second week in November. In the valley of the Forth (Stirlingshire), it is with difficulty that small supplies of the hardiest sorts can be had after the middle of October.

In Scotland the practice of sowing during November, for earliest gatherings, is less common than it was 30 years ago. Where the situation is damp and the land heavy, such a practice neccessitates pains to keep the seed free from vermin. Mice are often troublesome; also slugs. The first are warded off by sprinkling red lead over the seed before it is covered with soil—which is better to be of a kindly nature, such as leaf mould and siftings of old potting-bench soil. Sowing on the surface, in rows covered with fine soil, is suitable where the ground is damp and heavy, and as the green tops appear dustings of finely sifted ashes and soot afford protection from frost, and render the Peas safe from the attacks of slugs and sparrows; but early staking and netting is in some localities necessary to prevent the ravages of birds.

Where frames can be spared the raising of Peas is more satisfactory. When sown under glass, strips of turf are placed 6 in. apart, and the Peas sown along



Telephone.

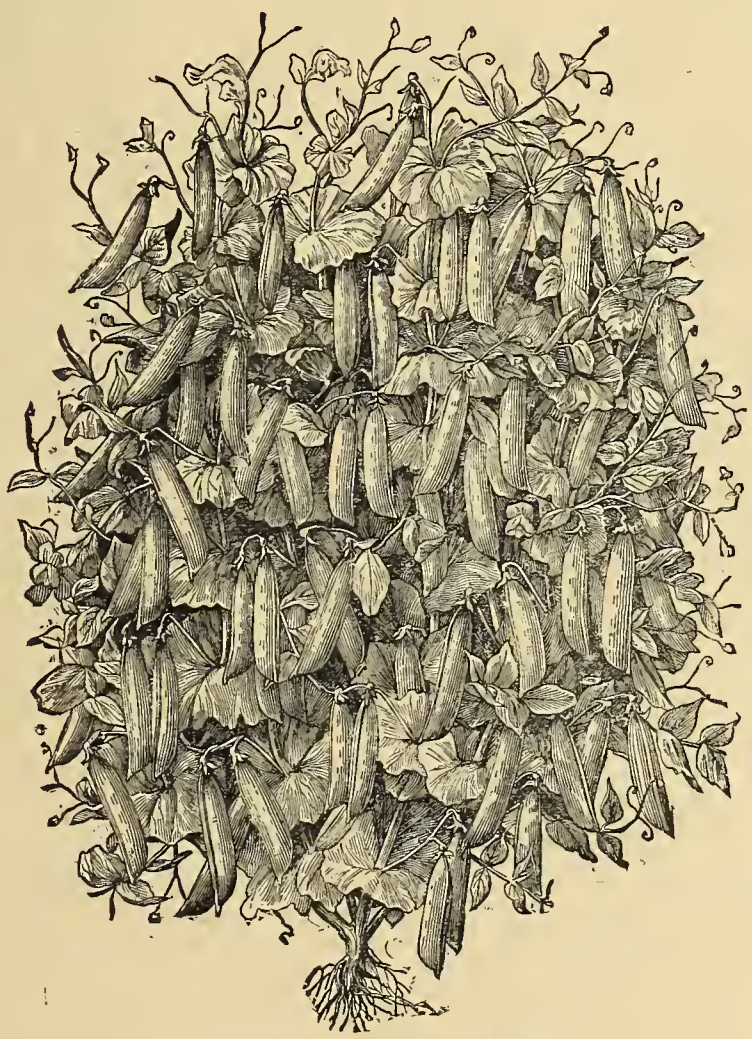
them, as thickly as they are to be planted out, and covered with light soil—old mushroom manure, fine ashes, charcoal dust or leaf mould suits well. When the Peas come through the soil they are freely exposed to light and air. The lights are only used to throw off wet and when frost is severe, coddling

Peas (like some other early crops) draws them up weekly and renders them subject to injury from the elements when they are planted in the open ground. Our plan for some years past, for earliest crops, has been to sow the seed on rough soil, such as chopped turf, placed in shallow boxes, covered with old mushroom manure, and placed in a late Peach house or vinery till the green tops were about two or three inches high. Then the Peas were put out under a south or west wall till the end of March (using protection according to weather). Then they were planted in a sheltered border, with kindly soil at the roots, which are kept intact.

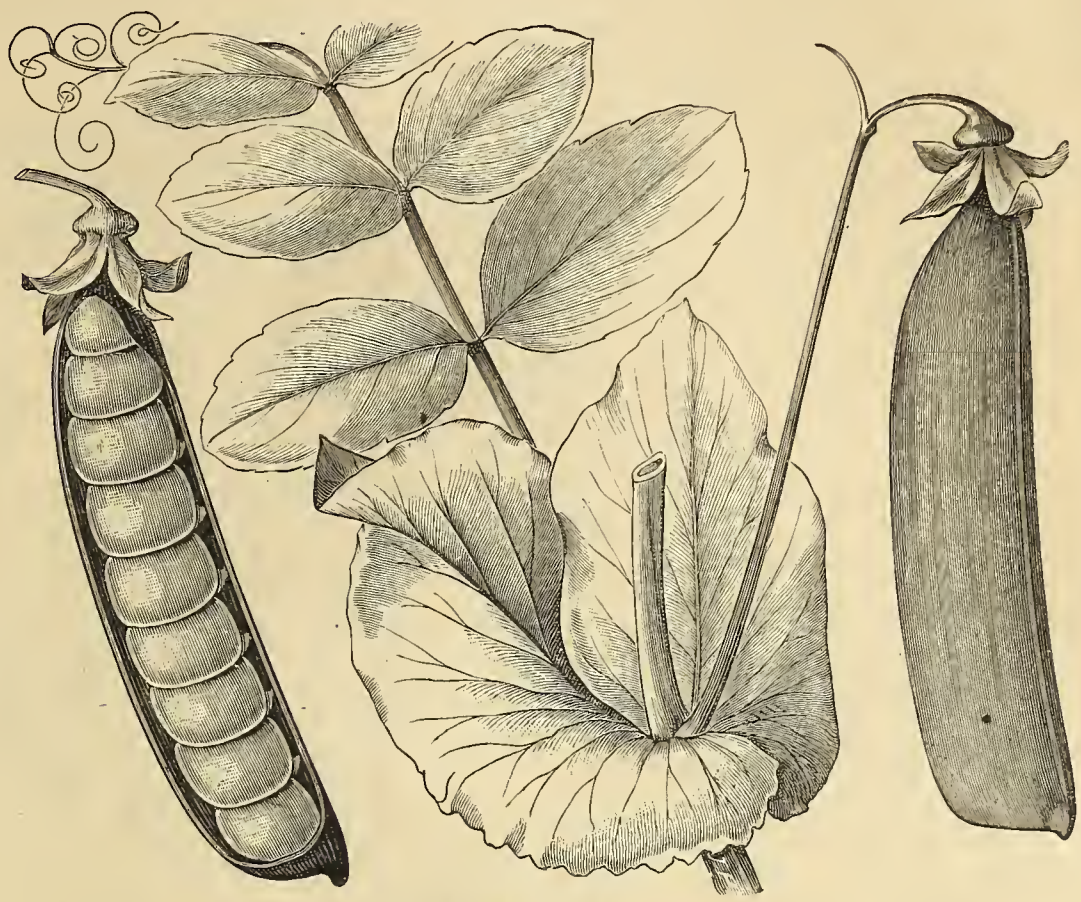
We have for over a dozen years used Pea trainers only. The first expense was considerable, but they are still as good as new, and are largely used for the protection of flowering plants and tender vegetables, when not required to support the Peas. We sow for succession early in February in open borders, (also Sweet Peas for cutting) and prefer ground moderately rich and well trenched. To be safe from drought, deep tilth is imperative; and as Peas often are injured on heavy soil by being tightly wedged by the soil after rain, we use decayed rubbish or half decayed manure, for surfacing after the seed has been sown. This is also a protection against drought. We prefer sowing every ten or twelve days, and such sorts as will succeed closely to each other. Favourite dwarf's for earliest use are Chelsea gem, American Wonder, and Blue Peter. Taller earlies are Gradus, William the First, Sangsters No. 1, Dickson's favourite, Dr. McLean (our best cropper), Duke of Albany, Laxton's Supreme, Stratagem, Veitch's Perfection and Ne Plus Ultra which have proved the best against many others. Mr. Clarke, Messrs. Drummond's seed manager, Stirling, recommends along with these, Duke of York, Criterion, and Sharpe's Queen. I have great confidence in that gentleman's recommendation. The late Mr. Waterer of Knap Hill Nurseries, once told me he sowed regularly Ne Plus Ultra for supplying Peas in June.—*M. Temple, Carron, N.B.*

CANNELLS' ENGLISH WONDER.

We may take it for granted that this originated from American Wonder, of which it may be regarded as a more vigorons and prolific variety, so that the sojourn of the original on this side of the Atlantic, and under the influence of the British climate, has been favourable to its welfare, giving it, so to speak, a stronger constitution. Only a few individuals, we take it for granted, first showed increased vigour, and were subjected to rigid selection for a number of successive years, until the stronger habit and other desired qualities were fixed. The British gardener is quick in perceiving a good thing, and ever ready to use his best efforts to improve it. Several growers have devoted a considerable amount of attention to American Wonder and possibly a greater number have been selecting English Wonder. The accompanying illustration represents a plant of the strain selected by Messrs. H. Cannell & Sons, Swanley, who placed it at our service. The qualities of this strain or race of Peas are so well known, as hardly to require comment or description; but in this particular case we desire to call the attention of our readers to the well-established branching habit of the variety when grown under suitable conditions, and accorded proper treatment. Peas of all kinds are usually too crowded in the lines to give the best results. The variety under notice is a first early wrinkled Pea, 12 in. to 16 in. high, and bearing an abundance of dark green, slightly curved pods, well packed with seeds of excellent flavour.



Cannells' English Wonder.



Veitch's Exonian.

VEITCH'S EXONIAN.

For some years past this has enjoyed a high reputation as a first early Pea of a prolific character. It is ready for use before William I., but is dwarfer in stature, and a wrinkled marrow instead of being a round-seeded variety. It received a First-class Certificate from the Royal Horticultural Society in 1887, and was first put into commerce by Messrs. R. Veitch & Son, Exeter, in 1888. Since then we have frequently seen it grown as an early Pea, growing about 3½ ft. high and producing wonderful crops, quite putting the old round-seeded early varieties in the shade, both with respect to its general appearance and prolific character. The pods are of the Ne Plus Ultra type, being straight, cylindrical and well-packed, with seven to nine peas of excellent flavour, resembling that of the well-known variety ust mentioned. The peas themselves are of a rich dark green, though the haulm, on the contrary, is pale. For the requirements of private establishments it is well adapted, because amenable to good treatment in the rich soils of old gardens, and well repays liberal feeding. A very favourable account was given of it in the Royal Horticultural Society's report of the Pea trials at Chiswick last year. Many cultivators consider it of better flavour than William I., while it is dwarfer and comes into use a few days earlier—a matter of no small importance to the gardener in the season. Seeds sown in the open ground on January 6th have given Peas fit for gathering on May 16th. It appeared at a time when early varieties of good flavour were sorely wanted, but has since maintained its reputation, and is more extensively sown each successive year. Messrs. R. Veitch & Son have given us the opportunity of placing the accompanying illustration before our readers.

Salep is a drink curiously resembling cocoa used to some extent in the East, although but slightly known in England. It is also used as a sweet-scented jelly. It contains in small compass a great deal of nutritive starch, associated with a peculiar gum. It is produced from the tubers of several species of Orchis, including O. Morio, O. militaris, and O. maculata.

CHARLES THE FIRST.

This has been known to the trade for seven or eight years, but its merits have lately been recognised by the public, so that the variety now gets more and more extensively sown each succeeding year. It is a first early Pea, succeeding American Wonder, and is of semi-dwarf habit, say about 18 in in height, or in good fertile soil attaining 2 ft. It crops heavily, as may be seen by reference to the accompanying photographic illustration, placed at our disposal by Messrs. Charles Sharpe & Co., Limited, Sleaford, Lincs. The pods are of medium length, straight, and well filled with good sized Peas of fine flavour. Charles the First belongs to the wrinkled marrow section, and should prove useful for market garden purposes, owing to its dwarf habit, free-fruiting nature, and general suitability for field culture.

Sharpe's Charles The First.

QUESTIONS AND ANSWERS

Names of Plants.—*P. M.* : Croton, not recognised ; 2, Croton picturatum ; 3, Croton Veitchi ; 4, Dracaena Cooperi ; 5, Polypodium subauriculatum ; 6, Selaginella Braunii ; 7, Libonia floribunda.—*W. M.* : 1, Abies nordmanniana ; 2, Juniperus virginiana ; 3, Juniperus sinensis.—*G. A.* : 1, Pelargonium tomentosum ; 2, Pelargonium Radula ; 3, Euonymus japonicus latifolius aureus ; 4, Aspidium angulare lineare ; 5, Nephrodium decompositum glabellum. — *A. C.* : 1, Elaeodendron orientale (generally known as Aralia Chabrieri in gardens) ; 2, Agapanthus umbellatus variegatus ; 3, Odontoglossum crispum andersonianum.

Communications Received.—J. Mayne.—R.G.W.—J. L., P.—S. C.—H. G. Cox.—Veitch & Sons.—J. G. Pettinger.—B. Lockwood.—J. R.—Edward Wilson Gates.—D. W. D.—Laing & Sons.—A. G., A. H. S.—S., Hendon.—G. Sales.—F. R. B.—J. Bryant.—Q.

LONDON SEED TRADE.

February 16th, 1897.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report : The recent rainy weather has checked demand for agricultural seeds. Foreign Red Clover remains steady. English Red Clover is cheaper. White Clover and Alsike dull. Trefoil and Ryegrasses unchanged.

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CONTAINS:

Peas, for succession. 6 qrts.
Beans, Broad, best. 4 pints.
Beans, Dwarf, ½ pint.
Beans, Runners, 1 pint.
Beet, the best, 1 packet.
Borecole, best, 1 packet
Broccoli, 3 packets.
Brussels Sprouts. 1 packet.
Cabbage, 3 packets.
Carrot, for succession, 2 oz.
Cauliflower, 1 packet.
Celery, selected, 2 packet.
Corn Salad, 1 packet.
Couve Tronchudas, 1 pkt.
Cress, 3oz. and 1 packet.
Cucumber, 2 packets.
Endive, best, 1 packet.
Herbs, 3 packets.
Leek, 1 packet.
Lettuce, 3 packets.
Melon, 1 packet.
Mustard, 4 ounces.
Onion, best, 4 ounces.
Parsley, best, 1 packet.
Parsnip, best, 1 ounce.
Radish, 3 ounces.
Salsafy, 1 packet.
Savoy, best, 1, packet.
Scorzonera, 1 packet.
Spinach, 4 ounces.
Tomato, 1 packet.
Turnip, best sorts, 3 oz.
Vegetable Marrow, 1 pkt.

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, FEBRUARY 27th, 1897.

ROYAL GARDENERS' ORPHAN FUND.—The annual general meeting of the subscribers to this charity was held at Anderton's Hotel, Fleet Street, London, on the 19th inst. The principal event of this meeting was the election by resolution, without balloting, of the whole of the thirteen candidates to the benefits of the Fund. Needless to say, this was a very happy commencement of the second decade of the existence of the Fund, which was instituted in commemoration of Her Majesty The Queen's Jubilee. In like manner, the committee on this occasion proposed the election of the whole of the candidates, by way of commemorating The Queen's Diamond Jubilee. The chair was taken promptly at 4 o'clock by Mr. Wm. Marshall, who called upon the secretary, Mr. A. F. Barron, to read the minutes of the last general annual meeting, and of the last ordinary meeting, which in both cases were approved. Copies of the report of the Executive Committee were placed before the subscribers and others present; and the chairman while making comments upon it, read some letters which had been received from the mothers of children, who had passed the limit of age for receiving benefit from the Fund, showing clearly not only the thankfulness of the recipients, but the absolute necessity for the existence of such a charity. It was a pleasing fact to be remembered, that the money disbursed by the executive of the Royal Gardener's Orphan Fund was doing good and useful service. The chairman proposed the adoption of the report, which

was seconded by Mr. J. Fraser; and there being no dissentient voices, the proposition was carried unanimously. The following is the report in question:—

"In presenting their ninth annual report, the Executive Committee can heartily congratulate the subscribers on another years operations—generally satisfactory and encouraging. If the financial support given to the Fund as annual subscriptions be not as large as the committee could desire, yet from other sources it is evenly maintained and the interest in the progress of the Fund widely felt.

"The Fund was instituted in 1887 in commemoration of the Jubilee of Her Majesty The Queen. The year 1897 finds your Committee assisting in commemorating the longest reign of a British Sovereign, and in consideration of this auspicious event, they recommend to the subscribers that the whole of the candidates be elected by resolution of the annual meeting.

"To those who have so generously, and in not a few cases, so constantly supported the Fund by means of special donations, the committee owe a great debt of gratitude. By sums derived from money-boxes, concerts, the opening to the public inspection of gardens and plant houses, especially during the season of the Chrysanthemums, the sale of flowers, etc., considerable additions have been made to the Fund.

"The annual festival dinner—presided over by His Grace the Duke of Bedford, the president of the Fund—proved a most gratifying success, resulting in a considerable augmentation to the charity; and the committee tender to His Grace their most grateful thanks for his able advocacy of the claims of the institution and also for his generous contribution. Among other contributions to the festival fund was that of the tenants of, and growers of produce for, Covent Garden Market, who subscribed the sum of £341 15s. 9d., a measure of support highly appreciated by the committee; and they also desire to gratefully acknowledge the great assistance rendered by Mr. J. Asshee in obtaining this welcome gift.

"The number of children who have been placed on the Fund since the commencement is eighty-five, of this number fifty-eight are now receiving the benefits of the Fund, to be increased by those recommended for election this day. The number of children who through the age limit and other causes have ceased to be chargeable to the Fund is twenty-seven. One most pleasing cause of gratification to the Committee is the letters of deep and earnest thankfulness received from the mothers of children who have ceased to be chargeable to the Fund, acknowledging the great help the quarterly payments have proved to them in times of necessity. The committee by means of the special grants they are empowered to make, have also been enabled to render timely assistance in starting several orphans in life. The total amount paid to the children since the commencement of the Fund is £4,918.

"The members of the Executive Committee who retire by rotation according to Rule IV., are Messrs. Marshall, Bates, Dean, Herbst, Jones, May, Reynolds, and Weeks, all of whom being eligible offer themselves for re-election. The best thanks of this committee are due, and are hereby tendered to the treasurer, T. B. Haywood, Esq., and the auditor, John Fraser, Esq., who retire after holding office since the establishment of the Fund. The committee have great pleasure in announcing than N. N. Sherwood, Esq. (a munificent supporter of the Fund), has kindly consented to accept the office of treasurer, and Peter Barr, Esq., that of auditor, and they are hereby nominated by the committee. Mr. A. F. Barron is again nominated as secretary at the same remuneration."

We here give the items of the cash statement in a condensed form. Receipts: Balance from last account, £60 1s. 11d.; general subscriptions and those collected by the local secretaries, £365 5s. 6d.; donations from various sources, £214 15s. 7d.; Emma Sherwood Memorial, £13; annual dinner, £887 3s. 6d.; card collection, advertisements in lists of subscribers, dividends on stock and interest on deposit, £282 0s. 3d.; total £2,362 6s. 9d. Expenditure: allowances to orphans, Emma Sherwood Memorial, and grants in aid, £868 5s.; annual dinner, £161 17s. 8d.; secretary's salary, £105; printing and posting subscriber's lists, £31 8s. 6d.; printing, stationery, annual, general and committee meetings, postages, bank charges, and sundry expenses, £66 2s. 9d.; purchase of £500 3 per cent. Canada stock, £530 1s.; balance at bankers, in hand, and on deposit, £599 11s. 10d.; total, £2,362 6s. 9d. It may here be stated that £7,070 6s. 10d. is invested in consols, and £2,000 in Canada stock, making a total of £9,070 6s. 10d.

After this, Mr. J. Assbee proposed that the best thanks of the meeting be accorded to T. B. Haywood, Esq., treasurer, and Mr. John Fraser, auditor of the Fund since its inauguration in 1887, for their services, these gentlemen having now retired owing to pressure of business upon their time. The proposition was seconded by Mr. Geo. Reynolds. Mr. B. Wynne then proposed, and Mr. W. Bates seconded that N. N. Sherwood, Esq., be elected as treasurer in the place of T. B. Haywood, Esq. Mr. Wynne commented upon the large measure of support which had been given to the Fund upon numerous occasions during past years by Mr. Sherwood. Mr. J. Walker proposed, and Mr. Geo. Reynolds seconded, that Mr. Peter Barr, who was well known to horticultural circles, be elected as auditor in the place of Mr. John Fraser. Mr. W. Poupart proposed, and Mr. G. W. Cummins seconded, that the best thanks of the members be given to the retiring members, Messrs. Wm. Marshall, W. Bates, R. Dean, H. Herbst, H. J. Jones, H. B. May, G. Reynolds, and A. W. G. Weeks, for their services, and that these gentlemen be re-elected. The chairman then commented upon the excellent services rendered to the Fund by the Secretary, Mr. A. F. Barron, and that his books had been examined and found correct in every way. He therefore proposed, and Mr. R. Dean seconded, that Mr. Barron be re-elected.

The charity, said the chairman, was in a position to elect the whole of the candidates to the benefits of the Fund, and read over their names as follows:—William Clark, Louis Frederick Allen, John Braithwaite Chennels, Herbert Charles Hatchard, William Stephen Hutchinson, Montague Haynes Lemmon, Donald McIntyre, Alfred Thomas Page, Graham Ritchie, Thérèse Anstead Sendenhorst, Frederick William Stephenson, Dora May Swift, and Harrold Maxwell Swift. He proposed, and Mr. J. Lyne seconded, that these thirteen children be elected. Mr. J. Assbee proposed, and W. Roupell, Esq., seconded, that a copy of the above resolution be sent to H.R.H. the Princess of Wales, the patroness of the Fund.

The whole of the above resolutions, each in its respective order, were carried unanimously. Mr. J. Hudson proposed a vote of thanks to the chairman for presiding that day; and after the latter had replied, he said that the business of the meeting was concluded and thanked those present for their attendance and services. A party, consisting of members of the executive committee, subscribers and others, met at Anderton's Hotel, at 6 p.m., to partake of a friendly dinner, as is customary on this occasion.

The Lily of the Valley is the Princess of Wales' favourite flower.

Banana Peel, it is stated, contains ingredients in its juices from which an indelible ink and a kind of vinegar can be made.

The Empress of Austria recently gave orders for 50,000 Roses to be planted round the statue of Heine, about to be erected on her property at Corfu, on a rock about 2,000 ft. above sea level.

The lake in St. James' Park is now in process of being cleaned out. It was found to be necessary owing to the rapid growth of weeds during the hot summer of last year.

Facetious Swell: "Well, my boy, are you going to eat all those Apples when you get home?" Boy: "Na. We'll eat all we can, and can all we can't!" —*Scraps.*

Mr. H. A. Garrett recently delivered a lecture on "Public Gardens" before the members of the Torquay and District Gardeners' Association. Dr. R. Hamilton Ramsay presided.

Mr. Jack Rick for the last five years foreman in the glasshouse department at Falkland Park, South Norwood Hill, has been appointed head gardener to George H. Hadfield, Esq., Moraston House, near Ross, Herefordshire.

Mr. N. McFadyen, until lately head gardener to Capt. R. Mitchell Camphell, at Glaisnock, Old Cumnock, has been appointed head gardener to the Hon. T. F. Kennedy, of Dunure, at Dalquharran Castle, Dailby, Ayrshire.

A New Chrysanthemum Society has been lately formed at Chippenham. A meeting was called and under the presidency of Mr. L. H. Marshall it was decided to form a society. Its title is to be the Chippenham and District Chrysanthemum Society. It is intended to hold one exhibition annually.

A New Fumigator.—A Notts gardener has recently constructed a fumigator which he claims to be superior to anything now in the market. It has been well-tried, under various conditions, in several glasshouses, and proved to be quite satisfactory. We understand that the machine is constructed in a light portable form, sets to work immediately, and is equally useful for sanitary as well as horticultural purposes. A patent has been applied for.

Eastbourne Horticultural Society held their last monthly meeting at the Natural History Society's Rooms, Lismore Road, Councillor Sharpe presiding. A lecture was given by Mr. J. Gore on "Tomatos." The chairman suggested at the conclusion of the lecture that a sum of ten guineas should be forwarded to the Gardeners' Royal Benevolent Association, whereby they would gain a life membership therein. He personally promised a guinea. Mr. T. Durrant Young also made a promise for a similar amount.

Six Hundred Pounds Sterling for a Cabbage is a long price to pay, and not an extra fine specimen either, and yet this is the price per head at which the French Government have been raising Cabbages for some years past in the heart of Paris. In the year 1880 the Legislature sanctioned the expenditure of £280,000 for the purchase of a plot of ground at the corner of Rue Colbert whereon to build an enlargement of the National Library which was at that time unable to accommodate the ever-increasing store of books. From the date of the purchase no attempt has been made to build, and the land has only been devoted to the growing of the Cabbages aforesaid to the average number of twenty-three annually. As the annual interest on the money totals up to £14,000 each of the Cabbages costs the nation about the sum mentioned, viz., £600.

Fruit Culture at St. Germans.—The inhabitants of St. Germans have been bestirring themselves in the direction of fruit culture. It is hoped, indeed, that they will persuade the Cornwall County Council to establish an experimental plot in their midst, especially as it is considered a most favourable locality for the purpose. What is regarded as a preliminary step took place at the beginning of the month. Mr. C. Ilott, in accordance with an arrangement made with the Saltash District Technical Instruction Committee, visited St. Germans, and in the presence of the Earl of St. Germans, and other distinguished visitors, together with a large attendance of interested persons, gave a practical demonstration of the pruning of fruit trees in the garden belonging to Mr. G. H. Benton. On the evening of the same day Mr. Ilott delivered a lecture in the Town Hall upon the planting and general culture of hardy fruits. He illustrated his remarks by blackboard diagrams. An interesting discussion took place at the close, the lecturer replying to the various questions raised.

Mr. T. W. Saunders.—We were deeply sorry to hear a telegram read to the meeting of the N.C.S on Monday last, containing information that the genial Editor of *Amateur Gardening* had met with a serious accident, and was under hospital treatment.

Derivation of St. Malo.—It may possibly interest some of my Scotch friends to learn that St. Malo, a sea-port town of Brittany, is intimately connected with a well-known Scottish name, at least so I gathered recently from a learned work on Brittany. It seems then, that "in the 6th century a hermit named Aaron built a chapel on the summit of a rock near a place called Aleth. Among the disciples who flocked round Aaron for instruction was a young Scotchman, by name McLeod." Now this harsh word to Breton ears became, in course of time, "Maclou," which, later still, was further softened to "Malo." The young Scot prospered—as young Scots will—he became a bishop, and founded a monastery, round which sprang up a town. At his death he was counted a saint—hence the modern term, St. Malo.—*C. B. G., Acton, W.*

Fishponds.—The committee of the West Gloucestershire and District Carnation, Picotee, and Pansy Society, whose title we hope is sufficiently long, held the first meeting of the season at the Full Moon Hotel, Fishponds, Mr. G. Rennie Powell presiding. Mr. Robert Field, of Lloyd's Bank, was elected treasurer in place of Mr. Joseph Loveder, resigned. A lengthy discussion then took place with regard to the prize schedule. Upon the recommendation of Mr. E. Poole, F.R.H.S., a class for ornamental foliage plants was added. On the motion of Mr. T. Elliott, Easton, a class of Roses for jobbing gardeners was also carried, Mr. E. Poole, who seconded, generously offering to furnish the prize. It was also resolved that prizes for hand bouquets of cut garden flowers, exhibited without a paper collar, should be offered. A vote of thanks to the chairman brought the proceedings to a close.

Growth of the Scilly Islands Trade.—A number of years ago Mr. Augustus Smith, the proprietor of the Islands, suggested the cultivation and marketing of flowers as a remunerative industry. He was led to do this owing to the decline in the prices obtained for Potatos, which up to that time had been the staple product. The first results of the new departure were not encouraging, as only £1 was obtained for the first consignment. He persevered, however, and with what success is amply evidenced by the present extensive trade in flowers done by the Islands, and to which we have referred from time to time in our columns. Twenty-five years ago Mr. Augustus Smith died, and the Islands passed to Mr. G. A. Smith-Dorrien, who has enthusiastically carried out the plans of his uncle. He is a zealous cultivator of Narcissi, and is very largely identified with the show of Truro, proposed to be held during the coming Spring. There is also another link between him and Truro, for his uncle, Mr. Augustus Smith, at one time represented that city in parliament.

Early Primroses.—Owing to the mildness of the weather the "Pale Primrose" is pretty forward in asserting itself. Clusters of them are to be seen in a few of the most sheltered nooks in the grounds at the Alexandra Palace, Muswell Hill, whilst as early as the second week in February they have been flowering away in several parts of Norfolk. In one locality particularly, numbers of clumps were in evidence upon a north-west bank, where only the late afternoon sun could catch them, and this is a very uncertain quantity in a February day. Primroses have already made their appearance in London, having been sent from Cornwall. They will be found in increasing numbers as the spring wears on and Primrose Day approaches. At one time London used to draw supplies of Primroses from Sussex, but the wholesale grubbing up of the roots that was for ever being protested against, but was never stopped, has practically exterminated them in a wild state in that county. As Primroses are not cultivated to any extent for market, it is to the wild plants that we look for supplies, and good Tories for the wherewithal to furnish the outward and visible sign of their reverence for their old leader. No amount of sentiment, however, can possibly justify the hunting-out and grubbing-up of Primrose roots that is being practiced, and before long, unless prohibitive measures are taken, the Primroses of other counties will be like those of Sussex—gone!

Chrysanthemum leaves fried in batter are a favourite dish of the Japanese, according to Mr. Alfred Parsons.

Colours and Vegetation.—The influence of the various colours of the prism is always a favourite theme with scientific investigators. M Camille Flammarion has been giving the results of his experiments conducted at the observatory of Juvisy. Fruits of plants, notably those of sensitive plants, exposed to blue rays, remain in an arrested condition for months without a shade of modification. On the contrary, when exposed to red rays, the fruits ripened with astonishing rapidity; and the stems attained four times the height of those exposed to white light.

The Hastings and St. Leonard's Natural History Society had another very successful gathering at the last fortnightly meeting, when Dr. Gray, J.P., gave a lecture upon "Alpine Flowers." Dr. Gray regarded an Alpine flower as one found above the glaciers, but below the snow line. He spoke of the general characteristics of this class of flowers, and of their adaptation to environments. The lecture was illustrated throughout by numerous lantern-slides, illustrating the differences to be observed in the Alpine floras of various countries. Thus the barrenness of the slopes of the Rocky Mountains was contrasted with the richly-clothed slopes of the Alps. Dr. Gray went into considerable detail concerning various genera and species to be found in the Alps, reference being made to the number of species of Gentian, their various forms, and the profusion with which they are distributed. Various species of Ranunculus, Anemone, Primula, and Crocus, together with the Thornless Rose and the Alpine Cress, were also referred to.

Syndical Chamber of Belgian Horticulturists.—At the monthly meeting of the Syndical Chamber of Belgian Horticulturists and Royal Agricultural and and Botanical Society of Ghent, in the Casino, Ghent, on the 7th inst., the following Certificates of Merit were awarded :—To Cypripedium insigne, Sanderae, Baron Schroder, Laeliocattleya Pallas, Lycaste Poelmani, Laelia anceps alba, Odontoglossum Uro-Skinneri, a lot of seedling Cypripediums, Dendrobium leechianum, Odontoglossum cappaertianum, Dendrobium nobile, D. n. nobilius, and Cymhidium eburneum giganteum, all presented by M. Jules Hye; to Pteris Boultoni, presented by M. Ed. Pynaert-Van Geert; to Cattleya Trianaei Imperator, presented by M. M. Linden & Cie; to Clivia Mdlle Aline Capitaine, and Clivia M. Capitaine, both presented by M. Capitaine; and to Cyclamen Bush Hill Pioneer, presented by Messrs. Hugh Low & Co., Clapton, London. Various other certificates were awarded for flowering and culture, also one botanical certificate and several honourable mentions.

Woolton Mutual Improvement Society.—The usual fortnightly meeting was held at the Mechanics' Institute, Mr. Thomas D. Smith, of Birkenhead, presiding over a goodly attendance. The subject for consideration was "The Peach and Nectarine under glass," which was introduced by Mr. W. H. B. Yeo, of Claughton, in a telling manner, opening his case with a short and concise history of the Peach, giving some details as to the temperature and atmosphere, whilst the plants were in flower, and thus drawing a comparison as to the culture at this juncture in our own country. The case for stocks was also given. The cultural details were closely allied to those that are generally followed by the majority of growers; good drainage, and soil fairly retentive, but if unduly close should have the assistance of broken bricks and lime rubble; half inch bones should be added. In an excellent discussion that followed, the essayist was taken to task as to fumigating, feeding with manure water, and the position the fruits should occupy on the shoot. The critics included Messrs. Tunnington, Todd, Hogan, Stoney, Harrison Waterman, Disley, and others, who entered into the matter most heartily. Mr. Yeo, in his reply, thanked the numerous speakers, in which he stated that although some were contentious in various points, he was supported by others; and thus it was proved that if his practice was not all that could be desired by those present, they were sufficiently close to induce various methods on certain details, which must prove of some value to most growers. Votes of thanks were accorded to Mr. Yeo for his lecture, and to Mr. Smith for presiding.

Orchids at the Sale Rooms.—Some interesting Orchids turned up at the rooms of Messrs. Protheroe & Morris on Friday the 19th inst. A piece of Dendrobium splendidissimum grandiflorum was secured for £2 7s. 6d. An unnamed hybrid between D. schneiderianum and D. aureum brought 4½ gs. The sepals and petals were creamy-white, tipped with rosy purple. The lip was similar, but mostly occupied with a large crimson blotch, rayed at its margins like that of D. aureum. Altogether it is a pretty hybrid. A fine Cattleya Trianaei fetched £1 15s. 6d. A good variety of Odontoglossum crispum was knocked down for 5 gs. A beautiful variety of Masderallia Shuttleworthii, bearing 30 flowers, was secured by the Hon. Walter Rothschild, Tring Park, Tring, for 26s.

The Gardeners' Royal Benevolent Institution.—Our readers are aware that a performance of the comedy opera "Dorothy," given by the members of the Westminster Operatic and Dramatic Society, was to take place in St. George's Hall, Langham Place, W., on the evening of February 18th, in aid of the Victorian Era Fund. Judging from the way in which the hall was filled on that date the movement was crowned with abundant success, an enjoyable evening being spent. The costumes, which were furnished by Clarkson, were rich and in excellent taste, and after the first act, which was a little tame, the players fell into their respective *rôles* very well. Mrs. Henry Stringer, as Phyllis Tuppit, evoked considerable applause, and Mr. Llewelyn Powell, as Lurcher, brought down the house by his quaint wit and laughable antics. Not a little merriment was excited by Miss Edith Wheeler, who gave a good representation of the lovelorn and four-times-widowed Mrs. Privet. Mr. F. Charles Giddy acted the hospitable squire, all of the olden time, admirably.

Dunoon and District Gardeners.—On Friday, 19th inst., the second annual dinner of the Gardeners of Dunoon and District was held in the George Hotel, Dunoon. Mr. G. H. Clark (of Messrs. Smith and Simons) occupied the chair, while Mr. T. Dagg (of Messrs. Austin and McAslan), acted as croupier. After dinner, purveyed by Mr. Smith in first-class style, the usual loyal and patriotic toasts were proposed and duly honoured, Sergt. McTavish, a line veteran, responding for the "Navy, Army, and Volunteers." The toast of "The Dunoon Commissioners" was proposed by Mr. John Keir. Commissioner Millar, who replied, referred to the large number of improvements the commissioners had on hand, and predicted a great measure of prosperity for the future of Dunoon. "The Nursery and Seed Trade" was given by Mr. Fraser in a few choice remarks. Mr. Tait (of Mr. Downie, Edinburgh), replied. He did not know any trade wherein a better feeling prevailed than that which existed between the seed and gardening fraternity. "Dunoon and District Gardeners" was given from the chair, Mr. Clark saying that while it was a very nice thing to meet in a social capacity, he would have been better pleased had a flower show also been held in the course of the summer. A midsummer show, he had no doubt, would turn out a great success, and he hoped the gardeners would yet see their way clear to adopt his suggestion. Mr. Peter Mathieson and Mr. Fraser acknowledged the sentiment, the latter pointing out that an unsuccessful attempt was made last year to organise a flower show, but it fell through owing to lack of exhibits. "The Press" was proposed by Mr. Millar, and humorously acknowledged by Mr. Simon Martin, formerly secretary of the Horticultural Society. "The Visitors," "The Ladies," &c., were afterwards pledged, the company not forgetting "The Host and Hostess." Excellent singing was sustained by Messrs. Dewar, Macgregor, Reid, Stirling, Bell, Dagg, Spiers, Stewart, Dickson, Tait, &c. Bagpipe selections were also played by Pipe Major Taylor. The proceedings were most enjoyable throughout, and the second gathering was in no respect behind the one which preceded it.

EPACRISES.

At one time, plants of this character were all the rage, but popularity is proverbially an evanescent commodity; and the Epacrises, beautiful as they are, have been relegated to a back seat for some reason or other. If there be any other reason than the fickleness of fashion, certainly the fault does not lie with the plants. For conservatory decoration

they are invaluable throughout the winter months and on till early spring, and we may look in vain for other subjects that exhibit the self-same style of beauty. Hard-wooded plants of this kind are difficult to grow say some, but this is more of a bogey than anything else, for given ordinary care and attention, the Epacris will yield an ample return.

The greenhouse at Kew, at the time of writing can boast of a fine batch of sturdy young plants in 48-sized pots. All of them, without exception, are well flowered; and as the collection includes a considerable range of colour, the whole effect is very brilliant, and well demonstrates the decorative value of the subject composing it.

E. hyacinthiflora candidissima is a superb white form with a long name. Viscountess Hill exhibits a bright shade of scarlet that is most effective. The racemes of flower are extra long in this variety. E. ardentissima is deep cerise. Rose Perfection is well described by its name, inasmuch as the long very narrow flowers are bright rose in hue.

The above are only a few of the cream of the collection, than which we have certainly seen nothing better in the same line this year. One of the good points of the Epacris is its graceful character, The flowers may be somewhat stiff individually, but the whole plant is most elegant in appearance, and will arrange well with Ferns and dwarf foliage plants. Epacrises also stand fairly well in dwelling rooms provided they can obtain some light.

LIVERPOOL HORTICULTURAL ASSOCIATION.

A MEETING of members of this society took place in the Free Library on Saturday the 13th inst., Mr. Thomas White in the chair. A fair number of members were present to hear the able paper by Mr. Hugh Ranger, on "Hippeastrums (Amaryllis)."

As an introduction the lecturer gave a minute history of the plant, tracing the gradual improvement up to the date that Messrs. J. Veitch & Sons gave proof of the room for improvement. This was followed by full instructions as to raising the seed, general culture, and saving seed. For general cultivation seedlings were recommended, although in the case of choice varieties offsets should be cared for. The seed should be sown soon after ripening in June or July in a light soil, with only sufficient compost to cover the seed. The pan or pots should be plunged, which will keep the soil in a more uniform condition; in four or five weeks germination takes place, and in nine or ten weeks the seedlings will be ready to pot off into 2-in. pots, which should be plunged. The temperature of the house should be kept at 60°. Syringe daily, which can be afterwards reduced as the days shorten. In another two months another shift can be given into 4 in. pots; no water other than the syringe will be required for the next four weeks. In February, the final shift into 5 in. pots can be given. Water must be again withheld for a few weeks, syringing according to the conditions of the weather. At this season it may be requisite to commence ventilating, keeping the temperature at 65°.

About the middle of May a top dressing will prove beneficial, and, from this time until August, water may be given freely, owing to the rapid evaporation; and in watering, sufficient should be given to permeate the whole mass of soil. Shading was not advised if the foliage could be kept sound. About the middle of August, water may be gradually withheld, stopping the supply about the middle of September, and by the second week of November the foliage will have completely died down. The pots may be then placed on their sides in a medium temperature.

Re-pot in batches from January to March so as to lengthen the season; shake out all the soil and clear off all dead roots, and pot the bulbs half their depth in 5 in. or 6 in. pots. The compost should be in a fairly friable condition, when no water will be required for five or six weeks after repotting. When the flower spike shows, the pot may be lifted from the plunging material and stood on a stage. The compost recommended was two-thirds loam, one-third leaf mould, with sufficient silver sand to keep the soil open, and to each barrowful add a 5 in. pot of Clay's Fertiliser.

The insects that may prove troublesome are red spider, thrip, mealy bug and scale. The two former can be held in check by syringing, and the mealy bug may be overpowered by syringing with sulphur and water—a 5 in. pot of the former to a gallon of water—over the foliage and the surroundings.

In answer to inquiries, it was recommended that the bulbs be re-potted every year, that seed be taken from bulbs of any age, although this practice greatly reduces the vigour of the plant.

Several flowering plants of fine varieties were exhibited by the lecturer, carrying four or five flowers on each bulb, and for comparison a variety, supposed to be raised over 100 years ago, caused considerable amusement. A cordial vote of thanks was tendered to Mr. Ranger for his excellent paper.—*R.G.W.*

SPECIMEN CHRYSANTHEMUMS.

SOMEONE else sore! Well! I cannot help it! and can only refer him to my answer to "'Mum" (p. 374). Till reading "'Mums" first article (p.294) I never knew of a society or ever read a schedule where more than one plant was allowed in a pot. And that such a thing exists, as they do by "'Mum's" own showing, is a disgrace to horticulture. No one can speak too strongly on this point. Turning to "Beche" (p. 374), just let him imagine that every mother's child is perfection in her sight, and no authority on earth will convince her otherwise. So it is with gardeners: many plants are, to their mind, absolutely perfection, but anon they go to the show, and they find things different. They then see that a little bit more of this, or the other, would have just made the difference. Next year the man without means shows the same plant (perhaps a trifle better), but only finds again that he is defeated by a new and telling variety. This is the struggle after perfection, and yet where is the limit?

How any one, much more growers, can advise societies to set up a standard of excellence, perhaps "perfection" is a more suitable word, is past my comprehension. At the present day it would only mean a standard of perfection that could be made moveable in any direction.

I don't know whether "'Mum" or "Beche" are learned ones in the new varieties of 'Mums. My opinion is that there never was so much advance before as there has been of late. The old ones are not in it, and all this in no time. What I want to make plain is this—that the judge's idea of what a specimen should be last year will not do for this. Again, as to taking my own physic, I can take that, even if it is defeat. I never make a practice of judging a plant before the card is on. Let "Beche" also not forget that my reason for not growing a plantation was not the same as "'Mums." Excessive staking, also training, does away with beauty that is perfectly natural to plants. I have seen specimens twisted and tied down in every conceivable way. What objects were these! and yet, perhaps, they were perfection in someone's eyes. Our profession is nothing but one long continued run of changes and new things. Those perfect judges of a while back will not do for the future.

Lastly, the man that grew Val d'Andorre for York Exhibition, for anything I know, left a better at home for Leeds, or his next show. After perfection is reached nothing remains. There would be no advance. Monotony would set in. Then where are we? Therefore, I think it best for us all to have our own idea of what perfection is, notwithstanding that it is only to be topped over by someone else, thereby crushing some completely, but giving more power to others.—*J. G. Pettinger, Strawberry Dale Nursery, Harrogate.*

VEGETABLE CALENDAR.

IT is important now to have the work in this department well in hand; and all operations such as trenching and preparing the ground, which may have been delayed owing to the state of the weather or other causes, should be carried out as early as possible. All ground should be cleared of the refuse of used up crops, such as Brussels Sprouts, Broccoli, &c., and the ground manured and prepared in accordance with the requirements of the succeeding crop. A short interval of exposure of the surface of the ground to the beneficial influence of the atmosphere, is better than none, as both seedling and transplanted plants grow away more freely than in newly dug land. Solar heat and drying winds are the two things needed at the present time to bring the ground into good condition for sowing and transplanting. When these conditions have been secured the main crop of Parsnips may be sown, especially where size and weight of crop are the main object. The ground should be well pulverised and deeply worked to get good roots. Where exhibition roots are expected, special culture will be necessary. This consists in making holes 2 ft. to 3 ft. deep and filling them with prepared sandy soil, and sowing on the top of each hole, finally selecting the strongest plant to remain. Where quality is the object sought for then defer the sowing to the end of March or early in April, when roots of medium size, but of the highest quality, will be the result.

SEAKALE.—Where there is a good stock of this still on hand a bed may be formed in a skeleton frame, placing the roots a few inches apart, and covering the whole with dry leaves to the depth of 8 or 10 in. This bed formed outside will give a late supply of tender growth, and come in most useful, when variety in vegetables is not abundant. As the crowns will now under any circumstances commence to swell, the whole of the remaining stock should be covered with a few inches of light material to keep the points of the shoots blanched; otherwise, no after treatment will get them into a blanched condition. A plentiful supply of cuttings for next year's crop should be secured, and these may now be placed in boxes in fine soil, and stood under the stages of a cool house or in a frame. This will give them a month's start of cuttings not so treated, and will greatly assist in securing an early and long season of growth.

MUSHROOMS.—The present is a good time for the formation of beds outside for a late spring, and early summer, supply. The same care and condition in turning, and sweetening the manure are necessary as for beds formed in the mushroom house. Any shady position may be selected, such as against a north wall or under standard fruit trees. The main point is not to allow the heat to decline much before spawning, and earthing up these outside beds. Afterwards protect the beds with a good layer of litter, and throw a mat over the whole to retain the heat as long as possible.

SALADING.—A regular supply will now be appreciated, and a few Lettuces placed under glass now will soon commence active growth. Successional sowings of Radishes under glass should be kept up, and a bed may be sown outside in a sheltered position. A small sowing of Celery for the earliest crop should be made, selecting a good white kind, as it blanches quicker than the red kinds.

VEGETABLE MARROWS.—For growing in frames on slight hot beds a sowing may be made of the medium-sized kinds. Grow the plants on from the seed pan without check, and an early crop will be had without much difficulty.—*J.R.*

THE PLANT HOUSES.

The Stove.

With the longer days and the increased light and warmth things here are beginning to move nicely. The time has now come when the syringe may be started to work again after its winter's rest. The morning syringing may be given about nine o'clock for the first part of the coming month, but the afternoon turn should be given early enough to allow of the plants drying before nightfall. Air must be given very cautiously; indeed some growers keep their stoves very close throughout March (giving scarcely any air), and this plan has a good deal to recommend it, as it assists plants which have been cut back, or others which have been disturbed a good deal at the roots, to break quickly into growth.

The temperature should not now be allowed to fall below 65° Fahr. by night. The intermediate compartment may stand at about 60°. In both cases a substantial rise by day will be required. The fire will not need to be driven so hard, and if the day shows promise of turning out bright the fire must be banked down in good time. On the other hand, if cold, biting winds prevail, and March has an unenviable reputation in this respect, brisk fireheat will be necessary all the day. March is, indeed, one of the most trying months of the year, inasmuch as it usually comprises a series of rapid changes from one extreme to the other.

POTTING DAVALLIAS.—Having regard to the way in which the rhizomes spread, shallow pans, are the best receptacles for Davallias, as they afford plenty of surface room, without too great a depth of soil. In overhauling old plants that have been growing in pots or pans many sizes too large for them, it will often be found that a great part of the rhizomes is dead, and that considerable reduction will be necessary. Drain the pans well and use a compost of equal parts of peat and loam with silver sand. Do not bury the rhizomes, but only the roots attached to them, the former being allowed to lie upon the surface of the soil. A few pegs will be necessary to keep them in their places. The larger and heavier fronds will also require to be supported in many cases, and neat stakes must be used. In the case of plants which have been much reduced, it will be advisable to remove them to a close pit, in which they will pick up much quicker than they would in the more airy stove.

Pits and Frames.

The time has again come round when the sowing of seeds of the various plants required during the summer season for conservatory and flower garden decoration has to be thought about. A sufficiency of suitable pans and soil should have been got in readiness during the dull weather, and where this is the case more than half the battle is over. The pans should not be filled higher than to within three-quarters of an inch of the top of the rim. Make the soil moderately firm, and level it carefully prior to sowing by pressing it with a flat surface, such as a piece of board. The soil should contain sufficient moisture for the time being, so watering will not be needed.

The seed pans should all be covered with a sheet of glass, which will prevent too rapid evaporation of moisture from the soil. A place should be found for them in a light pit, and if it is needed a temporary stage should be built for them in order to bring them up close to the glass. Shade will be necessary during the middle of the day, if the sun is bright, and if the presence of other subjects in the house renders it undesirable to shade the whole, a few newspapers may easily be laid over the seed pans. When watering, take care to use a very fine rose, and to handle the pot lightly, or the seed will be washed up together.

IMPATIENS SULTANI.—In order to succeed with this pretty plant, thin sowing is absolutely necessary. The seedlings do not exhibit sufficient strength to warrant potting off until they are at least an inch in height. Consequently, if the young plants are at all crowded, they are very liable to damp off. A sowing should be made during the first or second week in March in a brisk heat.

BALSAMS.—The remarks made concerning Impatiens Sultani will apply to Balsams with nearly equal force. The first sowing should be made within the course of the next week.

COCKSCOMBS.—Although these plants are distinctly oddities, yet are they much in favour for conservatory decoration. In addition to the old crimson purple variety, we have now many forms exhibiting some truly marvellous gradations of colour. A packet of mixed seed should produce an abundance of plants with a considerable range of variation. Make a sowing the first week in March. Celosia pyramidalis plumosa may also be subjected to similar treatment. —*A. S. G.*

THE ORCHID HOUSES.

CATTLEYAS.—A selection of twelve Orchids admits only of one species of each genus. Undoubtedly it is a close race between three Cattleyas, namely, C. Trianaei, C. Mendelii, and C. labiata autumnalis. Thus the difficulty in choosing the best one is at once apparent. After due consideration we came to the conclusion that C. labiata autumnalis was the most useful. It comes into flower at a time when there is very little of quality to be had in the way of cut flowers.

Those that grow cut flowers for market are not slow to recognise the kinds that pay best, and we find C. labiata is a great favourite, selling readily at good prices. The reason for this, perhaps, is not far to seek. There are few other choice flowers to compete with it, whilst in the spring there is a host of other things, such as Lily of the Valley, Roses, and a host of other kinds of Orchids. Therefore we feel justified in giving the first place to this fine Cattleya.

CULTURE.—It grows well either in pots, pans, or baskets; but taken from every point of view, we think pots or pans are the best, for this reason, the repotting is done quicker and with considerably less damage to the roots. Should the roots adhere firmly to the sides of the pots, they may be easily detached by the thin blade of a knife, or the pot may be broken and the pieces with the roots attached placed carefully into the new pot or pan. Not so those growing in baskets; for the roots will entwine each rod in every conceivable way, making it impossible to give a fresh basket without a certain amount of damage being done to the roots; and to put basket and all into a larger one we do not advise.

COMPOST.—Use good lumpy peat, with most of the fine particles shaken out, a little live sphagnum moss inserted here and there as the work proceeds, together with pieces of crock or charcoal. The moss when growing gives a better and more healthy appearance to the whole, not but that they will do equally as well without it. Good drainage is as necessary as daylight, as they require plenty of moisture at the roots when growing; but newly potted plants must be attended to in this respect with the utmost care. Many a failure can be traced to the non-observance of these simple precautions, which are advocated by all growers of plants in pots, no matter what they be. The plants will soon be starting into growth, and should then be repotted forthwith.

GENERAL REMARKS.—The next few months will be a busy time with growers, for the repotting of a great number of things must now have attention. The early or winter flowering Angraecum sesquipedale, Vandas, &c., will now require a top-dressing of live sphagnum moss, and a general clean up, always taking care to allow them to get moderately dry at the roots before taking them to the potting shed. Stop! though; every one has not a properly appointed potting shed, nicely heated and so on, so that it would not be wise to take them into a cold draughty place. In such cases it would be better to do the potting in the house in which they are grown, to avoid possible chills.

TEMPERATURES.—These may be allowed to rise somewhat higher without forcing, when the weather is mild, with a free circulation of air through the bottom ventilators.—*C.*

PLANTS RECENTLY CERTIFICATED.

THE undermentioned subjects received certificates from the Royal Horticultural Society, on the 9th inst.

Orchid Committee.

PHALAENOPSIS HEBE, *Nov. hyb.*—This hybrid is intermediate between its parents P. rosea and P. sanderiana, the latter being the pollen bearer. The sepals and petals are white, but the latter have a flush of purple at the base. The terminal lobe of the lip is deep purple with a bronzy tint at its base. The side lobes are beautifully netted all over with reddish-purple, while the crest is spotted with crimson. The flowers are larger than those of P. rosea, and very pretty. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

LAELIOCATTLEYA VIOLETTA, *Nov. hyb. bigen.*—The seed parent of this bigeneric hybrid was Cattleya gaskelliana, and the pollen bearer Laelia purpurata. The progeny has the short pseudo-bulbs of the former. The sepals and petals are of a soft lilac-purple. The lip is large, with a rich, crimson-purple lamina having a crisped lilac margin; the side lobes are deep purple. The throat is of a well defined golden-orange, spotted and streaked with broken lines of crimson. It is a bold and handsome type. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

CATTLEYA TRIANAEI IMPERATOR, *Nov. var.*—Messrs. Linden, L'Horticulture Internationale, Brussels, would seem to have dropped upon a rich find of this well-known Cattleya. The variety under notice seems, at first sight, to belong to some other species, so distinct is it. The sepals and petals are of a soft lilac-purple; but the lip, including lamina, side lobes, and throat is almost of a uniform crimson-purple, the usual orange blotch in the throat being almost completely obscured by the rich colouring extending down from the lamina. The basal portion of the interior of the tube is of a pale purple variegated with white veins in lines. Award of Merit.

CATTLEYA TRIANAEI EXIMIA, *Nov. var.*—This variety is notable for the great size of its well-formed flowers and the boldness of all its parts, while the colours are light and pleasing. The petals are very broad and of a light rose. The large round lip is also of a light purple; but its chief characteristic is the large and prominent orange blotch in the throat. Award of Merit. Messrs. Linden, Brussels.

LAELIA ANCEPS KIENASTIANA, *Nov. var.*—Dark varieties of Laelia anceps are often most admired; but that under notice has been selected for the pleasing, light colours of its flowers. The sepals are white, tinted with a faint lilac, and the petals are somewhat darker. The apex of the lip is dark purple, the middle white, with a central yellow crest; the lateral lobes are pale purple. Award of Merit. Frau Ida Brandt, Riesbach, Zurich, Switzerland.

Floral Committee.

IRIS BAKERIANA.—Coming as it does early in the year, this pretty, bulbous Iris is all the more welcome. The falls are of a rich, blackish-violet at the apex, and this colour partly surrounds a whitish area lower down, and which in its turn is beautifully blotched or spotted with violet. The stardards and the petaloid stigmas are of a beautiful light blue. The whole plant is only 4 in. high, and the flowers are delightfully fragrant. First-class Certificate. Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester.

VIOLET AMIRAL AVELLAN.—The flowers of this Violet are large and carried on footstalks about 6 in. in length. They are single and deliciously fragrant, but their chief distinctness consists in their being of a dark but decided purple, not violet like the majority of varieties. The foliage, conformably, is also of a bold and vigorous character. Award of Merit. Messrs. R. Wallace & Co.

LAPAGERIA ROSEA WARNHAM COURT VAR.—the flowers of this handsome variety are of great size, fleshy texture, and funnel-shaped, with the segments spreading widely at the mouth. Each segment measures 3 in. to 3½ in. in length. The colour is of a rich crimson-red, spotted with white all over the face of the revolute portion of the segments and in the interior of the tube. First-class Certificate. C. J. Lucas, Esq. (gardener, Mr. Duncan), Warnham Court, Horsham, Sussex.

Gleanings from the World of Science.

Coniferous Woods.—At the meeting of the Scientific Committee of the Royal Horticultural Society on the 9th inst., Dr. Masters exhibited specimens of Deodar Larch, and Cedar of Lebanon, grown by Mr. J Simpson at Wharncliffe. They were said to have been planted at the same time, about thirty years ago. It was remarkable that the heart-wood of the Larch and Deodar were much alike, while that of the Cedar was different, in not being so darkly coloured like the others. The quality was in each case good, especially that of the Larch. It has been observed by Dr. Tristram that the wood of the Cedars grown on Mount Lebanon is much closer in grain and darker in colour than that of trees grown in England (*The Nat. Hist. of the Bible p.* 343).

Species of Thuya.—Dr. Masters also exhibited specimens illustrative of confusion in the nomenclature of this genus. He observed that T. occidentalis grows in the Atlantic States of North America, and T. gigantea (Lobbi) on the north-western or Pacific side. A form originally named T. plicata was introduced at the end of the last century by Menzies from Vancouver. In Don's *Catalogue of the Plants of the Botanic Gardens at Cambridge* this plant is recorded, but without description. As this is a western species, it is really synonymous with, or at most, a variety of T. gigantea. But the original T. plicata having probably died out the name plicata has now become transferred to a form or variety of T. occidentalis from the Atlantic side of the United States. It is probable that both species are represented by a "plicata" variety, but it is not certain whether the Pacific variety is now in cultivation. Specimens of the original plicata from Vancouver are in the Herbarium of the British Museum, so that it is a question whether, strictly speaking, the name T. gigantea should not be superseded by that of T. plicata. The plant now bearing that name should then be called T. occidentalis var. plicata.

HINTS FOR AMATEURS.

Lawns.—As it will not be long before the grass begins to grow again it will be well to pay the lawn a little attention now in the way of rolling, for this will enable the mowing-machine to be used with greater ease and effectiveness presently. Choose a fine day for the operation when the grass is fairly dry. If worm casts are present they must be broken up and scattered previous to the rolling by the application of a birch broom.

Grass edges.—The present is a very good time to see about straightening the grass edges, which are liable to be worn down by traffic. The edge of the grass is a very favourite path with many people, and the result of such a practice is very soon evident. Where the paths are straight the trimming of the edge is a very simple matter. All that is needed is to lay a line down and pull it tight, thus obtaining a guide for cutting by. Around curves it is a far more difficult matter, as the line cannot be used in the ordinary way, and a workman's eye is apt to be misleading. Once a mistake is made, and too much cut off it cannot well be put on again. There are two methods of solving the difficulty. One is to insert a number of pegs round the curve and draw the line round them, but this is a tedious proceeding, and one the adoption of which we should not advise. The better plan is to lay the line loosely round the curve so as to describe an even outline. This will furnish a guide to cut by. In such a case the iron must necessarily be sharp. Take care, also, that the haft is held perfectly perpendicular, as it is only by using it thus that a straight and even cut can be obtained.

Wall Roses.—Owing to the general mildness of the season the Roses are forwarder than usual, and hence it will be well to get the pruning and nailing of those plants growing on walls over as soon as possible. In pruning, first of all the dead wood should be cut out, and the weaker branches may follow. It is a mistake to lay in too much wood, as the growths become so crowded that they are in each other's way. Select sound well-ripened growths and nail them in at regular intervals so as to cover the wall completely. The tips for a foot or two will be small and weak, and hence these parts may be removed. Spur lateral growths back close to the branches bearing them. Another point is to see that the branches are not allowed to cross each other. Certainly the flowering is not injured thereby, but it imparts an air of untidiness that would be far better absent.

After the Roses have been attended to, the borders lying against the walls may be forked over and put straight again after the trampling upon that they must get to some extent. Care should be taken not to disturb any bulbs, such as Narcissi and Hyacinths, that have been planted in the border.

Snowdrops and Crocuses that are in bloom will also need to be carefully steered by, as it would be a thousand pities to spoil their beauty now when they are making the garden so gay.

Border Carnations in Pots.—There is a great deal to be said for this system of growing border Carnations. For producing show flowers it is necessary, inasmuch as it affords facilities for shading the flowers from the sun, which must be done if their colour and form are to be kept up to the highest standard. Apart from this, plants in pots may, without any trouble at all, be had in flower a little earlier than their relatives outside, the latter thus forming a succession to them.

Now is the time to see about potting up the plants. For some time they have been pushing steadily on, and may now be shifted without danger. Vigorous plants of strong growing varieties will do very well in a 7-in. pot, but for ordinary varieties, and plants of medium strength, space may be economised by putting three in an 8-in. pot. The soil must receive careful preparation. It should consist of three parts of good loam, and one part each of [illegible]d horse droppings and leaf soil, with plenty of [illegible]er sand. We do not like adding chemical [illegible] sprinkling of soot, say a 32 potful to [illegible]ill be serviceable. The young [illegible]ed as little as possible, only [illegible]ot moderately firmly. [illegible] to a cold frame [illegible]light. Here they may be kept closer for a few days than they were before potting. Do not give any water for the present—that in the soil will be sufficient for the time being. Green fly will soon be in order now, and the plants will have to be watched very carefully and fumigated as soon as the slightest signs are discovered.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Propagating Pandanus Veitchii.—*G Sales* asks for instructions as to propagating this plant. He has a fairly large specimen bearing a number of growths. These may be taken off, also all suckers thrown up from the bottom, and potted up into small pots in light sandy soil. Make the soil nicely firm about the bases of the offsets, and give them a nice bottom heat. They will then make roots in a very short time.

Starting Tuberous Begonias.—You may start your Begonias as soon as you like, *Maori.*; in act, the sooner the better. The shallow boxes will answer very well for a time, but the plants will require another shift before they are fit for planting out in the flower beds. Should you want any further information do not fail to write.

Maidenhair Fern Dying.—You give us so little information as to the conditions under which your plant has been placed, *L. C.*, that it is difficult to tell you why it has died. A Fern of the kind under notice will do fairly well in a window during the summer, but it very seldom starts again well. It may linger on for a year or two, but it grows weaker with each succeeding year. Still, you may be meeting your troubles half way, and your Fern may only be sick unto death, but not dead. Can you not get some friend who has a glasshouse to take care of it, and try and induce it to grow?

Aralia Sieboldii.—Will you please inform me if Aralia Sieboldii is hardy in this part of the country (Derby), as I have seen it growing out of doors in the south-west of England.—*Excise.*

It is true that in the favoured locality you mention Aralia Sieboldii will grow out of doors and pass through the winters without shelter, but as far north as Derby this could not be done, and your only plan would be to cover the plants up warmly during frosty weather. It would manifestly be injurious to the plants to keep them in the dark for any length of time, and thus a sharp winter would almost surely be the death of them.

Lobelia cardinalis.—I lifted some clumps of these from the flower beds last autumn, and they have passed the winter in shallow boxes, covered with a little soil, and placed in a cold frame. They are now starting to grow. Please tell me how to increase the stock.—*B., Cambridge.*

This can easily be done by dividing the roots into as many pieces as there are growths. Each of the latter should have a quantity of healthy roots attached to it. Pot the divisions up into small 60-pots, and place them in a gentle heat. After they have made a start, they may be taken out of heat and put into a cold frame. Too long a sojourn in heat would do harm, and hence, the sooner they are out of it, after they are in full swing, the better.

Fruiting Bananas.—There is no special difficulty in growing Bananas, and in fruiting them also, *G. T., Hendon*, other than the question of space. If your house is a fairly roomy one, and is well heated, you may go ahead. If, on the other hand, it is small and insufficiently heated, you will save yourself some trouble by giving up the idea. Of course, if you can give plenty of heat, but have not much space, you may still go on—if you would like the panes of glass pushed out of the roof of your house. Musa Cavendishii is the dwarfest and the most suitable for pot work. Its height varies from 4 ft. to 6 ft. Musa Ensete is chiefly of service as a foliage plant for use in the sub-tropical garden.

Soil for Cucumbers.—Please tell me what soil to use for Cucumbers. I intend making a hot-bed and growing the plants in a frame placed upon it. Shall I have to mix any manure with the soil? and if so, what sort, and what quantity of soil shall I require? *F. G.*

Good mellow loam is the best medium to employ. No manure of any sort should be added, or it will cause the growth to be too rank. We do not believe in bringing the roots of newly planted subjects into close contact with chemical manures. Wait until the plants are growing and fruiting freely, and then give manure if you like. At least a barrowload of soil will be necessary for each light. This should be placed in the middle so as to form a mound or ridge. When the roots of the plants begin to run, and make their appearance on the surface and round the sides of the mounds, then more soil may be added, but the time for this is not yet.

Green Fly on Richardias.—Yours is no uncommon cry, *J. Bryant.* Richardias are almost sure to be attacked with green fly. There are two or three ways of dealing with it. The first and most effectual is fumigation. The second is to sponge the plants with tobacco water, and the third is to take the plants out of doors and brush the fly off with a soft camel's-hair brush. The smut upon the flowers, which so mars their appearance, must be carefully sponged off with clear water. Take care, in thus doing, that you do not bruise the spathe, which is somewhat delicate.

Forced Strawberries.—I have some plants in pots that have been forced. Are they of any further use, or may I throw them away at once? *S., Hendon.*

Such plants sometimes come in handy for making good vacancies in the out-of-door plantations. Sometimes such plants may be induced to bear a crop of fruit in the autumn. When they are expected to do this, they must be reduced at the root, potted up afresh, and grown on through the summer. Vicomtesse Hericart de Thury answers best to this kind of treatment, and is fairly certain to fruit well. If you do not need your plants for either of these two alternatives, you may as well throw them away at once.

Thinning Strawberries.—A dozen or fifteen fruits to a pot may certainly be obtained, *Q.*, but we think you would do better not to exceed nine. You will then get better fruits, and they will ripen more equally. As soon as the required number has set, you should cut off the rest of the flowers and thus economise energy. Keep the syringe to work until the fruits show colour.

Wood Ashes for Onions.—Give the proposed Onion bed a dressing with the wood ashes as soon as you can, *A. A.* Afterwards fork the bed all over, mixing the ashes with the soil. The bed will not need to be touched again until it is time to give it the necessary firming before proceeding to sow the seed. For this part of the programme, dry weather is absolutely essential.

Edwin Molyneux Chrysanthemum.—In answer to *J. G. P.* (p. 377), I have never found any special difficulty with Edwin Molyneux Chrysanthemum. It has always received similar treatment to the other varieties with regard to the striking of the cuttings, feeding, etc. Of late years, however, it has become rather more difficult to manage, and the blooms are very liable to damp off. Moreover, it will not stand the heavy feeding that some other varieties will. There were some good blooms of it to be seen last season in the Royal Horticultural Society's Gardens at Chiswick. The plants, I was informed upon enquiry, were obtained from cuttings struck about the end of December. The plants were grown on without stopping, and the first bud was taken.—*Abram.*

[For another note upon this matter see p. 410.—ED.]

Primulas in Small Pots.—It seems to be the general idea that Chinese Primulas require a 48 or 32-sized pot to do them well, but I have a splendid batch of plants full of flower that are only in small 60's. It was originally intended that they should have a further shift, but owing to pressure of other business at the time this was omitted, until it got too far in the season to disturb them. Accordingly they were left, and now I am glad that they were, for they are, at the time of writing, perfect pictures of bloom. I shall certainly grow some more in small pots during the coming season.—*J. L. R.*

DAPHNE INDICA RUBRA.

I HAVE pleasure in sending you a photograph of a plant of Daphne indica rubra, now in flower in a greenhouse in the garden of Mr. J. T. Bickford, a prominent tradesman in the town of Exmouth. Like many others, Mr. Bickford has a vital interest in the business which he so honorably conducts; and I am sure there are many who would willingly bear testimony to the accuracy and expedition ever displayed in all phases connected therewith. But tastes and fancies often run in other directions, and when spare moments can be snatched, and the passion asserting itself, what more natural than that the favourite pastime should be indulged in, which I am happy to say in this case is none other than horticulture.

Meeting the gentleman a few evenings ago in company with one or two other friends, nothing would do, but that we should accompany him forthwith, to which we gladly gave assent. After passing through devious passages, and timidly glancing at various packages, by the way, on which were letters, signs and figures that suggested at least some mysterious connection with compounds of a highly inflammable and explosive character, we at length entered a lean-to house facing south-east, and at the further end were requested to halt. Whilst the lamp, our worthy guide carried, was turned on to this unique and highly meritorious specimen, I need hardly say that to myself it appealed in a very pleasing manner; for, often had I seen weak and puny plants apologising for the space they occupied, yet of which it was continually hoped "they will be better next year." But here was a plant in the best of health and floriferousness, 7 ft. in height, and 4 ft. through, measured on the spot by one of the party who had a two-foot rule immediately at hand. This specimen was planted out in the border, and for years has flowered with a vigour and freedom shown in the accompanying illustration prepared from a photograph. I congratulate Mr. Bickford on his great success. In a measure I envy him his plant, whilst I gratefully acknowledge my indebtedness for opportunity of inspecting the plant, and for the photo so kindly given.—*W. Swan, Bystock.*

DAPHNE INDICA RUBRA.

FORCING OF VEGETABLES.

AT the fortnightly meeting of the Devon and Exeter Gardeners' Association on the 3rd inst., in the Guildhall, Exeter, a paper on this subject, prepared by Mr. J. Mayne, gr. to the Hon. Mark Rolle, Bicton, was read by the hon. secretary, Mr. A. Hope, in the unavoidable absence of the writer. The chair was occupied by Mr. J. Abrahams, gr. to T. Kekewich, Esqr., Peamore. Mr. Mayne dealt with his subject in a very practical manner, as the subjoined will show. He is a frequent contributor to the "horticultural press," and takes high rank as a cultivator amongst the fraternity in Devon. His essay deals with the work he conducts every winter at Bicton, and is as follows:—

SEAKALE.

"Seakale is a very easily forced vegetable, and can be had ready for the table by the first week in December. I prefer the crowns to have a slight frost or two before making a start, though at times this does not take place so early in the mild climate of Devon. Consequently, a start must be made to introduce the first batch the first week in November. As a rule, the majority of its growth is off by this date, especially if a frost has occurred. In lifting the roots, care must be exercised that the crowns are not bruised, and all the stout roots should be broken off and preserved to choose cuttings from. In my case I plant about 1,500 early in March, and these are the crowns that are forced the following autumn. The whole batch is lifted about the middle of December, laid in thickly together outdoors, and the crowns just covered with soil. Should severe frost occur, some long litter is placed over them so that they can be readily got at when required. I find the first few batches take rather a higher temperature to start them than later lots, say early in the New Year. A mushroom house which keeps about 55° to 60° is a very suitable place. The crowns can be placed fairly close together, and should have sifted leaf-soil worked lightly around the roots and up level with the top of the crown. A can of water should be kept there and the crowns syringed daily. To keep up a succession, I put in 50 crowns each week, but the number, of course, can be easily altered more or less according to the requirements of the establishment. The roots can also be forced in large pots or boxes and placed under stages or in any odd corner in a forcing-house. These must be covered with pots or boxes, as no light must reach the crowns in any stage of their growth, or blanching will not be perfect. Neither must they be subjected to too much heat at this date (February), 50° to 55° is quite high enough.

"The best place to force this vegetable (that is by those who adopt the plan I do and lift all their roots) is to erect a shed-like place about 12 ft. long, 8 ft. wide, and 4 ft. 6 in. high, with 12 posts, five inches square, four on either side, and four in the centre to take the sides and top. Rough planks, two to three inches thick, should be nailed to those around the sides about one and half inches apart. The top should be of Oak, and rather stouter than the slabs used for the sides, so as to be able to carry the weight of leaves necessary to give the required heat. This little building should have a small door on the south side by which to get in and out; the other three sides should have from two to three feet in width of good Oak, and Beech leaves, if possible, placed around them, and the same thickness on the top. The material should be well trodden as the work proceeds. I keep adding to this as the leaves are brought in, should the weather be cold, but if mild, the first named will be sufficient, though the grower must exercise his own discretion on this point and see the place does not get too hot. I keep a thermometer hanging up inside, and if, when mild outside, it does not register above 60°, all will be well. This heat from leaves is not so drying as from hot-water pipes. Some sifted leaf soil should have been got in readiness and placed inside to plant the roots in. I also keep a can of water and the syringe in here to damp the surroundings when at all dry. In passing, it may not be out of place to add that there is no better place to bring Rhubarb on than here in this little hut, if I may so term it. Delicious Kale and Rhubarb as crisp and blanched as it is possible to get them, can be forced here. These details apply to lifted roots only.

"I now come to forcing crowns as they stand in the open ground. Of course, these are given a much wider berth than those grown and lifted; they should be planted in groups or clumps of three to six, one foot apart, with three feet or more space between each clump, to allow for Seakale pots and heating material, which should be composed of fresh leaves three parts, the rest of stable litter—this should have been thrown together and mixed before. This must be packed around the pots and above them to the height of 30 to 36 inches. It will take six to eight weeks to get it ready for use this way, and, of course, can be had in by Christmas very well. A few test sticks should be placed in the heating material to ascertain how the heat is. What you have to avoid is too much heat, as the roots soon burn. A batch should be so treated about every three weeks or a month. The decayed leaves should be removed and the soil lightly forked up prior to forcing, the crowns earthed up a little way, and a small quantity of litter placed between them, as I do not consider it as well if the ground gets frozen very much. Excellen heads, and, probably, a trifle larger than the nine or ten months' old crowns I haved forced for several years past, can be brought on in this way, and for several years in succession; but a new plantation should be made every three years or so.

Another method I have seen adopted with fairly good results, where I was once foreman in Herefordshire—a square was allotted in brick pits about 18 feet long, by three feet six inches wide. These were pigeon-holed, and were about five feet deep, and every alternate one was filled with fermenting material, while the others were planted with three rows of crowns, and were forced three years, and then replanted, a part being done each year. Over

these crowns span-shaped shutters were placed, and long strawy litter placed over these, and made secure against frost and wind. This was always ready by Christmas. Success is obtained with each method, but for myself I prefer raising the whole crop and replanting each year. The cuttings are planted one foot apart in the row by 18 inches, and given a rich plot. A late supply can be had by leaving a few rows, and banking up with soil before the crowns start to grow. I have seen fine heads obtained by this means.

ASPARAGUS.

"Naturally this choice vegetable is more esteemed than Seakale with most people, especially by the majority of cooks, and I presume more satisfactory results are obtained in cooking this than Kale. The plan usually adopted, and which I do myself, is to make up a hot-bed with fresh leaves and stable dung, two parts of the former to one of the latter. This should have been thrown together previously and turned over a few times to sweeten it. The Asparagus will stand more heat, top and bottom, than Seakale. But this must not be much above 60°. A sheltered place should be chosen, but where plenty of light and sun can reach the bed. In putting the material together it should be well trodden, as this helps to retain the heat for a longer period. The bed should be a trifle higher at the back, especially if the frame you have at command has not a good angle, and space allowed for lining all around the frame. In fact, it should (the bed I mean) be made 18 in., larger each way than the frame to be placed upon it, so that the lining can be renewed when necessary. When the frame is placed upon the bed, three or four inches of short dung or rough leaf-soil should be put into it in readiness to receive the roots as soon as you ascertain that the heat is safe to do this. A test stick should have been placed in when the hot-bed was made. If, after a week or ten days, when you withdraw the stick and can comfortably hold it in your hand without finding it too hot, all will be well. It is far better to be on the safe side, as one can always add heating material in the way of lining. In fact, during such a winter as we had up to Christmas, a bed of leaves only would be enough.

"Now the next thing to see about is the crowns. These should be not less than three years old, but can be much more, and an advantage no doubt as the crowns should be larger. They should be lifted and placed in the frame with as little delay as possible, putting the roots thickly together and placing about 4 in. of sifted leaf soil over the roots and crowns, and when all is finished there should be six to nine inches clear of the glass. This will give room for the 'grass' to grow. The lights can be kept closed until you see the heads appearing, when a little air should be given on all favourable occasions, according to the state of the weather, which will assist in giving a green tint to the grass, and which should be cut when about six inches in length, tied in bundles of fifty, and stood in a little water if not required for immediate use. The frame must be well matted up every night in case a frost should occur. And, again, I say, do not neglect to see to the lining I usually start my first batch about the 15th of November, but this season it was on the 20th, and was cut on December the 7th, just eighteen days. My frames are six feet by eight feet, and I fill one of these. It takes about eighty crowns. But as with Seakale—more or less—must be the grower's motto according to his requirements. I continue to cut from this first batch just one month.

"In the meantime the second frame had been planted, namely, on December the 18th, or four weeks from the first batch, and I find this is quite often enough. It is not necessary to make a new hot-bed each time. A renewal of lining and moving up the inside of the bed is all that is necessary as a rule for two or three batches. Those who are fortunate enough to have a pit (lean-to) with a 3 in. hot-water pipe running along the front can use this with advantage, and if there should be bottom-heat pipes all will be right. If not, new leaves with a little manure will give enough heat for this if placed in the bottom. Here, again, the temperature should not much exceed 60°, or the grass will be spindly. Very little water will be required during the dull months of December and January; a syringing occasionally will generally suffice, unless hot-water pipes supply the bottom and top heat, when more will be necessary, and this should be at a temperature of 75° whereas none will be required in the hot-beds until the sun has more power. Later batches, say from the middle of March, can be brought on in a cold pit that has been recently filled with fresh leaves during the winter months, the sun at this date being no mean factor. Some gardeners introduce a few batches into a vinery that may be started early in February, but I do not consider it is a good plan; it appears out of place, and I do not think very good results are obtained, there being nothing like a little bottom heat for this delicious and easily forced vegetable."

(To be Continued.)

CHRYSANTHEMUM EDWIN MOLYNEUX.

In your issue of the 13th inst., J. G. P. (p. 377) solicits information respecting the growing of this variety; and with your permission I should like to give my mode of procedure. I might say it is a great favourite with me, and when you hit it right there is none to beat it. Grown in the ordinary way, there is no difficulty in getting large flowers, but in addition to being too early for the shows, it lacks colour and refinement (which to my mind is to be preferred to mere size), therefore something has to be done to bring about the desired effect.

Briefly then my treatment is this: Cuttings are taken as far away from the stem as possible, about the middle of December, and inserted in single pots in the usual compost. When rooted, they are with the others potted on, and about the middle of February they are accommodated with a cold frame. By this time they will be in 60-sized pots. In about a month's time, they will be nice plants about 6 in. high, and ready for a transfer to a larger size of pot. Instead of doing that, however, I take my knife and cut off about 3 in of half the plants; this throws them back quite a fortnight; consequently, the natural break will not be so soon, and the crown bud will show at the right time for producing a good-sized bloom, with all the characteristics which go to make up a flower fit for exhibition. The other half of the plants are grown on; and if the natural break is made early, as is common with this variety, the plants are allowed to grow on in their own sweet way, until about the first week in June, when the knife is again used, cutting down to a point just below the natural break. This will generally give the necessary check, and thus secure a bud at the right time. They are very impatient of water and stimulants; too much causes the foliage to turn yellow, especially is this the case in the early stages; but later, when the bud is taken, liberal treatment should be the order.—*S. C.*

READING AND DISTRICT GARDENERS.

The fortnightly meeting of the Reading and District Gardeners' Mutual Improvement Association was held in the Club Room, British Workman, on the 15th inst., when Mr. Neve presided over a very large attendance of members. The lecture for the evening was "Soils and their Comparative Fertility," by Mr. Douglas A. Gilchrist, B. Sc. Edin., director of the Agricultural Department University Extension College. Mr. Gilchrist said that before he commenced his lecture proper he would like to direct attention to the geological map of the British Isles, which they saw before them, showing the variations in soils, and the character of the soils derived from different formations. He also directed their attention to the various climatic conditions in the different parts of the country, and how different plants required different conditions of climate. Taking up his subject proper, "Soils and their Comparative Fertility," the lecturer explained that the fertility of soils might be divided into natural or inherent fertility and artificial fertility.

The following were indications of natural fertility:—The character of the general vegetation of a district such as the trees and hedges; for instance where the Ash is to be found doing well, the soil would be of a generally strong loam and damp sub-soils, whilst on chalk and oolite formations the Beach would predominate. Trees also (especially isolated trees) generally indicated whether storms are prevalent in the district, as they showed, by their stunted growth or otherwise, whether they had been subject to rough weather in the past. A good Thorn hedge showed that the soil was exceedingly good. By the method in which farmers cultivated their land the soil could easily be known; for when the land is laid out in high ridges this generally indicated cold, wet soils. The herbage of common land generally indicated whether the soil is fertile or not. Then the colour of the soil and the character of the soil and sub-soil, which may be seen at the edge of a ditch, gives a good indication of natural fertility or otherwise. Soils in order to be fertile must have all the ingredients of a plant food present in a suitable form; they must also be in a suitable condition as far as tilth is concerned.

Digging or ploughing, or especially trenching when carried out on a rather heavy soil and sub-soil when wet, frequently does considerable harm for years by baking the soil. This should be avoided by carrying out this operation on heavier classes of soils only when they are sufficiently dry. There must also be no injurious ingredients present in the soil. After dealing with the plant food in the soil, and the condition in which it should be present, the lecturer dealt with the problem of how the plant food of the soil could be effectually retained or even increased, and then discussed how these ingredients could be suitably increased in the soil by the application of various manures. Reference was made to the composition of various local soils which had been analysed in the chemical laboratory of the college. One sample which was taken from Messrs. Sutton & Sons' Trial Grounds, showed a useful soil which had been greatly improved by manuring and trenching; the other was from poor down land close to the ridgeway at Wantage, which was in such poor condition that it would take years to convert it into a fairly good soil.

Before closing, the lecturer made reference to the work of the earthworm. Darwin was the first to recognise the great work done by the earthworm in improving the soil. Although many would consider that the casts caused a great disfigurement to their lawns, yet he could assure them that the worms were greatly improving the soil. Many questions were asked as to soils and manures, and a discussion took place, in which Messrs. Bradley, Webb, Hinton, Prince, Alexander, Neve, Dearlove, and others took part. Various soils and sub-soils from the district of Wellington College were brought by Mr. Townsend, The Gardens, Sandhurst Lodge. A very hearty vote of thanks was accorded Mr. Gilchrist for his lecture, and in reply he said he had been looking forward with the greatest pleasure to once more coming amongst them, and promised on some future occasion, if it was the wish of the members, to give them another paper. Five new members were elected.

HASTENING PEAS UNDER GLASS.

A dish of good Peas never comes amiss at any time of the year, but its value is greatly enhanced when it can be obtained early in the season. As a consequence, there is a good deal of rivalry amongst gardeners as to who shall be able to pick the first dish. The practice of sowing under glass at the end of January or the beginning of February, and putting the plants out of doors when the state of the weather permits, is pretty generally followed, in order to procure an early crop. By such a system it is possible, in the southern counties, to make a first picking sometime from the second to the last week in May, according to the character of the season. Further north, several weeks more have to be allowed. Thus, in the northern midland counties, Peas picked the second or third week in June would be early, whilst, over the Border, things are still later. It may be mentioned here, however, that parts of Scotland will compare very favourably in this respect with parts of England, as was well evidenced by the note that appeared from Mr. Wm. Ogg, on p. 741, Vol. XI., of The Gardening World, where he stated that William I. sown in the open ground on March 19th, had yielded the first picking on June 14th.

The plan of sowing under glass to obtain an early crop has, at various times, provoked adverse criticism from some cultivators who have, amongst other things, described it as a "coddling practice," but "coddling" or not, it is the best method yet found out. It has been described as being unprofitable, and such it possibly would be from a market point of view, but in a private establishment, weight of crop is not the only consideration, as both earliness and quality have to be looked to.

It has been our rule for many years to sow in the first week in February. Very little is gained by sowing much earlier, as March is as likely as not to

be inclement, and the plants do not like to be cooped up in their confined quarters for too long, especially when those quarters consist of sixty pots.

There are several ideas as to the best receptacles to use. We have always found large sixty pots the handiest and best, placing these in a gentle heat to assist germination. Another plan is to construct rough troughs of boards, fill them with soil, and sow in these. Still better is the "sowing on turf" system. A number of strips of turf about 5 in. in width are laid closely together with the grassy side downwards in a frame. The seed is sown on these in January, and covered with soil. In planting out, all that is necessary to do is to cut a trench, lay the strips of turf end to end, fill in the sides with soil, and the row is complete without the plants being disturbed at all. Sowing in boxes and dibbling the plants out is an old-fashioned dodge that we do not at all recommend. To commence with, it takes more time than either the turves or pots, and the dibbling is a sad check to the little plants.

The soil should consist of good loam chopped up finely with a spade, and the rougher parts of it will come in handy for drainage in the bottoms of the pots. A capital place for the seed pots is a shelf in a vinery started with the new year. No water will be needed, except in very exceptional cases, the moisture in the soil being usually sufficient until the seedlings are through the soil. Too much water would be sure to cause the seed to rot.

It is very important that the young plants should not be left too long in heat, or they will become drawn and spoiled, since such plants never develop into really strong fruiting specimens. As soon, therefore, as they are well through the soil they must be taken out of the heat and removed to a frame. Here they must be kept close for a few days, when the transition will not check them to any extent. From this time onward until they are finally consigned to their permanent quarters, they must be ventilated freely, gradually hardening them off until they are fit for planting out, which will be by the middle of March.

A south border under a wall is the best position, for here the plants will get the greatest amount of sunlight and a good deal of shelter.

In the case of dwarf varieties such as American Wonder and Chelsea Gem, both of which answer well to the "hastening" system, the rows may be from 15 in. to 18 in. apart. Taller growing varieties such as William I., Ringleader, or Sangster's No. 1 will naturally require more space. These latter should be staked as soon as they are planted, for not only do the stakes themselves give some shelter, but they render it easier to give further protection should occasion require it. An easy and effective way of giving this is to lay boughs of Laurels or other evergreens along the rows.

Dwarf varieties should be enclosed by a light framework of spars, over which mats may be thrown, in the event of severe frost supervening. March very rarely passes away without a spell of more or less severe weather. Even if we do not get very sharp frost or snow, the biting winds are even more troublesome, as beneath their blighting influence the plants stand absolutely still for weeks together as if numbed; indeed, if cold winds hold for very long, the crop is sure to be late.

THE GOLD LACED POLYANTHUS.

It will be very gratifying to all lovers of this grand old race of Florists' flowers to observe the advertisement in last week's Gardening World of a Middleton florist, who offers for sale, at a very moderate price, six varieties of the "show" gold-laced Polyanthus, viz., "G. Thornby," "Mrs. Brownhill," "Middleton Favourite," "Exile," "Cheshire Favourite," and "Sydney Smith." The three former are evidently new varieties, as I have never heard of them before, but the latter three are old ones. I am sorry these two champion varieties, viz. (Bullocks') "Lancer" and "George the Fourth" are not included in the list, These two varieties were formerly very extensively cultivated in the district of Middleton, by the late Mr. Samuel Barlow and Mr. Beswick; and as they are great acquisitions to every collection, it would be interesting to know whether they are still in cultivation, and, if so, where they are obtainable, and at what price?

This is a very good time to obtain plants, either for pot culture or for growing in the open border. If for the latter they should be planted in some good rich soil, where the sun will not shine upon them after 12 o'clock noon. This is the most important feature in the growth of the "show" Polyanthus; and with ordinary attention in other respects, keeping the plants regularly and well watered during hot and dry weather, they will thrive and bloom as freely as the common border varieties. — *James Thurstan, The Green, Cannock, February 22nd, 1897.*

SHEFFIELD CHRYSANTHEMUM SOCIETY.

The annual dinner of this society took place on Tuesday, February 2nd, at the Masonic Hall, Surrey Street, Sheffield, about one hundred members and friends sitting at the board to partake of a substantial and varied spread, that reflected great credit on the caterer. Captain Jeffcock, the genial president, occupied the chair, and was supported on the left by Mr. Atkinson (of Messrs. Fisher, Son, & Sibray), and Mr. Seagrave, nurseryman, whilst on the right were to be seen Messrs. Jarvis, Vickers, the secretary, &c.

The chairman remarked, in proposing the toast of the evening, that in all probability the Queen would honour the town with a visit during the current year, when he hoped the neighbouring nurserymen would be favoured with a share of the necessary decorations, contiguous to the route, at the various railway stations, &c. He also announced the receipt of apologies from various gentlemen who had been invited to attend, but had been prevented through the prevalence of the inclement weather and other causes, notably the Deputy Mayor, and the representatives of the kindred societies, York and Barnsley. Mr. Jarvis, in the course of an able speech, eulogised the virtues of the president and vice-presidents, whilst Mr. Vickers dilated on the fascinations of floriculture, wittily introducing a remark anent the railway guard or porter, who visibly measures a few inches more round the chest when favoured with but a buttonhole from a horticultural friend, concluding with an expressive hope that the Sheffield Chrysanthemum Society would, during the coming year, beat its already healthy financial record—admittedly already one of the most prosperous in the country.

Mr. Gartery, from Rotherham, in response to "Visitors and Kindred Societies," remarked that to his knowledge the courtesy of the Sheffield executive was very much appreciated by representatives of other similar societies; whilst Mr. W. Camsell, ever humorous, kept the large audience in considerable merriment by his witticisms concerning the innate accomplishments of the president, vice-presidents, and secretary.

Mr. Atkinson, in his reply to the toast of "Non-competing Members and Nurserymen," very aptly alluded to the growing negligence of other autumn flowers, such as Tree Carnations and Cyclamens, as regards their cultivation for exhibition purposes, and thought that though the "Autumn Queen" of flowers, the Chrysanthemum, would perforce come to the front, still other charming flowers should not be so glaringly omitted from the schedule of prizes, and so discourage the cultivation of other seasonable floral gems. No other industry, he resumed, had attained such a progressive movement during the sixty years of Her Majesty's reign as horticulture, and this led him to allude to the appeal now being made by the Gardeners' Royal Benevolent Institution's executive for funds to augment the existing balance, so as to inaugurate something befitting the Diamond Jubilee of the Queen.

The secretary also stated that he had received a letter from the treasurer in London, and commended the appeal for help to their consideration. The meeting was represented by the following members from the Rotherham Chrysanthemum Society, viz:—Messrs. Gartery, Stocks, Wainwright, Bradford, Taylor, Rhodes, and Upstone. The various toasts were interspersed with harmony of a good order, much enhanced by the singing of Mr. Crossland, jun. (nurseryman), who possesses a most exceptional natural alto voice that, with the necessary training, would in the humble opinion of the writer, warrant for him a greater income than can ever be attained in these days of keen competition in the nursery trade, for his command of the top A natural would defy all competitors.—*Albert Upstone, Seedsman, Rotherham.*

MESSRS. W. BALCHIN & SONS' FLORAL ESTABLISHMENT AT BRIGHTON.

One of the principal attractions in the busy thoroughfare of the Western Road, Brighton, is the conservatories of Messrs. W. Balchin and Sons. These buildings are large and commodious, well suited for making a floral display, and beautifully fitted up with all the necessary appointments of modern enterprise for carrying on a large business. At a recent visit, a grand and imposing sight was presented to me. Noble Palms standing upon pedestals display their natural gracefulness, as well as other plants suitable for decorative work. This part of the business is very extensive, and is managed by Mr. W. Balchin, junior, who leaves nothing undone to please the numerous visitors, and to carry out the extensive floral decorations; for many of the leading contracts fall into their hand, and are executed in a thoroughly practical and satisfactory manner. The great increase in this part of their business must be most gratifying to them.

Amongst the various and pleasing arrangements in these conservatories mentioned, are large quantities of well grown and profusely flowered plants of Azalea mollis in its varied bright forms, and Azalea indica, of which Deutsche Perle, (double white) and Madame Van der Cruzen (double pink) seem to be the favourite, and deservedly so, for plants in 5 in., pots are flowered to perfection. Cyclamens are also grandly done, and a very fine strain too. Butterfly Vulcan, and the giganteum varieties are well represented. Double and single Primulas, tree Carnations, Malmaisons and Marguerites, are flowering freely; also Lilacs in variety, Callas, Lilium Harrisii, Acacias, Freesias, Narcissus, Tulips, Roman, and other Hyacinths. Lily of the Valley, Anemones, Violets, and double scarlet Pelargoniums, all help to make a grand display, as they are beautifully arranged, and intermixed with various light and graceful foliage plants.

Amongst the cut flowers a few good and useful Orchids were conspicuous, including Cattleyas, Laelias, Dendrobiums, Coelogynes, Odontoglossums, and Oncidiums in variety; also large sprays of Acacia. Most of the former, here grown in pots, are represented in vases as cut flowers. Several young ladies are engaged here in making up various floral designs, for which there is a very great demand; and the nimble way in which they prepare the flowers and make up the various button-holes, sprays, bouquets, wreaths, &c., shows they are no novices at the work.

In addition to this enterprising part of their business they have a branch at Hove, where a lucrative seed business is conducted by another son, and close by they have a large number of glass houses, where various plants, both flowering and foliage, are grown to suit the increasing demand for floral and decorative work. I noticed that the public buildings, hotels, and restaurants, seem to take an interest in decorations of this kind, and rightly too; for what can give a more pleasing charm to such places than nature's adornments of plants and flowers.

In addition to these places mentioned, their principal Nurseries are at Hassocks, a few miles out of Brighton, on the South Coast Line. No doubt many of our gardening friends visit Brighton. Should they feel inclined, let them pay a visit to Hassocks; and whether they meet Mr. Balchin, senior, or Mr. Richardson, the general manager, they will, I know, be made perfectly welcome. In the former they will find a gentleman well versed in all matters relating to our profession, ever willing to learn, unassuming in manner, and most pleasant to converse with. In Mr. Richardson they will find a straightforward, enthusiastic, practical man. His work proclaims this for him, for many things are well done at Hassocks, that you cannot see every day. These nurseries are very extensive, for many acres of fruit trees, hardy trees and shrubs, Coniferae, &c., are grown in great quantities. Roses are extensively done also.

It is here where so many of the plants and flowers are grown for the requirements of their trade. Houses well-built for the purposes, and large ones too, are full to overflowering with foliage plants of all sorts and sizes, as well as flowering plants, as formerly mentioned. A nice useful lot of Orchids in good condition—those kinds suitable for cutting purposes—receive the necessary attention with good results. It is here, under Mr. Richardson, that a few good old

plants are grown, seldom now to be met with; and when they have been shown in such grand condition, as they have at some of our leading shows, they refresh one's memory, and make one wish there was more encouragement to grow these beautiful plants. I am now alluding to Leschenaultia, belonging to the Goodenovieae family. Boronias are grown by the hundred. There is not a more beautiful plant grown than Leschenaultia biloba major. Its beautiful bright blue flowers are most charming.

For the successful cultivation of Leschenaultia the following information may be useful, as it gives the method pursued by Messrs. Balchin and Sons:—"In May take off young growths about 2 in. in length and make them into cuttings, care being taken not to bruise the wood. Then insert about 20 cuttings each in 5 in. pots, filled with crocks, and a mixture of peat and silver sand; place them in a warm propagating pit and shade well from the sun. When rooted, pot singly in a mixture of peat and sand in 3 in. pots, keep close for a time, then move to a cooler house, and gradually expose to sun and air. They should be well pinched back to make them bushy, or they will grow tall and thin. Repotting should be attended to early in the spring, a mixture of good rich peat three parts, and silver sand one part being best for them. A frame or light greenhouse, where the sun may be allowed to shine upon them all day, is the best position for growing Leschenaultias during the summer months; also during the summer a sprinkling over-head with a syringe should be given in the afternoon of all bright days. In the winter they should be housed where the temperature does not fall below 45°, and where the atmosphere is dry and ventilation free, care being taken to guard against attacks of mildew."

Boronia serrulata, with sweet-scented bright rose flowers, is another useful thing; and these two plants, shown by them at the Temple Show, created quite a sensation to the numerous visitors, and were well sought after. Boronia megastigma, and B. heterophylla are also well done. The delicious scent of the former make it most popular. I was pleased also to see the old Tetratheca ericordes so beautiful and healthy. Large quantities of Ericas are also growing luxuriantly. Those varieties suitable for decorative work principally are all equally well done. In the summer time large quantities of annuals are also grown extensively for cut flowers, to supply the enormous and increasing demand, and which are sent to the Brighton establishment, where they find a ready sale.—*Rambler*

NATIONAL CHRYSANTHEMUM SOCIETY.

The annual meeting of this society was held at Anderton's Hotel, London, on Monday last. The large attendance of about eighty persons waiting for the business to commence made one imagine that "ructions" were expected; this idea was somewhat strengthened by the chairman's opening remark that "he hoped the meeting would pass off pleasantly," and was accentuated by several speakers' remarks, and various appeals to "bury the hatchets." Mr. R. Ballantine, vice-president, made an ideal chairman, ably using his strong tact in keeping the forces well in order, and he succeeded.

The minutes of the 1896 meeting were read and confirmed without comment. The committee's report and financial statement were also read and confirmed. This report will be issued in two or three week's time in the society's schedule, so we will content ourselves with reproducing the financial statement. After this the chairman, on behalf of the society, made sundry presentations, including gold medals and illuminated addresses to the hon. foreign correspondent and general secretary, medals to Messrs. B. Wynne, T. W. Sanders, T. Bevan, J. Williams, and the members of the Catalogue Revision Committee (Messrs. C. Harman Payne, H. J. Jones, D. B. Crane, W. H. Lees and A. Taylor). Each of these gentlemen returned thanks, as also did Mr. Ballantine for the medal awarded to him as the oldest officer of the society. The election of officers and committee for the current year resulted as follows:—president, Sir Edwin Saunders, F.R.C.S.; treasurer, Mr. J. R. Starling; chairman, Mr. T. W. Sanders; vice-chairman, Mr. P. Waterer; general secretary, Mr. R. Dean; foreign corresponding secretary, Mr. C. Harman Payne; auditors, Mr. Herbert E. Cutbush and Mr. A. E. Stubbs; committee, Mr. J. H. Witty (80 votes), Mr. W. Mease (77), Mr. J. Williams (76), Mr. J. W. Moorman (75), Mr. W. H. Lees (62), Mr. D. Ingamells (66), Mr. W. Holmes (65), Mr. R. Reeve (65), Mr. H. Cannell (63), Mr. J. Lyne (47), Mr. A. Newall (45), Mr. M. Gleeson (32) and Mr W. Howe (29), the last four being new to office. Other names submitted for election were—Messrs. C. E. Willis, W. Wells, R. Owen, C. E. Wilkins, J. W. Simmonds, A. Bougard, F. Matthews, and W. Coxhead.

Two societies were admitted to affiliation, and three new members were elected. Thanks and soft sayings all round ended a very busy and successful gathering.

FINANCIAL STATEMENT, 1896.

RECEIPTS.

	£	s.	d.	£	s.	d.
Balance in hand				65	7	8
Members' Annual Subscription—						
654 at 5s.	163	10	0			
12 at 10s...	6	0	0			
30 at 10s. 6d.	15	15	0			
87 at 21s	91	7	0			
1 at 30s...	1	10	0			
3 at 42s...	6	6	0			
1 at 63s...	3	3	0			
				287	11	0
Foreign Members' Subscriptions				5	3	4
Donations and Special Prizes				194	7	6
Donations to Jubilee Fund ..	349	3	6			
Proceeds of Smoking Concert, per Mr. A. E. Stubbs ..	11	15	0			
				360	18	6
Royal Aquarium Company—						
October Show	75	0	0			
November Show	175	0	0			
December Show	50	0	0			
				300	0	0
Bill Posting, as per contra ..				10	14	0
Bill Posting, overpaid, returned				1	0	0
Affiliated Societies—						
Fees	67	14	6			
Medals and Certificates ..	109	9	0			
Entrance Fees and Rent of Space..				120	7	0
Catalogues and Postage ..				16	15	7
Sale of Tickets				51	12	9
Advertisements in Schedule ..				46	12	0
C. Green & Son, overpaid, returned				2	11	0
Judging Fee, overpaid, returned				1	1	0
				£1,641	4	10

EXPENDITURE.

	£	s.	d.	£	s.	d.
Prizes—September Show ..	20	7	6			
October " ..	40	15	0			
November 1st " ..	464	13	6			
" 2nd " ..	155	10	0			
December " ..	54	13	6			
Medals Awarded and Engraving	103	10	6			
				839	10	0
Medals and Engraving, Affiliated Societies				52	9	0
Special Jubilee Bronze Medal				42	0	6
Cartage				3	5	0
Judges' Fees..				33	12	0
Judges, Floral and Staff Luncheons ..				30	13	5
Bill Posting, as per contra				11	14	0
Advertisements in Horticultural Press ..				20	19	0
Hire of Plants				5	7	0
Hire of Rooms				9	9	0
Expenses of Annual Dinner				18	5	6
Printing				67	19	6
Stationery				28	9	3
Stamps and Telegrams				36	19	4
Special Jubilee Postage				30	0	0
Sundry Expenses				11	13	7
Expenses of Jubilee Banquet				93	11	0
Royal Aquarium, Charge for Tickets ..				33	15	0
Royal Aquarium, Commission on Jubilee Subscriptions				19	13	4
Clerical Assistance..				75	0	0
Clerical Assistance, Members Register and extra Jubilee Work				7	7	0
Allowance for Extra Labour, Gas, Firing, &c., Jubilee Shows				25	0	0
Commisson, Obtaining Advertisements..				11	5	0
Show Expenses				51	3	0
Foreign Corresponding Secretary's Account				1	15	3
Expenses, Catalogue Revision				2	19	11
Purchase of Bottles				1	11	0
Expenses, Floral Committee				4	8	6
Money Returned				1	14	6
Insurance Premium				0	9	0
Donation to Royal Aquarium Employées				2	2	0
Bank Charges				1	13	7
Transferred to Reserve Fund Account ..				55	0	0
Balance				10	10	8
				£1,641	4	10

We have examined the accounts and compared the same with the several vouchers. We certify the Balance at Bank to be as stated, and we also certify that the sum of £55 has been added to the Reserve Fund, which now amonnts to £104 18s. 2d. at the Bankers. We have pleasnre in further stating that the bocks have been kept with business method and in a straightforward manner.

Auditors { GEORGE J. INGRAM. HERBERT E. CUTBUSH.

February 18th, 1897.

Reserve Fund £104 18s. 2d.

LATE PEAS.

As with early crops, so with late ones, they are in great request, but although the early plants raised under glass and planted out have a good deal to contend with in the way of cold nipping winds and occasional frosts and snows, the late ones are even more badly treated. In the spring time there is a moistness in the atmosphere that is often absent from it during the months of summer, and thus from the time of sowing (generally from the beginning to the middle of June) the poor plants are dried nearly out of existence, unless, of course, the summer prove a wet one, when they go to the other extreme. Besides having to contend with the enervating effects of drought, mildew has to be reckoned with to a greater or less extent, and one may often see rows of late Peas quite white with mildew.

It is manifest that only varieties of robust habit will pass successfully through such a trying ordeal. A common practice with some cultivators is to sow early sorts after the expiration of June, because they turn in rather earlier, but this plan has its disadvantages, inasmuch as such varieties are usnally rather weaker in constitution than the late ones.

A few years back British Queen was the best of the late varieties, but now it is superseded by other sorts that are certainly of greater merit. Still, in some localities it does well and is still grown. Usually, it runs to about 6 ft. in height, but it does not resist drought at all well, and in such a season the seed will sometimes germinate very irregularly, and the plants only turn out weaklings. The Peas, however, are of first-class quality, being large, tender, and of excellent flavour.

Ne Plus Ultra is another good old sort, very prolific and strong growing. It is rather tall, exceeding 6 ft. in height in an ordinary season.

Omega (Laxton) may be regarded as a dwarf of Ne Plus Ultra. It has long narrow pods containing from eight to ten Peas of first-rate quality. The height is about 2½ ft. Both it and the taller forms are well worthy of cultivation.

Sutton's Latest of All.—This is also a comparatively dwarf variety, as it only just exceeds 3 ft. in height. For September and October picking, it is invaluable; and under especially favourable conditions, dishes have been picked up till past the middle of November. The pods are produced in pairs and contain nine or ten Peas which preserve their green colour well through the cooking.

Besides the above which may be looked upon as standard sorts, there are several others of newer introduction that are valuable acquisitions.

Carter's Michaelmas Pea.—This variety has already established a name for itself. It is very late, and yet the quality shows no deterioration. It possesses a dwarf bushy growth of 2½ ft., and while very prolific, is vigorous and hardy, and thus possesses great powers of resisting both drought and mildew. The pods are large, well filled, and of the deepest green.

Sutton's Late Queen may now be looked upon as a standard variety, so well has it proved its value by a trial in different localities, and under varying conditions, since it was sent out by the Reading firm in 1895. It is claimed that it is an improvement upon Latest of All, and to those who know the merit of the latter variety this will appear a very high recommendation. It is a little taller than Latest of All, being about 3½ ft. in height. The vigorous constitution of which it is possessed enables it to resist mildew wonderfully well. The pods are very large, of great breadth, thickly coated with bloom and thus appear to great advantage upon the exhibition table.

Veitch's Chelsonian.—This is certainly one of the best of recent introductions and has been awarded a First-class Certificate by the Royal Horticultural Society. It is of vigorous growth with a branching habit, and about 6 ft. in height. The pods are dark green, and resemble in shape those of Ne Plus Ultra. The Peas are of excellent quality. This variety has already won for itself golden opinions and bids fair to become a great favourite generally, as indeed it deserves to be.

GARDENING MISCELLANY.

ADIANTUM FARLEYENSE.

THE beauty of this Fern is generally recognised—not so its value for cutting. People grow their plants in a close warm house, and as a matter of course the fronds produced under such conditions are not hardy enough to stand much. By judicious hardening this difficulty may, to a large extent, be obviated. Of course, the fronds will not last so well as the ordinary Maidenhair—this is scarcely to be expected—but they answer well. By keeping the plants in small pots, and by comparatively free ventilation during the summer months, the fronds may be educated to stand a good deal. Mr. William Iceton grows Adiantum farleyense in quantities at Putney, and finds that such a course pays. Certainly one could not wish to see finer plants than those he turns out.

ROSE KAISERIN.

GLOWING accounts of this Rose come from the United States, where it is evidently a great favourite. According to a contributor to the *American Florist* it should be planted out in a well-drained bed, rested during a great part of the winter, by allowing the house to almost freeze, and pruned similarly to a hybrid. Its defect is that it is liable to suffer from black spot late in the autumn, and hence it is advisable to take any cutttings that may be required early.

LATANIA LODIGESII.

IN a small state this Palm is very distinct and pretty, although it loses some of its beauty as it gets older. The fronds are palmate, and divided for about two-thirds of their way down. The segments are of medium width. A narrow line of deep crimson runs all round their margins, and the petioles exhibit a suffusion of the same colour, which shows up very conspicuously against the dark green of the upper surfaces of the fronds. L. Lodigesii does well in a stove temperature, the great thing being to avoid overpotting it. It is sometimes met with under the name of L. glaucophylla.

TILLANDSIA LINDENI.

THIS pretty Tillandsia has been flowering for some time past in the stove at Kew. It certainly well repays any care bestowed upon it. The bright blue flowers are produced in a terminal, compressed spike, ovate in shape, and usually bearing about a score of flowers, which open one or two at a time from the base upward, so that the blooming season extends over a considerable period, although the flowers themselves do not last for long. The sepals are green, tinted slightly with red at the apices. The leaves are rather narrow, accuminate, spreading, reflexed, and unarmed. A fairly strong compost should be given it, consisting of two parts fibrous loam, with dried cow manure and sand. A few small pieces of charcoal may advisably be added.

DRACAENA CANTLEYI.

NOT a little of the value of the Dracaenas as foliage plants is due to the variety of colour and general appearance that they present. The one under notice is distinct from any of the usual run of those grown in our stoves. The leaves are very long, lanceolate in shape, rather thick and succulent. They exhibit a deep green hue and are thickly dotted all over their upper surfaces with green-white dots, circular in shape, and about the twelfth-of-an-inch in diameter. The whole plant possesses a noble presence, but up to now is a stranger to most establishments. A very fine and vigorous young specimen is to be seen in the stove at Kew.

ASPARAGUS DEFLEXUS.

ONE might travel a long way before meeting with such fine specimens of Asparagus deflexus as are to be found at Mr. Iceton's Nurseries at Putney. They are accommodated in pots some 15 in. in diameter, and are fully 4 ft. high and 3 ft. in diameter. Throughout the winter months they are kept in a cool house, and judging from appearances this treatment suits them. Curiously enough, although A. plumosus seeds freely enough at Putney, of which our readers are doubtless aware, A. deflexus is very shy in this respect, only a few straggling seeds being obtained at intervals.

FOOD OF MOLES.

I OBSERVED your reply to a correspondent a few weeks back, wherein if I rightly remember, you stated you thought moles do not harm, except, perhaps, on the lawn, and that they lived upon grubs, etc., injurious to crops, and I felt reassured. I am greatly troubled with moles and hardly know what to do about destroying them, and I am also troubled with wireworms and black slugs, so much that I cannot get a good Carrot crop, and it is with difficulty I can keep Lettuces in early spring, the numerous slugs eating them off as fast as we can plant them out, notwithstanding frequent application of soot and lime. I think on the whole, however, I would prefer the wireworm to the moles in my Carnation beds, where they make a sad havoc. Feeling curious to know exactly upon what this vigorous little underground worker lives, I opened one a few days since that I caught upon a Strawberry bed, and found in in his stomach undigested short pieces of the common earth-worm and black slugs, together with what looked to me like fragments of wireworm. It is very annoying when one's seed beds, Carnation and Strawberry beds are riddled and drained. Still, perhaps, of the two evils the moles are the lesser.—*A. P.*

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Roses Injured with Frost.—*D. W. D.*: October and the early part of November are very suitable for the planting of Roses, but the latter are very liable to be injured or even killed, if the succeeding winter should turn out a severe one, just as has happened in your case. In future we think it would be a safer plan, in your northern district, to defer planting till a suitable time in March, dependent upon weather and the state of the soil. The actual amount of injury done to your Roses can only be determined some time after frost and snow have disappeared, say in March. If you had not protected them as you did with a layer of stable manure, most likely they would have been completely killed. As it is, some of them may make good growth during the coming summer, and possibly flower late. The second fortnight of March would be early enough to prune them, for you will then see to what extent the shoots have been injured.

Hybrids Amongst British Primulas.—*W. Napper*: You give no instances of a hybrid between two genera. Under cultivation there are several well-marked cases amongst Orchids; and in a wild state there are supposed hybrids between Cattleya and Laelia. But until people are agreed upon what is a genus, and what is a species, it will be impossible to speak with any degree of definiteness or precision. The terms "genus" and "species" are often purely arbitrary in their application, or in other words a matter of convenience. Primula vulgaris, P. veris and P. elatior are certainly very closely allied, and many botanists regard them as good species, while others as emphatically affirm that they are only forms of one species. You speak wrongly, however, when you say that the Cowslip and the Primrose are one and the same plant. You may say that they are forms of the same species, if you care to adopt that view. If any case it is merely a matter of assumption, or conventionalism, and must remain so until science can define exactly what is a species. Where the Cowslip and Oxlip grow together in a state of nature, intermediate forms are found, connecting the two by numerous links; hence, some botanists regard them as one species, whilst others consider them as two species, and that the intermediates are hybrids. All the three forms of Primula above-named reproduce themselves true from seed, and we regard them as species merely for convenience sake. We prefer a medium course or view between extremes. For your other questions see next week, as we are crowded on this occasion.

Plants to grow amongst Roses.—*D. W. D.*: There are various subjects that might be planted amongst Roses to fill up the gaps till the Roses become well established. It depends much upon taste as to what you might plant. Tall subjects are Dahlias, Hollyhocks, Phloxes, Pentstemons, Gladioli, &c. None of these should be planted so as to crowd the Roses or shade them too much, because they want all the sunlight possible. The first four you could keep sufficiently thinned out. Gladioli of the gandavensis type might be planted fairly thickly, as their foliage casts little shade. Dwarfer plants are Stocks, China Asters, Calceolarias, Fuchsia Dunrobin Bedder (about a foot high), Double Larkspurs (annual), Dianthus, Napoleon III., Mignonette, Nemophila insignis, and Violas. We think the latter would be very suitable without anything else, using one or several colours in a bed according to fancy. Others next week.

Names of Plants.—*T. D.*: 1, Crocus susianus; 2, Crocus aureus luteus; 3, Scilla bifolia; 4, Cotoneaster microphylla.—*W. H.*: 1, Pinus austriaca; 2, Sequoia sempervirens; 3, Thuya orientalis; 4, Cupressus lawsonianus; 5, Cupressus pisifera plumosa; 6, Cupressus pisifera squarrosa.—*G. M.*: 1, Cornus mas; 2, Eranthis hyemalis; 3, Anemone blanda.—*A. K.*: 1, Odontoglossum Coradinei; 2, Odontoglossum Lindleyanum; 3, Dendrobium findlayanum.

Strawberry Plants Damping.—*O. H.*: In the first place we think October was too late for getting the plants. You should make a point of getting them about the beginning of September, or earlier if you can get them. They should be potted as soon as received, in order that the fruiting pots may be filled with roots before the short days come on. After potting them firmly in good, rich compost, in a properly workable condition, stand them on a layer of ashes in an open position well exposed to sun and air. They will then be in a better ripened condition and keep better. Cultivators, for forcing purposes, pot their plants, as soon as they have been properly rooted in the small pots and removed from the parent plants. The crowns should not be buried too deeply in the pots, and the plants should not be watered overhead in the sunless and dull early part of winter. We cannot say whether any of these mistakes have been made, but they should occupy your consideration. We strongly advise you to get the plants earlier next year, so that they can be put in the fruiting pots at once.

Manure for a Vine Border.—*Nelson*: The 4 cwt. of ½ in. bones and the 2 cwt of bone meal, which you propose using, would not be too heavy a dressing; but we should prefer 6 cwt. of ½ in. bones, leaving out the bone meal, which might be used in after years when the Vines are in full bearing. See that there is an outlet for the drainage water, and put at least 6 in. of brick rubble in the bottom, to insure the superfluous water draining away. Even 9 in. of drainage would be better (with the depth of the border you are making), and over this a layer of turf should be placed. Use good turfy loam. After the Vines are bearing you can support them with top-dressings of various manures containing nitrogen, phosphorus and potash. For instance, a mixture might be made of 2 cwt. of dissolved bones, 1 cwt. of nitrate of potash, and 1 cwt. of sulphate of lime, and the surface of the border dressed with it at the rate of 2 lbs. to the square yard every three weeks or a month, during the growing period.

Dishudding Pansies.—*R. M.*: The advantages to be gained from dishudding are not very great. A few flowers of greater size might be obtained in this way, but it would be difficult to time them. You should make a point of getting varieties that naturally bear large flowers; then in the second place you should encourage young shoots that will be in full vigour and flowering about the time you require them. The older shoots might be cut away to give the young ones all the advantages of light and air. In any case, the plants should not be allowed to become crowded by too many shoots. Mulch the ground around the roots, and give copious supplies of water during dry weather.

Communications Received.—C. Darmer.—W. Napper.—D. W. D.—J. of H.—Barr & Son.—M. T.—E. Wilson Gates.—John Fleming.—S. M.—W. N.—G. Lawes.—Stove.—P. T.—C. Wilson.—Querist.—S. S. R.—T., Surbiton.

TRADE CATALOGUES RECEIVED.

DOBIE & DICKS, 66, Deansgate, Manchester.—Descriptive Price List of Seeds.

ALBERT UPSTONE, F.R.H.S. (late John Cobban, jun.), Market Place, Rotherham.—Seed List.

JAMES COCKER & SONS, 130, Union Street, Aberdeen.—Descriptive Catalogue of Roses and Hardy Herbaceous Plants; also Catalogue of Seeds, Plants, &c.

NATHAN SMITH & SON, 167, West Maumee Street, Adrian, Michigan, U.S.A.—Descriptive Trade List of Chrysanthemums.

VILMORIN-ANDRIEUX ET CIE., 4, Quai de la Mégisserie, Paris.—Catalogue of Dahlias, Cannas, and Chrysanthemums.

JOSEPH MOCK, Seedsman, Trier (Rheinprovinz) Germany.—Price List of Vegetable and Flower Seeds.

JOHN LAING & SONS, Forest Hill Nureries, and Catford, Kent.—Special List of New and Rare Clivias, also Streptocarpus.

E. H. KRELAGE & SONS, Bloemhof Nurseries, Haarlem, Holland.—Catalogue of Novelties, Herbaceous Perennials and Florists' Flowers.

JAMES CARTER & Co., 237, 238 and 97, High Holborn, London.—Carter's Invicta Grass Seeds.

D. M. ANDREWS, Alpine Nurseries, Boulder, Colorado, U.S.A.—Descriptions and prices of one hundred select Hardy Perennial Plants.

FIXTURES FOR 1897.

MARCH.

4.—Linnean Society.
4.—Ayrshire Gardening Society.
6.—Societie Francais d'Horticulture, London.
6.—Isle of Wight Horticultural Improvement Society.
9.—R.H.S., Committees and Lecture.
10.—Renfrewshire Gardening Society.
13.—Royal Botanic Society Meeting.
17.—Devon and Exeter Show.
18.—Linnean Society.
18, 19.—Birmingham Botanic Gardens Show
23.—R.H.S., Committees and Lecture.
27.—R.B.S. Meeting.
30, 31.—Truro, Daffodil and Spring Flower Show.
31.—R.B.S. Spring Show.

APRIL.

1.—Linnean Society.
1.—R.H.S. of Ireland Spring Show.
6, 7.—Brighton and Sussex Show.
7.—Shropshire Horticultural Society's Show.
8, 9.—Royal Caledonian Society's Show.
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
15.—Linnean Society.
24.—R.B.S. Meeting,
27.—R.H.S. Committees and Lectnre.

MAY.

6.—Linnean Society.
7.—R.B.S. Lecture.
8.—R.B.S. Meeting.
11.—R.H.S. Committees and Lecture.
14.—R.B.S. Lecture.
19.—R.B.S. Summer Show.
21.—R.B.S. Lecture.
22.—R.B.S. Meeting.
24.—Linnean Society's Anniversary.
24 to 28.—Bath and West and Southern Counties Show at Southampton.
26.—Gardener's Royal Benevolent Institution, Annual Dinner.
26, 27, 28.—R.H.S. Temple Show.
28.—R.B.S. Lecture.

JUNE.

3.—Linnean Society.
4.—R.B.S. Lecture.
11.—R B.S. Lecture.
12.—R.B.S. Meeting.
15.—R.H.S. Committees and Lecture.
16, 17, 18.—York Floral Fête.
17.—Linnean Society.
18.—R.B.S. Lecture.
23.—National Rose Society's Show at Portsmouth.
23 to 28.—R.A.S. Show at Manchester.
25.—R.B.S. Lecture.
26.—R.B.S. Meeting.
29.—R.H.S. Committees and Lecture.
29.—Royal Oxfordshire Horticultural Society's Commemoration Show.

JULY.

1.—R.H.S. of Ireland Summer Show.
2.—N. Rose Society Show at Crystal Palace.
7, 8.—County Boro. of Hanley Fête.
8, 9, 10.—Newcastle Show
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
13, 14, 15.—Wolverhampton Floral Fête.
15.—N. Rose Society's Show at Norwich.
21.—Beckenham Show.
24.—R.B.S. Meeting.
27.—R.H.S. Committees and Lecture.
28, 29.—Chester Fête.
28, 29.—Carnation and Picotee Society's Show at Birmingham.
31 and Aug. 2.—R.H.S. of Southampton Society's Show.

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Apples..... per bushel	2 6	4 0	Grapes, per lb	1 3	2 0
Black Currants ½ sieve			Pine-apples .		
Red " ½ sieve			—St. Michael's each	2 6	6 0
Cherries half sieve...			Plums per ½ sieve.....		
Nova Scotia Apples per barrel			Strawberries, per lb.		
Coh Nuts per 100 lbs	00	00	Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

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Artichokes Globe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus, per bundle			Horse Radish, bundle	2 0	4 0
Beans, French, per half sieve	2 6	2 9	Lettuces ...per dozen	1 3	
Beet..... per dozen	2 0	3 0	Mushrooms, p. basket	1 0	
Brussel Sprouts, per half sieve	1 6	1 9	Onions.....per bunch	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunch	0 3	
Carrots ... per bunch	0 3		Radishes... per dozen	1 6	
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket		
Celery.....per bundle	1 0		Small salading, punnet	0 4	
Cucumbers per doz.	1 6	3 0	Spinach per bushel	2 0	2 3
Endive, French, doz.	1 6		Tomatos..... per lb.	0 3	0 4
			Turnips .....per bun.	3 0	

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Asparagus Fern, bun.	2 6	3 0	Pelargoniums, 12 bun.	6 0	9 0
Azalea, doz. sprays...	0 9	1 0	Pyrethrum doz. bun.	2 0	4 0
Bouvardias, per bun.	0 6	0 9	Roses (Indoor), doz.	1 0	1 6
Carnations doz. blms.	1 6	3 0	" Tea, white, doz.	1 0	2 0
Chrysanthemums, doz. blooms	1 0	4 0	" Niels	6 0	9 0
Chrysanthemums, doz. bnches.	3 0	6 0	" Safrano	1 0	2 0
Eucharis ...per doz	4 0	6 0	" (English),		
Gardenias ...per doz.	4 0	8 0	Red Roses, doz.....	1 0	1 6
Geranium, scarlet, doz. bunches	6 0	9 0	Pink Roses, doz.	3 0	5 0
Hyacinths (Roman) doz. sprays	0 6	1 0	Smilax, per bunch ...	6 0	8 0
Lilium longiflorum per doz.	4 0	8 0	Tuberoses, doz. blooms ...	1 0	1 6
Lilac, White (French) per bnch.	3 6	5 0	Primula, double, doz sprays	0 6	0 9
Lily of the Valley doz. sprays	0 6	1 0	Poinsettia, doz blms.	6 0	9 0
Marguerites, 12 bun.	2 0	4 0	Violets (French) per doz. bnches.	1 0	1 6
Maidenhair Fern, 12 bs.	4 0	8 0	Violets (English) per doz. bnches.	1 6	2 6
Mimosa, per bnch. ...	1 0	1 6	Violets (Parma) per bnch.	3 0	4 0
			Violets Czar, large, per bnch.	2 0	3 0

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Aspidistra, doz.....	18 0	36 0	Ferns, small, per 100	4 0	6 0
" specimen	3 0	5 0	Ficus elastica, each	1 0	5 0
Azalea, per plant.....	2 0	3 6	Foliage Plants, var., each	1 0	5 0
Chrysanthemums, per doz.	6 0	9 0	Genista, per doz.	10 0	15 0
Cineerarias, per doz....	10 0	12 0	Hyacinths, per doz. ...	9 0	12 0
Cyclamen, per doz....	9 0	15 0	Lycopodiums, doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0	Marguerite Daisy doz.	9 0	12 0
Dracaena viridis, doz.	9 0	18 0	Myrtles, doz.	6 0	9 0
Euonymus, var. doz.	6 0	18 0	Palms in variety, each	1 0	15 0
Evergreens, In var. doz	6 0	24 0	Palms, Specimen ...	21 0	63 0
Erica Hyemalis, per doz.	12 0	15 0	Poinsettia, per doz....	9 0	18 0
Erica, per doz.	9 0	12 0	Solanums, per doz.	9 0	12 0
			Tulips, doz. pots.....	6 0	9 0

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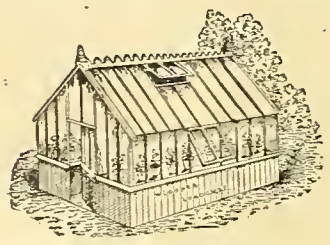

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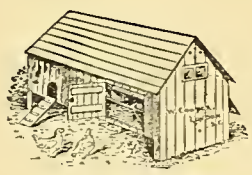

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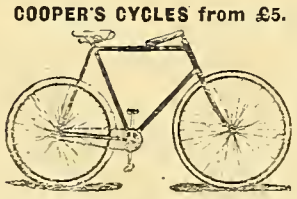

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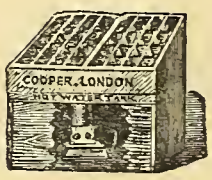

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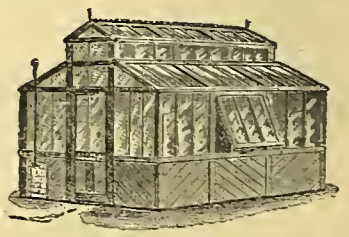

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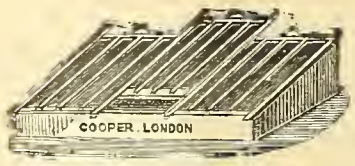

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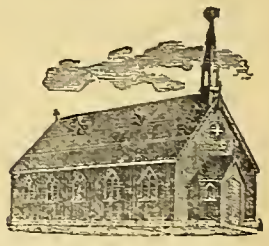

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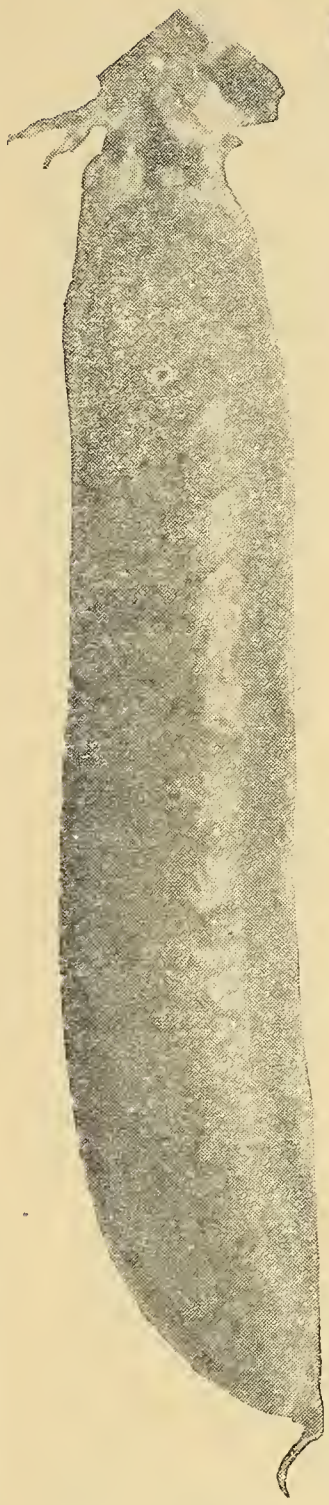

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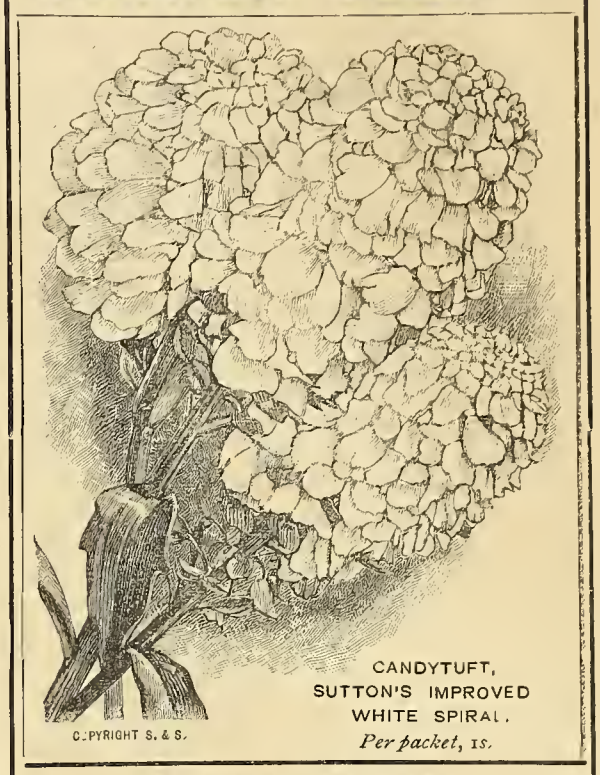

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SATURDAY, MARCH 6th, 1897.

THE KEW GUILD.—Outsiders hear but little of the doings of the Kew Guild except once or twice a year when the annual general meeting is held, or the *Journal of the Kew Guild* makes its annual début. Since the institution of the Guild in 1893, however, it has been making steady progress, and though at first some doubt might have existed as to the possibility of raising a fund sufficient to cover the expenses of the printing and publication of the *Journal*, yet that misgiving has entirely disappeared as each successive reunion of the members came round. The report and balance sheet read out to the meeting on the 25th ult., showed the Guild to be in a flourishing state financially and otherwise. A considerable number of the members supported the resolution to adopt the report which was presented by the president, Mr. G. Nicholson. What is more, the situation of affairs was so satisfactory that the hope was expressed that the *Journal* would at no distant date become a quarterly, as indeed it seemed to be in a fair way to make such acceleration in its appearance necessary.

Independently of the report, the president spoke at considerable length on Kew as a

school of horticulture both scientific and practical, the excellent advantages it held out to the young men who served their time in the establishment, and referred to the fact that Kew now holds a much higher place in the estimation of the British public than it did, practically only a few years ago. In these expressions of opinion he was amply supported by those present. He spoke of the success of the Mutual Improvement Society, and recommended the present staff of Kewites to continue giving it their heartiest support, as it was a valuable means of improving their time while at Kew, and an important adjunct to the other advantages offered by the establishment, whose status he compared with other seats of horticultural training in the country. In connection with the Mutual Improvement Society, we may here state that Mr. John Gregory, an old Kewite, has offered an album of views of Kew Gardens for the best essay read at the meetings.

As might have been expected, there was but a moderate sprinkling of old Kewites present, distance preventing the larger proportion from attending, while business engagements and illness, to our knowledge, held others back. Some letters were read from absentees. The old question relating to the non-payment of their subscriptions by many past Kewites was again brought forward, and it was even suggested that the names of all such should be struck off the list. This idea was combatted by several speakers, who contended that the chief value of the list lay in its completeness. There was a general agreement that the list should not only be maintained, but made as full as it was possible with regard to those whose whereabouts are still unknown. The names of those who are known to have died, are also to be recorded in a separate list. A few alterations in the list of officials were made, one of the more important being that Mr. W. Watson, the assistant curator, has been elected secretary as well as editor for the Kew Guild. Five past Kewites have been elected as foreign members of committee, to represent the United States of America, India, South Africa, Australia, and the West Indies respectively. Independently of the Guild it has been resolved to collect subscriptions in aid of the gardening charities in commemoration of the Queen's Diamond Jubilee; and, after some discussion, it was established by the vote of those present that whatever sum might be collected was to be divided equally between the Gardeners' Royal Benevolent Institution, (in aid of the Victorian Era Fund), and the Royal Gardeners' Orphan Fund.

INSTITUTE FOR TEACHING BOTANY.—At a meeting of the Royal Botanic Society on the 27th ult., Mr. John Birkett in the chair, Mr. W. Harrison Martindale, F.C.S., F. I. Inst., read a paper on "The desirability of establishing an Institute for teaching Botany in the Royal Botanic Gardens." Mr. Martindale had been giving some attention and study to the botanical institute, and gardens attached to the University buildings of Marburg, in Germany, of which town the botanical institute in question forms a conspicuous feature. He spoke very highly of that institution, and considered it an example worthy of being copied. Before he had proceeded far with his subject he took his audience back to 1863 when good work was done by the late Professor Bentley, in the laying out of the herbaceous grounds according to the natural system of arrangement in the society's gardens, where useful work might yet be done. Then he mentioned a number of places in London where botanical teaching is carried on, including the Department of Science and Art, South Kensington, the London College, Birkbeck Institution, the Physick Garden at Chelsea, &c., but the work at those places was limited. Botanical teaching in Germany was carried out on admirable principles. Something similar might be attempted by the Royal Botanical Society, provided they got an extension of their lease. The charter of the society showed that it was instituted for promoting the science of botany and the teaching of its uses in the arts and medicine. In Germany, Switzerland and France, their institutes were surrounded by gardens, and all appliances necessary for the proper study of plant life.

The society's gardens were admirably suited for the rearing of an institute, the objects of which should be the study of vegetable morphology, physiology, anatomy, histology, &c., of plants. The institute could take up the study of grasses, cereals, practical horticulture, fruit culture, the diseases of plants in relation to horticulture and agriculture, and even of foreign subjects such as the Coffee disease. London, whose wealth greatly depends upon the importation and distribution of foreign produce, affords little opportunity for the study of these products. The grasses best suited for the production of fodder were not so well studied in this as in some other countries which he mentioned. A teacher, he said, ought also to be an investigator. In considering the subject of a botanical institute, he reminded his audience that the late lamented Prince Consort had in mind the establishment of something of the kind at the Royal Albert Hall.

In commenting upon the paper read by Mr. Martindale, Dr. D. H. Scott, of the Jodrell Laboratory, Royal Gardens, Kew, said that the scheme just sketched out should commend itself to botanists. One side of the plan appealed to him (Dr. Scott), and that was scientific research. No doubt, some institution should be endowed for the carrying out of that kind of work; and the gardens, appurtenances and surroundings of the society were suitable for the purpose. If botanical teaching in connection with original research were started in the society's gardens, it would fill a gap and not interfere with the legitimate work of any other institution. Dr. F. W. Oliver, of the University College, London, spoke of the feasibility of carrying out the proposition if the fellows of the society would support it properly. A fellow suggested the formation of a committee to enquire into the matter. The Rev. Prof. Henslow dwelt upon the question of getting a sufficient number of students to ensure the success of the institute. He related some of his experiences with botanical students during the last 30 years, and stated that they were decidedly averse to the study of a single item beyond what was necessary to enable them to pass the examinations imposed upon them. He spoke of the teaching at the Birkbeck Institution and the facilities the teachers and students there had of obtaining all the specimens they required. The practical and physiological questions set by the Royal Horticultural Society for the examination in horticulture, promoted under their auspices, were also cited by Professor Henslow, who advised the society to ascertain what pupils they were likely to get.

One of the fellows thought they might commence the teaching of botany in a humble way, without going to the expense of putting up costly buildings, so that they might prove what demand there might be for such instruction as was proposed. An ex-professor said the great bugbear to the scheme was the numerous botanical schools on a small scale. Mere teaching would take care of itself, but original research would command the attention and the assistance of the public at large, quite irrespective of creed; and the society, if successful in this particular sphere, it would be amply supported. Mr. Rubinstein advocated a system of classes, and teaching such as were carried on at the Birkbeck Institution. Another fellow spoke of the original discovery of the fertilising properties of a crop of Clover on land, and the investigations that were undertaken to discover the cause to which this property was due. Finally the chairman invited fellows, who were willing to form part of the committee, for enquiring into the feasibility of establishing a botanical institute, to send in their names.

Crocuses, chiefly garden varieties of C. vernus and C. aureus, render the grass very gay in several parts of St. James' Park nd Regent's Park.

"Wonders" will never cease, at least amongst Peas. I intend raising a Scottish Wonder, and in asking for it, see that you get it.—*Snaggs.*

Two Large White Swans were recently observed flying over Highgate Woods in a north-westerly direction. They were at an altitude of 300 ft., and had probably deserted some of the London parks

W. G. Edwards wishes to inform his friends and acquaintances that he is leaving the gardens of the late Mrs. Reeves, of Sandhill Lodge, Fordingbridge, to take charge of the gardens of G. Churchill, Esq., of Holderholt Park, Fordingbridge, Hants.

United Horticultural Benefit and Provident Society.—The annual general meeting of this society will take place on Monday evening next (March 8th), at the Caledonian Hotel, John Street, Adelphi, Strand. The chair will be taken at 8 o'clock by Mr. A. Dean

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, March 9th, in the Drill Hall, James Street, Westminster, 1 to 4 p.m. A lecture will be given at 3 o'clock by Prof. H. M. Ward, F.R.S. on "Microscopic Gardening."

Spring Flowers.—Reading your accounts of early Primroses (Primula vulgaris) made me have a turn round the evidently unfrequented nooks of my garden, where I was not delighted to find an abundance of flowers of Senecio vulgaris and Stellaria media, because, though extravagant in flowers, they were niggard in variety. Just like spring, but I shall alter it.—*Cor.*

Rhododendrons in Kew Gardens.—The Himalayan Rhododendrons are proving a source of some attraction to visitors in the Temperate house. As a rule the early blooming of Rhododendrons under glass is taken for granted, but the mild weather that has prevailed for some time past has induced a number of the bushes in the Rhododendron valley skirting the banks of the Thames to come into bloom.

Rainfall in Devon for 1896.—Several of our correspondents keep an account of the annual rainfall in their several districts. Mr. J. L. Reynolds, Sidbury Manor Gardens, Sidmouth, supplies us with statistics for 1896, from which we cull the undermentioned items. The total for the year was 29.47 in. The mean annual average for Exeter, also in East Devon is 33 in., so that there was a deficit of slightly over 3½ in.; but for Sidmouth, the deficit is probably greater. The heaviest rainfall in any one month occurred in December, when 7.68 in. fell; September comes next with 6.16 in.; and March had 4.19 in. The driest month was May, with 0.06 in.; April had only 0.52 in.; and February 0.64 in. The heaviest rainfall in twenty-four hours occurred on December 2nd, when 1.34 in. fell; September 4th had 1.30 in.; March 21st, and July 25th had each a fall of 1 in. May 22nd showed a fall of 0.06 in., which was all the rain that fell during that month. There were 155 days in the year during which 0.06 in. or more rain fell. September had 26 rainy days; March and September each 23; October 15; August 12; and January, June, and July each 11, the other months having fewer wet days.

Pessimistic Weather Prophets are the best, because they prophesy so much of hail, rain, and snow, that you become agreeably delighted when it turns out finer than you expected.—*Snagg's Philosophy.*

A fine specimen Camellia is growing at Trevarnick, near St. Austell. It is 15 ft. high, and 100 ft. in circumference, and has as many as from eighteen to twenty flowers and buds to each square foot of its area.

Five Acres of Foliage.—The late Asa Gray after making calculations, stated that the Washington Elm at Cambridge, U.S.A., would bear about 7,000,000 leaves, having a surface of 200,000 square feet, or about five acres of foliage.

Rhus Cotinus, the Venetian Sumach, is commonly known in the "States" as the "Smoke Tree," the name being probably suggested by the long hairy pedicels, which in their airy gracefulness almost hide the foliage and render the plant exceedingly ornamental.

An Insect Pest.—During the height of the Colorado Beetle scare, a gardener in lodgings was puzzled to know how his lard had disappeared so quickly, and, on asking his landlady, got the following reply:—"You must know, Jarge, it's them'ere collar-lard-o beetles a robbin' on't."

The Ohio State Horticultural Society has issued a call for a national convention of State horticultural and kindred societies to meet at the Ebbitt House, Washington, on March 5th, to consider and recommend the more appropriate federal and state legislation for preventing the introduction or diffusion of noxious insects and fungi in the United States.—*Gardening (American).*

The Royal Gardeners' Orphan Fund.—A meeting of the executive committee was held on February 26th. W. Marshall, Esq. was again elected chairman of the committee. Amongst others the following special receipts were announced:—The Chislehurst Gardeners' Mutual Improvement Society Concert, £23 12s. 6d., a special vote of thanks being accorded; Messrs. Bunyard & Co., Maidstone, £5 5s.; Mr. O. Thomas, Frogmore, £2 2s.; Mr. T. Whillans, Blenheim, £2; Isle of Wight Horticultural Society, proceeds of lecture by Mr. H. J. Jones, £1 2s; Miss Noble, Henley, £1; J Kipling, proceeds of skating on Knebworth Lake, 11s. 7d., and several smaller sums. The result of the election was announced, whereby thirteen children are placed on the fund; and the respective guardians appointed, the mothers in each case undertaking the duties.

Curious Method of Feeding Apple Trees.—Under the heading of "Western New York Fruit Growers in Council," *American Gardening* records some experiments with fertilisers, and states that amongst other things, "though on first sight it may remind one of a humbug much mentioned a dozen years ago, it may yet open up new possibilities in feeding trees. A little above the surface of the ground a hole, 1½ to 2 inches through, is bored into the body of the tree and about two-thirds through, slanting downward at an angle of about 45 degrees. Through this opening the tree is fed wtth a substitute for plant sap, prepared by dissolving nitrogen, phosphoric acid, potash, iron, etc., in proper proportions. Dr. Caldwell says he can see no chemical obstacle to this plan, although there may be physiological reasons for its non-operation."

Propagation of the Sugar Cane.—Up till quite recently the Sugar Cane was propagated by cuttings or sets only, and, according to the *Morning Post*, it was only seven years ago that Professor Harrison, of Barbadoes, acting on advice from Kew, obtained plants by burying the flower heads of the ripened canes, thus proving that they contained the seed which had not before been found. A correspondent points out that in Bryan Edward's "West Indies,' of which he possesses a copy, published in 1794, it states that "the tops of canes sometimes shoot up in arrows, decorated at the top with a pinnacle, the plumes of which contain a whitish dust, or rather seed; yet these being sowed never vegetate, as I have heard in the West Indian Islands, a circumstance which may be adduced as a proof that the Sugar Cane is not the spontaneous production of this part of the world."

The Early Use of the Hop.—As far back as 1425 it is recorded that an evildoer was punished "for that he put a kind of unwholesome weed into his brewing called an Hopp."

The Boston Fern is a variety of Nephrolepis exaltata named bostoniensis. Its exact origin is not known, but it appears to have sprung into existence close to Boston, U.S.A. It has been variously and erroneously called N. paradisae, N. plumosa, N. reclinata, N. exaltata davallioides, and N. davallioides.

The name Horse Chesnut is supposed to bear reference to the fact that the nuts are ground into meal and used for feeding horses in Turkey. Some presume that this name was given on account of the leaf scars bearing a resemblance to the imprint of a horse's hoof, with the mark of the nail heads attaching the shoe to the hoof.

"Stories from Plant Life" formed the subject of a most interesting lecture delivered by Mr. E. Snelgrove, in the Nether Schoolroom at Sheffield. The lecturer showed the similarity existing between the lower orders of plants and animals, and explained the difficulty experienced in separating the one from the other. He then proceeded to deal with the economic values of plants showing how necessary they were for the supply of food, fuel, clothing, timber, etc. The lecture was illustrated throughout by limelight views, the apparatus being worked by Mr. W. Turner.

The Water Hyacinth (Pontederia).—This beautiful water weed has become a veritable nuisance in some of the hitherto navigable rivers of the South Atlantic and Gulf States of the United States, America. The weed was introduced within recent times, and now covers square miles of waterway with an interlaced matting of growth, and bringing steamers to a standstill. The U. S. Senate voted an appropriation of 10,000 dollars to enable the Secretary of War to try methods of exterminating the weed in the rivers.

The National Dahlia Society.—The annual report of the National Dahlia Society is before us. It is issued in book form, and besides the financial statement and balance sheet for 1896, with the committee's report for the same year includes a list of members and a schedule of the classes and prizes arranged for at the Grand Exhibition, which is fixed to take place at the Crystal Palace on September 3rd and 4th. The balance sheet shows an expenditure of £134 7s. 9d., of which £117 7s. 6d. has been given away in prizes. The balance remaining at the bankers is £8 10s. 4d., as against the balance at this time last year of £4 13s. 5d., so that although the society has accomplished a good deal of work the financial condition is improved. Mr. J. F. Hudson, B.A., Gunnersbury House, Acton, W., is the hon. secretary.

Transactions of the Scottish Horticultural Association.—The twentieth annual report of this association shows that it is in a more flourishing condition than ever. The membership roll numbered 595 in 1896, as compared with 493 in the previous year. The Chrysanthemum exhibition in the third week of November last was visited by over 40,000 people, and in every way was a record one. The number of entries was 913, being 70 in advance of the previous year. The handsome prize offered by the Corporation of Edinburgh was taken by Mr. J. W. M'Hattie, gardener to His Grace the Duke of Wellington, Strathfieldsaye. The monthly meetings of the association have become more popular with members, so that the attendances are good. The syllabus for session 1897 gives a list of papers to be read by various gentlemen during the year, and announces the annual general meeting on January 11th, 1898. The The pamphlet also gives extracts of the papers read during 1896, together with the proceedings transacted at each meeting. Amongst others we note papers on "Points in Judging Vegetables," by Mr. M. Temple, Carron House, Falkirk; "The Daffodil," by Mr. R. J. Shillington, Valleyfield, Penicuik; "Fungi," by Mr. D. M'Intyre, Royal Botanic Gardens, Edinburgh; "Plant Structures," by Mr. J. M'Intyre, Woodside, Darlington; "Review of Scottish Horticulture," by Mr. Robertson Munro, Langside House, Glasgow; and "Evolution and Plant Life," by Mr. S. Johnstone, Kirkby Mallory Hall, Hinckley, Leicester.

The Ill-mannered House Sparrow again. — The house sparrow is a deadly enemy of the useful insect-destroying martin, and never loses an opportunity of appropriating its nest.

Thirty tons of Flowers were despatched from Scilly via Penzance for the London and others markets on the 23rd ult. This is the largest consignment which the Scilly people have yet turned out at one time.

Grafting of Potatos.—Continental experimenters have been making some interesting trials in the grafting of the Potatos named Marjolin and Richter's Imperator. The trials resulted in hastening the earliness of the former and augmenting the produce of the latter. The experimenters were M. Edmond Lefort, secretary of the Meaux Horticultural Society, and M. Aimé Girard, respectively.

Asphalte and Trees.—Since Broadway, Providence, U.S.A., has been paved with asphalte the trees that are growing on either side of the street have commenced to go back, indeed, some of them are dying, if not already dead. This is doubtless due to the fact that the asphalte on the road bed and the concrete on the sidewalk deprive the trees of the necessary moisture. In dry summers the trees in the London streets would suffer in the same way did they not receive special waterings. The Providence people must follow this example if they wish to preserve to their town the beauty of the trees.

Technical Education.—On the evening of Tuesday, February 9th, at a meeting of the Young Men's Christian and Literary Association, Cookstown, Ireland, Mr. H. L. Glasgow gave a paper on the report of the Recess Committee upon the above subject. While he approved of the main objects aimed at, he condemned the system of prizes and bounties, a crop not worth growing for its own sake not being worthy of a prize. His opinion was that the whole theory of technical education, so far as it means instruction in handicrafts was a State interference with workers, expensive and ineffectual, whilst the universal teaching of drawing was of service, as tending to educate the eye of even the so-called unskilled farm labourer. In conclusion, he insisted on the immense benefit to the public at large of the technical Press and pointed to the weekly Press of Ireland as being the best and cheapest means of interesting the public.

National Amateur Gardeners' Association.—The annual report of this association has been printed, and shows that the association is in a prosperous condition, with ever increasing duties. The monthly meetings used to be held at the Memorial Hall, Farringdon Street, but they have been transferred to more commodious and cheaper quarters at Winchester House, Old Broad Street, E.C, where the space allows of the exhibits to be better displayed. During the past year 143 new members were elected, besides a number who rejoined after allowing their membership to lapse, so that the total membership now stands at 528. A library has been formed for lending out books to members, and its value is now reckoned at £20. The post of secretary is honorary, and though there was an assistant, the duties had so increased that they resigned; five honorary secretaries were appointed in their place to undertake the work in several different departments. Mr. Leonard Brown, F.R.H.S., The Cottage, Seven Arches, Brentwood, Essex, is the honorary general secretary. At the monthly meetings, a paper on some gardening topic is read. Exhibitions of plants and flowers are held at the same time, and competitions encouraged by the offering of prizes. Numerous special prizes are also offered and well competed for. There are Saturday afternoon visits to gardens and nurseries of note within reachable distances from London, and these are generally well patronised and enjoyed by the members, when the weather is favourable. The second annual conversazione was held on the 7th of July last, and the annual dinner on December 16th, both being well attended. The financial statement shows a balance in hand notwithstanding the large arrears of subscriptions at the time of publishing the report. Points are given for various exhibits during the year, and a silver medal is offered by the association to the member who gains the largest number of points during the year. Silver medals are also offered for various specified exhibits; and bronze medals in some cases as second prizes.

THE AMARYLLIS.

BEFORE these remarks are in print most growers of these valuable bulbs will have started them, by repotting or top dressing, and placing them in a warm house and giving them a little bottom-heat, the latter being a great assistance to them, until they come into flower (at any rate) or longer, if possible. What prompts me to write about them mostly is how seldom do we find them flowering in our houses during November and December, a time when none will deny they would be of very great service from a decorative point of view. Nevertheless, it is a very simple matter to have them in flower in the months mentioned above. Of course, the bulbs must be of flowering size.

We will presume that the general batch of bulbs has been overhauled early in January (the month generally advocated by one of our noted growers for some few years past). These plants are generally kept growing and well attended to until early in August, when the supply of water is gradually lessened, and eventually withheld altogether when the foliage shows signs of the bulb having done growing for that season. It is by starting a batch of those which look most promising a month earlier than usually done, for two seasons, which would make it early in November, next autumn twelve months. So treated, those, or the majority of them should be in flower before, and quite by, Christmas. What finer or bolder subjects can you have than these noble flowers for home or church decoration to mix with that always required Lily, Richardia africana, at this festive season, on the plant or in a cut state? I had a few in flower by the end of October, and have not been without a greater or less number since that date. I start a few at a time at short intervals, which is more useful than having a quantity in bloom all at one time, unless you have a special object in view, and require a good show at a given date.

Some of my strongest bulbs have thrown up two spikes, having three and five flowers respectively, but usually one spike is a week or ten days in advance of the other. Mine are grown with the Cucumbers and Melons in a temperature very little below 70° at night—too warm some will say, no doubt, but this is the only available place I have that commands bottom heat, and am well satisfied with the results; and that is everything. I do not make a point of repotting every bulb each year; I have them knocked out of their pots and examined, and if the roots are not too thickly packed, or crowding too much I let them stand over until another year with a top dressing. These, I may say, are more liberally fed with a stimulant than the newly potted bulbs. The compost I use is three parts loam to one of peat and leaf soil, with plenty of river sand and a layer of soot over the drainage.—*J. Mayne.*

PEOPLE I HAVE MET.

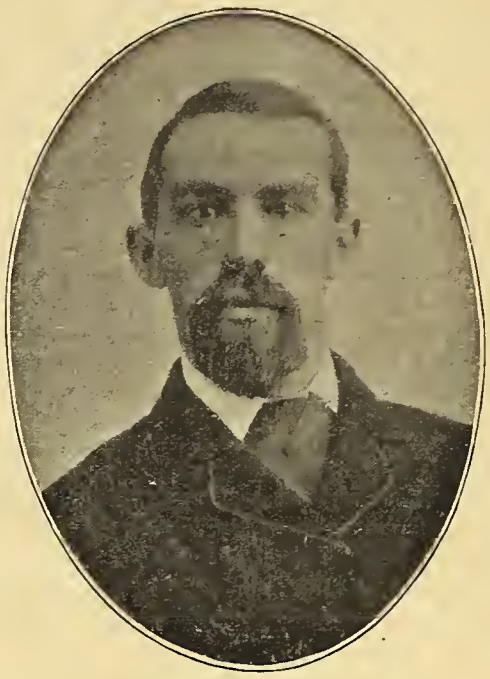
MR OLIVER PILLING.

A CHAMPION Yorkshire cottage gardener and vegetable exhibitor, Mr. Oliver Pilling, Elland, is indeed a household word amongst the gardening paternity, and at many horticultural exhibitions in the districts of the West Riding, Yorkshire. Nor is there anyone more to be feared by intending competitors in the cottage classes. No wonder; for there needs be some worthy, spirited opponents to tackle and stage against him. They will have to be vegetable "Rollands" to outdo an "Oliver" in the many splendid exhibits he invariably puts up.

No one, who has not had the opportunity of viewing, or criticising his trays, single dishes, and productions, would realise what can be shown and done under crippled and adverse circumstances, wherein the artisans of our manufacturing towns and centres labour. Often I have stood aghast, either in the capacity of a judge or "curating," at the energy, perseverance, and indomitable pluck shown, with such marked results.

It was not until the year 1890 Mr. Pilling determined to compete in another way, viz., for the Messrs. Carters' yearly cash prizes. He has now so far taken the premier honours for seven consecutive seasons, with the following results:—1890, 119 prizes; 1891, 143 prizes; 1892, 197 prizes; 1893, 134 prizes; 1894, 124 prizes; 1895, 207 prizes; and 1896, 231 prizes, respectively; or a grand total of 1,155. Such a record is well worthy of the highest emulation.

What a delight it is to visit the allotment gardens at Elland, during the summer's eve or morn, when all is "a glowing and a blowing" with animation and industry, to have a chat with the workers, and may be give, ay, and take a "wrinkle" from them, and be none the worse for it. "Ah!" remarked an allotment holder, "Oliver be up soin, a morn, afore



MR. OLIVER PILLING.

he goas to his wark and lat' at neet, when 'e's left off wark; alus in't garding. But I watch 'im; it's 'is waistcoit pockit mun, wher' secreets is." Well, I retorted, there may be something in that; but it appears to me to be as much in the head and hands.

"Waistcoat pocket" certainly was a poser to me, for I really suspected there were secrets of decomposition about when sniffing the air. "Ah," says my interpolator, giving me a nudge, "there you be, that's claret o'loime—fine thing for blanching Celery, that is, just give a slight sprinkling of it on the surface of the soil, mind, not too much."

I was perfectly aware that chloride of lime was an excellent ingredient for destroying algae, slime, and chlorophyll, but confessed I did not know its usefulness for blanching Celery.

However, that may be, Mr. Pilling's chief forte is Celery, Peas, and Cucumbers. The last named are splendid examples of cultural skill for length, body, symmetry, and evenness in shape, are perfect models, and locally termed "Pilling's variety."—*B. Lockwood, Lindley.*

Gleanings from the World of Science.

Wren's Nest in the Body of a Rook.—At a meeting of the Linnean Society of London, on February 18th, Dr. D. H. Scott, F.R.S., vice-president, in the chair, Mr. J. E. Harting exhibited under a glass case the nest of a wren built of moss in the dried body of a rook which had been hung up as a scare-crow in Gloucestershire. Similar instances of the kind had been recorded (Essex Nat. ii. 205 & iii. 25). He called to mind the nest of a swallow in the dead body of an owl mentioned by Gilbert White, and referred to other cases which had been collected by a former president of the society (Bishop Stanley, Hist. Birds). For instances of nests of the hoopoe placed in the desiccated bodies of unburied men, he referred to the experience of Pallas in Russia, and of Swinhoe in China.

Morphology and Anatomy of Water Lilies.—At the same meeting as the above, on behalf of Mr. D. T. Gwynne Vaughan, Dr. D. H. Scott gave the substance of a paper on the Morphology and Anatomy of certain Nymphaeaceae. Dealing first with the embryonic leaves, he showed by the aid of lantern-slides a series of transitional forms between the earliest leaf, which is acicular, and those of the mature plant. As regards the vascular system, the whole central region of the rhizome in Victoria regia was shown to be permeated by a number of separate bundles irregularly anastomosing; the more peripheral bundles appearing to be arranged in a definite manner, forming a limiting zone, the outermost phloem-strands of which not not run in a vertical but in an obliquely horizontal direction. In Nymphaea and other genera, the vascular system is not limited by such a peripheral zone. Nothing corresponding to a plerome could be distinguished in the apex of the mature rhizome of Nymphaea or of the floating shoots of Cabomba aquatica. In those species of Victoria, Nymphaea, and Nuphar which were examined, and also in Cabomba aquatica and Nelumbium speciosum, the adventitious roots do not arise indiscriminately upon the vascular bundles scattered in the ground-tissue of the rhizome, but are borne upon some which appear to be specially set apart for that purpose, and form a structure essentially similar to a stele, which reaches the greatest perfection in Victoria regia. In species of Nymphaea which produce many roots at each leaf-base the root-bearing stele is perfectly constituted, but in others, and in Nuphar, the vascular bundles are few in number, and are not arranged with sufficient regularity to constitute a stele, although they bear exclusively the adventitious roots. In Nelumbium speciosum the seedling was shown to be remarkable on account of the complete abortion of the primary root, and also on account of the complexity exhibited by the vascular system in the earliest or epicotyledonary internode. The rhizomes of Nymphaea flava and N. tuberosa bear a number of small tubers on stalks or stolons, of varying length, wherein the vascular system exhibits a polystelic arrangement, the bundles are grouped around three to five different centres to form so many steles consisting of three or four bundles each. When the tubers which are borne at the ends of these primary stolons germinate, they give rise to a number of narrow secondary stolons, which in turn produce new rhizomes at their extremities. On these and other points of interest, as demonstrated by Dr. Scott, a discussion took place in which Messrs. C. B. Clarke, A. W. Bennett, G. Murray, and Prof. J. B Farmer took part; Dr. Scott replying to the criticisms.

Adhesive discs of Ercilla.—Mr. J. H. Burrage read a paper on the adhesive discs of Ercilla spicata, Moq. He showed, with the aid of lantern-slides, that the adhesive organs were developed endogenously immediately above the axils of the leaves, and that each was made up of a mass of parenchyma with a central plate of tracheids in connection with the bundles of the stem at the base of the disc. It appeared also that hairs which force their way into the crevices of the support are formed from a special layer of columnar cells beneath the epidermis, resulting in the exfoliation of the latter. After a time the walls of the cells in the external layers of the discs become suberized, a periderm being eventually formed from a definite cambium just outside the vascular plate. It was further shown that while absolute contact was necessary for complete development, discs of various sizes might occur some distance from the support, possibly stimulated to growth by a moist environment. It was found that a few discs gave rise to small roots, and as the walls of the cortical cells were invariably suberized, they could not act in a normal manner. While there was no evidence to show that they were anything but climbing organs, a comparison with parasitic suckers, such as those of Cuscuta, suggested the possibility that the discs were not far removed from acting parasitically. The paper was criticised by Prof. Farmer and Dr. D. H. Scott.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Dendrobium rubens.—This beautiful hybrid was raised from D. leechianum, itself a hybrid closely allied to the well-known D. Ainsworthii, crossed with the pollen of D. nobile nobilius. As might have been expected, it bears a close resemblance to the seed parent, but more, in fact, than the other parent would warrant, considering its rich colouration. It seems, however, that D. Ainsworthii and D. leechianum, both strongly influence the character of the progeny. D. rubens has white sepals and petals, tipped, and more distinctly flushed with purple than

its allies. The lip also has the characteristic blotch of D. leechianum. It would seem then that D. nobile nobilius is chiefly responsible for the extra purple shading of the sepals and petals. The hybrid was effected by Mr. James Cypher, Cheltenham, and flowered in 1893, probably for the first time. It flowered quite recently, however, in the collection of T. McMeekin, Esq., Falkland Park, South Norwood Hill.

A fine Odontoglossum crispum.—A splendid variety of this popular species turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 26th ult., and caused quite a sensation amongst the buyers. The flowers, of which there were twelve on the raceme, measured 5 in. across each way; the sepals and petals were pure white, and the latter measured 2½ in. in length, by 1⅜ in. in width. The lip was white, tinted with lemon yellow, and having four to five small spots in the centre; it was 1¾ in. long and 1 in. wide. The piece consisted of seven pseudobulbs in fine condition. It was finally knocked down to H. T. Pitt, Esq., Rosslyn, Stamford Hill, for thirty-one guineas. A piece of the largest-flowered Odontoglossum excellens went for five guineas; and O. crispum guttatum fetched eleven guineas. Coelogyne cristata alba was bought for six-and-a-half guineas. The rather uncommon Dendrobium anosmum leucopterum fetched six-and-a-half guineas; and D. heterocarpum phillipinense was knocked down for £2. This variety, curiously enough, is scentless; the flowers are slightly paler than those of the type, and freely produced in clusters of three to four.

Dendrobium nobile sanderianum. — This handsome variety is generally admitted to come nearest to the well-known D. nobile nobilius in the richness of its colouring. The sepals and petals are of a rich purple almost to the base, which is considerably paler. The flowers differ considerably from the last named in form, being shorter and broader in every part, and therefore rounder as a whole. The lip is particularly noticeable in this respect, the front portion being very broad and rounded, while the blotch is large and rich crimson-purple in hue. It flowered recently in the collection of T. McMeekin, Esq., Falkland Park, South Norwood Hill, under the care of Mr. A. Wright.

FLORISTS' FLOWERS AT EASTWELL PARK, ASHFORD.

At the present time there is a grand display of Primulas at Eastwell Park. A large span-roof house is devoted entirely to about five hundred plants beautifully grown, and most profusely flowered, many of the plants being over 2ft. through and throwing up grand spikes of flower well above the foliage, forming beautiful pyramids of glorious flowers. The following varieties were most conspicuous:—Sutton's Giant White, both plain leaved and fern-leaved; Giant Pink, Giant Crimson, Pearl, Sutton's Reading Scarlet, and Reading Blue, all represented in many dozens of well-grown plants beautifully arranged. The charming and varied colours contrast splendidly and produce a beautiful effect.

Cinerarias are equally well done. A similar house contains between 200 and 300 well-grown specimens, many being 3 ft. through and 2 ft. high, well branched, with magnificent foliage, and forming perfect pyramids of foliage and flower spikes, just opening their bright coloured flowers. They will shortly be a grand sight, the strain being Sutton's Superb, and rightly named too; for those in flower are simply magnificent.

Calceolarias occupy a third house, there being about 300 plants, many being over 2 ft. through, with fine, strong, well developed foliage. They are of good, free branching habit, and of a splendid strain, being Sutton's Superb, which is so well known and greatly in demand. These will be a grand sight ere long. Mr. H. Walters, the gardener, is to be congratulated upon his success, for a better lot of plants it would be impossible to find.—*Rusticus.*

THE FLOWER GARDEN.

It is really wonderful to see the change that has come over the face of nature since the fine weather that started with the third week in February. At the time of writing the buds on many subjects are on the point of bursting. Forsythias are coming into flower, and Crocuses, Snowdrops, and Chionodoxas are starring the borders and Alpine garden. This hastening of things generally means that time must be taken by the forelock; otherwise it will be impossible to keep up with the work.

The Grass is needing special care. Seldom, indeed, has it looked so green at this season as it does now, and the mowing machine will soon have to be started going again. We do not advise starting to mow too early, however, for a little freedom, as it were, will do the grass good at this season, and will help to strengthen it, especially upon tennis courts, bowling greens, or cricket grounds, where it is necessary that the turf should be close and tough. Rolling and cutting play a most important part in keeping a lawn in good condition, but some attention should also be paid to the question of manuring. Old established lawns particularly benefit greatly by an occasional dressing. A light sprinkle of bone meal, and wood ashes will often work wonders. This should be worked in among the roots of the grass by means of a bush harrow, and a good rolling given immediately afterwards. The effects will become evident soon after the first shower. Soot also is an admirable top-dressing. Only a light dusting should be given, and that only in showery weather, but if this idea is followed out at intervals of about a fortnight a great deal of improvement will be registered.

Planting Carnations.—It is a great mistake to keep border Carnations cooped up in small pots until late in the month, for the starving that they are thus called upon to undergo serves no good end. Accordingly, preparations must be set on foot for getting them out into their flowering quarters within the course of the next week. The ground, which should have been manured and deeply dug last autumn, may now be forked neatly over previous to planting. It is an excellent plan to plant in beds about 4 ft. wide with alleys between them. This admits of the necessary attentions being given throughout the season without trampling all over the ground. Place the rows a foot apart. Each bed will then contain five rows, while about a foot may also be allowed between the plants in the rows. In planting take care not to bury the plants too deeply, and follow up with a good watering, which should be repeated at intervals if the weather keep dry, so as to enable the plants to get a good hold of the soil speedily.

Pruning Climbers.—Push on the pruning and nailing of these with all possible speed as was advised in the last calendar. In the southern counties this work should all be finished by not later than the end of the second week in this month.

Ivy.—In order to keep Ivy upon walls within proper bounds it must receive a trimming once a year. The present is a good time to do this, as the stumps will very soon be green again with young leaves. An ordinary reaping hook is the handiest tool to use for the purpose. Cut back fairly close to the old stems, and thus get rid of a lot of dust and rubbish—the accumulations of a twelvemonth. As a matter of justice to the men who have to do the job a quiet day should be chosen for, obvious reasons.

Roses.—Like other things these are exceptionally forward, and their pruning must be seen to at once. In dealing with the wall trees do not lay in too much wood. First of all cut out all dead and weakly wood, then make a selection of the cleanest and best ripened growths to remain, cutting the rest clean out. The tops of the shoots left must also be shortened a little, inasmuch as they are always weak and badly ripened. Lateral growths should be spurred close back.

Hybrid Perpetual Standards.—The idea here is to obtain a shapely and evenly balanced head, and to this end all growths that cross each other must be cut out, also any that are observed to be too gross, as the latter if left would monopolise much of the strength of the tree, and tend to produce a one-sided and irregular head. In shortening cut back to within from four to eight eyes, according to the variety being dealt with, whether a vigorous or comparatively weak grower. Young plants should be cut down to within about four eyes of the point at which the bud was inserted.

Tea Varieties.—These must be left until the last. Being of weaker growth they do not need severe pruning. A little thinning of the growths, and a slight shortening is usually all that they require.—*A. S. G.*

FRUIT UNDER GLASS.

Pot Vines.—While the berries are stoning but little advance will be apparent, but the temperatures must be kept steady until stoning is completed, and the second swelling begins. Then an increase of 2° may be given in the night temperature, with a proportionate rise by day.

Vines in Flower will need a dryer atmosphere than has been given hitherto, in order to aid the dispersal of the pollen. A gentle tap may be given the rods sometime about the middle of the day. Some cultivators give a very high temperature at this point under the mistaken idea that it is necessary to insure the fertilization of the flowers. This is proved to be erroneous by the fact that Grapes on outside walls set their fruit readily enough at a lower temperature. The dry atmosphere is the important part of the programme. The temperature should not fall below 60° Fahr. by night, however, as this is necessary to carry out forcing properly.

Watering the Borders is becoming each day of more importance as the strain of fruit and foliage upon the Vines becomes greater. It would be impossible to lay down a hard and fast rule with regard to the frequency of waterings. This is a matter which the cultivator must settle for himself. Borders are constructed so differently, both as to gross depth and amount of drainage given, that it follows as a matter of course that the exhaustion of the water will vary likewise. For fairly well drained borders containing vigorous Vines, one good soaking every three weeks is not a whit too much. If the border is very shallow more water will be required, and so on. The only thing upon which it is possible to dogmatise is that whenever water is applied it should be in sufficient quantities to soak the whole of the border. All water given must be at nearly the same temperature as the mean of the house, and none should be given colder than 60°, for a lot of cold water at the roots at this time of the year means a decided check to the plants.

Cherries.—As soon as the fruit is well set the syringe may be started to work in the mornings. A good washing should be given by its aid at first to clear off the old flowers. Attend to the stopping of the shoots before they have wasted the energy of the tree by growing too long, and keep a smart look out for the appearance of black fly, which usually comes upon the scene about this stage of growth. The temperature may stand at 50° by night, with a maximum rise of 10° on bright days. Air should be given when the thermometer shows 55°

Later Houses, the occupants of which have been allowed to come along gradually, and of their own accord, are just now in flower. Here the work of pollenising must be carried on regularly each day. As with the Peaches, a rabbit's tail fastened on the end of a light bamboo is the handiest tool. The operation should be commenced about 12 noon, as at that time the pollen is most likely to be dry, and easily dispersed. Touch the flowers lightly, as bruising the reproductory organs is the surest way to cause the flowers to fall without fulfilling their mission. Do not coddle in any way. Air freely, but avoid draughts.

Melons.—A succession house must be planted without delay. This should be prepared in the same way as was the first, viz., by a thorough cleansing. The great point is to have the house ready for the plants before they get pot bound. Once the roots have reached the sides of the pots they should not be allowed to stay in those pots any longer.

Early House.—The late bright weather has been all in the favour of the plants, and they are pushing away strongly. The setting of the female flowers must receive the closest attention. If earliness is the principal object the first female flowers that open should be pollenised. For exhibition purposes one or two fruits to a plant are quite enough, but fruits of such a size are of comparatively little value for the ordinary establishment. A fair number of medium-sized fruits is usually the mark to be aimed at. The temperature must not be suffered to decline below 65° by night, with a 10° rise by day. Air must be given cautiously, and for the next two or three weeks the house should be shut up at 2 p.m., when a good syringing should be given. The use of the syringe not only keeps the atmosphere moist and kindly, but it tends to keep down insect pests, particularly red spider, which prey upon the Melon. —*A. S. G.*

HINTS FOR AMATEURS.

THE month of March is one of the busiest in the whole of the year with regard to the vegetable garden, for there are so many things to be done in this department at this time, and the days are all too short for the purpose, certainly too short for the amateur gardener, who has to look to his garden after the regular business of the day has been attended to. As the month creeps on the evenings will get longer, certainly, but time will have been lost in waiting for them. Throughout the greater part of February the ground was very wet from recent rains, and in anything but a fit state for working. The drying winds which we experienced towards the end of that month, however, worked wonders, and at the time of writing it is in capital condition for getting about on.

Onions are very rich feeders, and it is astonishing to what a depth the roots will penetrate in well-cultivated soil. They also abhor wet stagnant soils, and it is useless to expect good sound bulbs that will ripen well and keep well from such a position. Therefore good drainage and a thorough tillage are both necessary to ensure the best results. Land that it is proposed to devote to Onions this year should have been roughly thrown up at the commencement of the winter. This is generally in fit condition to be levelled about the third week in February. A dressing of soot, woodashes, or a mixture of both should then be given, forking it well in. The lumps will not require much breaking up, stress of weather will have saved the gardener that bother, and the largest lumps will crumble to pieces at the mere touch of the digging fork.

Time of Sowing.—It would be impossible to lay down a hard and fast rule with regard to this. Localities differ, soils differ, and the weather can never be trusted to come twice alike, more's the pity. Thus on a soil that is inclined to be heavy, sowing may be deferred for a week or two later than it would be on lighter soils. This is often of necessity, for the heavy land is longer before it is in a fit condition for working. March usually brings us a spell of winter, and this very often when February has been a mild and open month. Seed is far better out of the ground when snow and frost reign, for a protracted spell of such conditions greatly endanges its life. Still, March is the season for sowing, and the sooner in the month the better, provided that the weather is at all promising.

Firming the Soil.—This is a very important part of the programme, for good bulbs will not be formed unless the ground is solid. Before proceeding to tread or roll the ground, it must be carefully levelled. Then it should be gone over, carefully treading each square inch. Naturally in such a case the man with big feet has a great advantage, so such a one need not fear that he will be of no use in life, since he can at least be turned to good account for treading an Onion bed. The rake must next be brought into play to level the surface, and then the drills may be drawn. The latter should be shallow, otherwise there will be a heavy percentage of "thick necks" among the crop. The drills should also be uniform in depth, so that the seed may all come through about the same time. About 1 ft. should be allowed between the drills, as this will give facilities for weeding, thinning, etc.

The seed should be sown rather thinly. Not a few cultivators adopt the plan of mixing a little Cos Lettuce seed with the Onions. This is not at all a bad idea, as the Lettuces are fit for use before the Onions get any great size, but we would give a caution to amateurs against carrying this idea to the extreme. A Lettuce at intervals of 3 ft. or 4 ft. along the lines does no harm to the Onions, but if allowed to be present in greater quantities it would make the Onions rather straggling, as pulling up the stumps would loosen the soil too much.

After sowing, the drills must be filled up, raking the soil carefully over, and the treading process gone over once more, finally leaving the surface of the soil smooth and even as rake and roller can make it.

Varieties.—The greatest difficulty to the amateur will be one of selection, for there are so many varieties from which to pick and choose. Apart from the question of flavour and colour which will influence the choice primarily, the amateur must find out by practical experience what varieties do well in his particular locality, and when he has hit upon a good thing, he should stick to it. Two or three sorts may well be grown, one at least of which should be a variety that will keep until the end of the season. Of this section there is nothing to beat James' Keeping. The bulbs are of medium size, very firm, and of great weight. The flavour is stronger than most. Veitch's Main Crop is excellent for ordinary use. The bulbs possess great depth, and are very symmetrical in shape. They are of medium size, if grown in the ordinary way, although they can be grown very large if special attentions are given. In many places, especially amongst cottagers, the old Reading Onion is held in great esteem. The bulbs are large, rather flattened, and very mild in flavour. This variety is good for early use, but does not keep very well. Sutton's Improved Reading, on the other hand, is an excellent keeper and a distinct advance on the old form. Of the newer varieties, Sutton's A. 1., which was sent out by the Reading firm in 1892, and has received the high cultural qualification of XXX in the trials at Chiswick, as well as a First-class Certificate from the Royal Horticultural Society, is well worth growing. The bulbs are of semi-globular form, grow to a great size and weight, and keep remarkably well.

Early Carrots.—These are in great demand, and whilst even the roots are exceedingly small they are largely used for flavouring soups, and when they get a little larger as a vegetable cooked whole. A sowing should be made as soon as possible for providing an early supply. Choose a south border, sheltered at the back, if possible, by a wall. Such a position is necessary, for Carrot seed will not germinate if the temperature of the soil keeps low. Break the ground up nicely, and level it previous to sowing. The drills should be drawn at right angles to the edge of the border and about 10 in. of space may be allowed between them. Early Nantes is a very reliable and early stump rooted variety with medium-sized roots that are very sweet in flavour, and have but a very small core. It will supply all that is necessary until the long-rooted main crop varieties of the Intermediate type are ready for use; indeed, if a good plot of Early Nantes is sown, there will be no need at all to draw upon the main crop until the winter.

Seakale.—We have before alluded to the propagation of this useful vegetable in the columns of "Hints," and are led to make mention of it again, with a view to remind readers that the time is now here when it may be conducted. The roots which have been lifted for forcing purposes during the winter will have had all the side roots which are over the thickness of a slate pencil cut away. These thongs, as they are sometimes called, should have been laid in sand or soil to keep them from shrivelling. They may now be taken out and trimmed into cuttings. The cuttings should be from 4 in. to 5 in. in length—we do not care to have a greater length than this, or the cuttings are unwieldy. Make a straight cut across the top, and an oblique one at the bottom of the cutting. There will thus be no mistake when planting as to which is the top, and which the bottom. The soil is the next consideration. This must be deep and rich. If it has been recently trenched so much the better. A position under a north or east wall will do very well, as it will be cooler than places more exposed to the sun. The sets or cuttings should be planted 1 ft. apart in the rows, and the rows should be from 18 in. to 2 ft. distant from each other, the latter distance preferably, since it allows room for a vigorous growth on the part of the plants. If all goes well, good roots will be forthcoming for forcing next autumn.

Seakale Out-of-doors.—The crowns in permanent plantations that have not yet been forced, should be covered over at once with a little soil or a few leaves, or they will be starting into growth, and the produce will then be bitter, as no amount of blanching will then entirely eliminate the bitterness.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Bouvardias.—Please tell me what I am to do with my Bouvardias? They have been kept dry all through the winter. Will they need pruning? and if so when will be the time to do it.—*G. Lawes.*

Your plants will certainly require pruning. The growths should be spurred, *i.e.*, cut back, nearly to the last year's wood. Place the plants in a gentle heat and syringe them twice a day. Water may be given at the root in small quantities, but the plants must not be deluged in the way that is often done. As soon as they have started to break into growth they must be shaken out of the old soil and potted up afresh.

Acalypha musaica is propagated by cuttings, *Stove.* If the plants are leggy, take the tops off and insert them in small pots as cuttings. Put the old stumps into a brisk heat with plenty of atmospheric moisture, and you will very soon get plenty of cuttings. The best time of the year for the operation is now just coming on.

Potatos in Frame.—You must not coddle the Potatos as you have been doing, *Artus*, or you will not do much with them. Pull the lights completely off them on fine days. Cover up at night if it threatens to be cold, but take the covering off the first thing in the morning. The practice of sprinkling a little Radish seed broadcast over the surface of the bed is a good one, for the Radishes do not take much out of the soil, and they are fit for use long before the Potatos want the room. Any Radishes that are not eaten, however, should be pulled out and not allowed to grow like weeds among the Potatos.

Border Carnations.—*L.L.A.* complains of border Carnations struck from layers last year looking sickly and yellow, and asks for a reason. This is difficult to give with the information in our possession as to the exact condition under which the plants are placed. Are they pot-bound? have they had sufficient water? is there any green fly amongst them? Either of these conditions would be detrimental to the health of the plants. Write again.

Protecting Apricots.—I have taken possession of a house and garden during the past year, and find that there is an Apricot tree on one of the walls facing south. The buds are very forward, and the tree will very soon be in full bloom. How am I to protect it from possible frost?—*C. Wilson.*

The best plan is to have a sheet of canvas or tiffany fixed to a rod and fastened to the top of the wall. Thus a blind will be obtained which may be let down and pulled up at pleasure. Place two light spars with their tops against the wall, and their bases about 18 in. from it. One of these spars should be placed at each end of the tree to keep the rod of the blind from injuring it as it is let down and pulled up. Another way of giving protection is to insert some branches of heather, or evergreens of any sort among the boughs of the Apricot. Even a slight covering of this kind will assist in throwing off a lot of frost.

Pruning outdoor Vines.—You must prune the Vines at once, *T., Surbiton*, nor delay a day longer. If you do there will be danger of their bleeding. Spur back to within a couple of buds of the base. Either a knife or sécateurs may be used—the latter are more speedy.

Bedding Lobelias.—*S.R.R.* has had the misfortune to lose his stock of bedding Lobelias, which have been carried off by damp. He wishes to know if seed sown now would produce plants that would bloom this season.

Certainly it would! but we should advise that no time be lost in getting the seed in. Place the seed-pans in a temperature of not less than 60° by night with a rise during the day. Germination will then be pretty rapid. The young seedlings must be pricked off into light sandy soil as soon as they are big enough to handle, and returned into the same place as they were taken out of to get a start. When they have got a good hold of the soil they may be removed into a cooler house. Plants raised from seed may not bloom quite so early as those raised from cuttings, but there is very little difference—so little, indeed, that not a few gardeners raise their plants for bedding from seed sown at the end of February in each year.

Border Carnations.—Is it any use taking cuttings of border Carnations now? If so, how would you

treat them? I did not layer the plants last summer, and want to increase them.—*Watercress.*

You will gain nothing by attempting to strike cuttings now, as even if they rooted they would not flower this year. Wait until July and layer as soon as the flowers are past their best. Cuttings may be struck at the same time if you desire it, or if there is no room to layer by reason of the plants being too thick. In such a case thin out the shoots by taking some to serve as cuttings, and thus make room to layer the rest.

Smut on Rose Leaves.—Can you tell me what the black smut on the leaf enclosed is, the cause of, and the cure for the same.—*Watercress.*

The smut is caused by the excrements of Aphis. Prevention is better than cure here, so you must fumigate to kill the Aphis before they have had a chance to disfigure the leaves thus. The only method of removing the smut now is to sponge the leaves, as the dirt is too firmly fixed to be moved by syringing. This, however, will be too much of a job if they are big plants. If they are small ones in pots it might be worth doing. You must use your own discretion in this matter.

Watercress as Manure.—I have a garden near to a Watercress bed. Last summer, when the bed was cleared out, a lot of the Watercress stalks were left. Are they of any use as a manure? and if so, what flowers and vegetables would they suit best.—*Watercress.*

The material in question should make a good manure, and would suit almost any kind of crops. Take care that it is well decomposed before you apply it to the soil.

CHRYSANTHEMUM MRS. GEO. RUNDLE.

The accompanying illustration has been prepared from a photograph placed at our disposal by a correspondent, who is also a Chrysanthemum grower. It represents a trained specimen which was exhibited at Dundee some years ago by a well-known grower. We do not consider it equal to the splendid specimens exhibited at the Jubilee Celebration of the National Chrysanthemum Society, in November last by Mr. D. Donald, gardener to J. G. Barclay, Esqr., of Leyton; but latitude and climate were more in favour of the southern grower. The farther north we go, the climate is cooler, and the growing season considerably shorter. The Chrysanthemum is a plant that cannot tolerate artificial hastening or forcing under glass; so that any advantage which a northern grower may gain, must be largely due to cultural skill. We have not been informed, but take it for granted that the specimen under notice has been grown from an individual plant. That has been a *sine qua non* with southern exhibitors for a great many years, although in the early days of Chrysanthemum growing the practice was sometimes adopted of putting more than one plant in a pot for big specimens. Great improvements in culture have, however, to our knowledge, been effected in the northern counties within the last few years.

Chrysanthemum Mrs. Geo. Rundle.

FORCING OF VEGETABLES.

(*Concluded from p. 410*).

Kidney Beans,

"These constitute another acceptable vegetable early in the year, but I find from experience that unless one has good, light and well heated houses, good results are not obtained by sowing much earlier than the New Year, and in a temperature of 60° to 65°, with a rise of 10° by sun heat. It will take about seven weeks to have them fit to gather from the time of sowing; 8-in. pots are the most suitable for the first few batches. Some sow as early as August, so as to carry on without any break after the plants in the open ground have ceased bearing, but during November and December, generally dark, dull months, the returns are not very satisfactory. I think the end of December, or early in January, is soon enough. A batch should be sown every three weeks or a month. Plenty of light is necessary for this vegetable, or the plants get drawn up very soon. They require to be kept fairly near the glass, and do well on shelves. The syringe must be constantly moved among them whenever the weather is favourable, if not they soon fall a prey to that horrid pest, red spider. A fairly light, though rich soil is necessary; loam, leaf soil, and a little manure from a spent mushroom bed, form a good compost. The pots should be filled to within 3 in. of the top, made fairly firm, and about ten seeds sown in each pot, and covered with 1½ in. of soil. If all the seeds come up, one can easily thin them out to six, which will be enough to leave. I generally pinch out the tops as soon as the first pair of proper leaves are formed, which causes them to throw up two growths. They will take a fair amount of water at this stage, in fact, they must never be too much on the dry side or spider will soon appear. As soon as they are from 4 in. to 6 in. high some twiggy shoots should be placed around them as a support. Old worn-out birch brooms are useful for this. When in flower they should be kept rather drier overhead, and a circulation of air is beneficial at this stage. As soon as they are set, some kind of manure should be given them two or three times a week. I find a little weak guano water, also diluted farmyard drainings, suit them very well. They should be well syringed morning and afternoons, when closing time arrives. The beans, as they become fit, should be gathered and tied up in small bundles, and their ends stood in water until you have enough for a dish.

Ten and twelve inch pots can be used after the month of February is past, as they do not dry up as fast as the smaller pots. Boxes, too, are often made use of for later crops, about 2 ft. 3 in. long, 9 in. or 10 in. wide, and the same in depth. These crops can be brought along in Peach houses, or the like, while a good many gardeners have to grow them in their vineries; but I must say I do not like them brought in here in case that foe of ours I have spoken of makes its appearance. Heated pits, similar to those I mentioned anent the Asparagus, make excellent places to grow them in when sown in rows 15 in. apart. A crop can also be hastened a few weeks by sowing in a frame, or cold pit, shutting up early in the afternoons, well syringing the plants

and matting up the frames at night. Ne Plus Ultra I find very good for forcing, and Canadian Wonder for the latest batches.

POTATOS.

"Tbese are forced in several ways. I find 9 in. and 12 in. pots suitable for a few early dishes. I place one tuber in the smaller pot and two in the larger one. Loamy soil, with a little borse droppings, makes a good compost. I start a batch early in January, and place them in an early Peach house at work. The tubers sbould have been previously prepared—that is, stood on their ends in a box witb a little leaf soil scattered among them, and placed in the house about ten days before. Tbese must be placed in tbeir pots when 2 in. of growtb has taken place. They must be given plenty of light, also air, when at all favourable, and I keep moving mine from house to house—Peach houses or vineries—as they are started, because they do not like too much heat. I leave room in the pots for an eartbing up, as it were, wben they get about 6 in. high. Frames placed on a botbed are very suitable, too, and most excellent crops can be grown here. A foot of soil sbould be placed in the frame, and the tubers planted 5 in. deep, 8 in. apart, and 10 in. from row to row. I also make a point of eartbing mine up with 3 in. of soil, when about 6 in. bigh. Tbis assists to keep the growths upright. Here they will take a fair amount of water wben in active growth, and the lights are drawn back altogether on very mild days, but placed on early in tbe afternoon and matted up each nigbt. Heated and unheated pits too, are useful for forwarding tbis ever-required vegetable. As I have already said, they must bave abundance of air as the season advances, and when water is necessary, it sbould have been warmed to about 60°. I ought to add tbat I only advocate tbe pot method for tbe very earliest dishes. Mine in the pits follow these, and are usually planted about January 20th. I find the Old Ashleaf, Veitcb's, Myatt's, Rivers' Ashleaf, Sharpe's Victor, and Early Puritan, good for forcing, but I prefer tbe first and last-named varieties.

CARROTS.

"This is another acceptable disb, and mucb appreciated when in a young state, and may be brougbt on much earlier than it is possible to have them outside, by making up a bed of leaves and placing a frame thereon. What they require is similar to Potatos, a gentle lasting heat, which fresh collected leaves will give. The frame should bave about 9 in. of soil which should be light and of a sandy nature, leaving space of 9 in. or 10 in. for tbe tops. The seed can be sown in drills 4 in. to 6 in. apart or broadcast. I adopt this last named plan, and it should not be sown too thickly, for, if it is, tbinning must be done very early as the plants soon get crowded. The frame can be kept closed until tbe seeds germinate, when a little air will be necessary whenever the weather will permit. Tbe lights can be drawn off altogether when mild and replaced about 3.30 in the afternoon. If brigbt, ligbtly syringe the bed, and then close up and replace the mats as long as cold weather lasts. I don't think there is mucb gained by sowing until the middle of January. Parisian Forcing or Sutton's Early Gem are suitable for tbis work.—*J. Mayne.*

A considerable amount of discussion followed the reading of this paper in whicb the gardeners present evinced a keen interest. Various experiences as to the methods adopted in the forcing of vegetables generally, but more particularly of those forming tbe subject of the above paper, were given in detail by different members. Amongst those who took part in the discussion were Mr. Slade (Poltimore Gardens), Mr. Weeks (Stoke House Gardens), Mr. G. B. Carlile, Mr. F. Anning, Mr. Rogers, and Mr. W. Mackay, of Exeter."

SCHIZOSTYLIS COCCINEA.

THIS plant has the merit of being perfectly hardy, but at the same time is never seen at its best if left to its own resources among other hardy herbaceous plants. Its month for flowering is December, and, when properly treated, it forms a most useful adjunct to the list of plants yielding a supply of flowers during the dull time of the year. It is an Iridaceous plant from the Cape, and when well grown reminds one of the Gladiolus. The colour of the flowers is very much like that of Linum grandiflorum. It may often be found, wbere neglected, just a mass of grassy foliage, with a few solitary puny flowers, whereas a good spike will be from 12 ins. to 15 ins. in height, with several expanded flowers and spikes, such as are most serviceable to intersperse with otber flowers, both on account of tbeir colour and distinctive appearance. Witb a little trouble good spikes may be readily obtained by those baving a stock to commence with. Our own practice has been to divide the last season's plants in the spring into separate crowns, and plant the stronger ones six inches apart in rich, light soil, where little attention beyond keeping clear of weeds and watering in dry weather will be required, and during September or early in October, lifting tbem and cramming as many into 48 or 32-pots as we could. This gives them time to make fresh roots before severe frost sets in. A cold pit or frame is most suited for the requirements of this most useful plant, wbicb wben in flower may be moved into the greenbouse or conservatory.—*W. B. G.*

MR. CHAMBERLAIN'S GARDEN.

Mr. Chamberlain bas certain garden preferences that are in agreement with those of Lord Bacon, who insists that "one part of the garden must be set aside as a wilderness." A considerable portion of the garden at Highury is wild and uncultivated, and consisting of dell and copse and stream; and it is this mixture of natural scenery and cultivated formal flower-garden tbat is the principal beauty of the place, and more alluring than the magnificent Orchid collection of which its owner is justly proud. But wbat a dazzling wealth of colour is presented by this collection of Orcbid blooms, and what astonisbing and almost intoxicating varieties of hue and tint! Here is a blossom, the Ada aurantiaca—so ricb and glowing and vivid that only the miraculous hand of Rubens could transfer it to canvas; here is another, comparable to nothing but the dying rays of tbe setting sun; and yet another, more lovely than eitber, the Cymbidium, whose delicate white flowers call up a vision of some air-bubble played upon by the most etbereal of moonbeams. The Orchid-bouses, of which there are fourteen, open out of a long corridor, adorned on one side with a show collection of Orchids, Azaleas, Cyclamen, Cinerarias, and Pelargoniums, eacb variety of wbich is kept separate and exquisitely arranged witb rare Ferns, or the foliage most in barmony with its character. Facing tbis magnificent pageant of blue, pink, mauve, and amber, there stretches the corridor wall and ceiling, clotbed with flowering climbing plants of every kind —Jasmine and Honeysuckle, Heliotropes, and Fuchsias, mingling their trailing foliage witb the elegant blue flower of tbe Plumbago plant and the regal scarlet clusters of the Tropaeolum. Tbis charming floral promenade can be lighted witb electricity, and on the occasion of balls and receptions, with its flowering roof and walls and many-coloured rainbow-like glassbouses, presents the appearance of a veritable fairyland.—From "Mr. Chamberlain's Garden," in the *English Illustrated Magazine* for March.

SUTTON'S FARMERS' YEAR-BOOK FOR 1897.

THIS well-known Farm Annual opens witb an article on "English Natural Grasses," written from tbe farmer's point of view, and dealing especially witb the agricultural value of the varions grasses and tbe proportions in which they should be used on diverse soils either for hay or grazing. Tbe merits of the different varieties are discussed in a popular way with the practical object of securing the highest return for the outlay in every instance. To remedy a defective seeding is so difficult and expensive tbat Messrs. Sutton's frank exposition of the case will be considered most opportune by those who contemplate laying down land to permanent grass.

Another article refers to tbe advantages of temporary pastures. The system of sbort term leys has often been advocated by the great Reading Firm, and the nortbern farmers have not been slow to avail themselves of its benefits, whicb include a large saving in tbe labour bill, a quick return for the initial outlay, beavier crops tban can be obtained from permanent grass, and tbe best possible preparation of the land for root and straw crops. In this connection tbe value of Lucerne and Sainfoin bas not been overlooked. It is scarcely necessary to add that on tbe wbole question of laying down land to grass Mr. Martin J. Sutton is a recognised authority.

One of the most striking features of tbe Farmers' Year-Book is the series of voluntary reports of astonishing crops grown by customers, and tbese reports are accompanied with convincing pbotographs of fields of Mangel, Swede, Cabbage and Carrot.

Perhaps the most original illustrations in the book are the six views of Cattle and Sheep feeding off fields of Sutton's Swedes in New Zealand. Tbe photograpbs were brought home by Mr. Martin Hubert Sutton, the eldest son of the senior partner, who during tbe past year has made a prolonged business tour in South Africa, New Zealand and Australia.

We will only add that the fund of information contained in the work is presented in an attractive form and is printed in clear and readable type.

ROYAL GARDENERS' ORPHAN FUND.

ANNUAL DINNER.

At tbe dinner held in tbe evening of tbe 19tb nlt. between twenty and thirty were present, Mr. Owen Thomas presiding. The Chairman's speech was a bappy one, and proved how tboroughly he had entered into the details of tbe charity, and how truly he bas tbe cause at heart. He said:—It only seems like yesterday wben we were celebrating the Jubilee year of Her Majesty's accession to the throne. It was on tbis occasion when gardeners, like other other loyal members of the community, were looking out for a way to give expression to their loyalty. It occurred to Mr. Penny, then of Sandringham, and Mr. Clayton, of Grimston, that the best way this expression could take would be by forming an institution to befriend tbe orpbans of gardeners, and I cannot but think that botb these gentlemen will always look back witb feelings of thankfulness for the inspiration that came to them to support the institution of tbis fund. At first the idea was met by many with misgivings, as being too great an undertaking to be successfully launched. However, there were a few bold spirits in those days, and the prospect was no sooner mentioned by the gardening press than it was taken up witb acclamation, not only by horticulturists but also by the garden-loving public, and the proud position the fund occupies to-day proves beyond doubt that a happier or a better suggestion could not bave been made.

So mucb for the reception of the Fund. What sball be said of its growth? Tbe excellent report in the hands of members will tell them much better than I can; but I may be allowed to say this, tbat nearly £5,000 bas been paid to destitute orphans of gardeners during the past nine years, besides a sum of £9,000 which has been invested for tbeir future benefit. This is a record to be proud of, and the management is to be congratulated. Tbis great success has been brought about in the first place, I think, by virtue of tbe merit of the Cbarity, Gardeners' Orpbans.

The English people have a garden, and tbey have opened their hearts and their pockets wide to help the objects of this charity. We know tbat our bappy and favoured country is full of benevolent and kindly feeling towards the weak and the destitute, but it is not everyone who bas the power or the happy faculty of being able to bring this good quality into active existence. Tbe Orphan Fund is happy in having tbose at its head who take an active personal and practical interest in its welfare. When it is said that at tbe head of tbe charity we bave the bonoured and much-loved name of H.R.H. the Princess of Wales, with His Grace tbe Duke of Bedford as president, our esteemed friend Mr. Marsball as chairman of tbe Executive Committee, with our old friend Mr. Barron as secretary, besides a working committee of gentlemen, everyone of whom is a well-known horticulturist, it is not to be wondered at tbe success wbich bas attended the establishment of the fund. We must not forget that tbe establishment of this institution has imposed a serious responsibility on the sboulders of those wbo are responsible for its management and maintenance.

To-day there have been added thirteen orpbans to tbe benefit of the fund, at an extra annual expenditure to the charity of £170. A better commemoration of Her Majesty's long reign no institution could possibly make, and in view of this greater responsibility greater income must be fortbcoming, or tbe

Fund will be in the same position as the orphans are now in—namely, with *No provision.* Gentlemen, if you will look down the list of orphan candidates for for election, you will find the melancholy words, *No provision, no provision,* repeated over and over again. To me these words express a feeling of utter despair and desolation as represented in the case of the widow and destitute orphans. It means to these not only an empty chair, but an empty cupboard, an empty grate, and often worse than all, an empty heart. The object of this charity is to help to ease the widow's burden, and to brighten the path of the orphan child. The wealthy lovers of gardens and gardening, as well as members of the horticultural trade, have come out nobly to help the garden charities, both this one and the older charity, in the welfare of which most of us are deeply interested.

It is with regret, and I say pained regret, that the fact must be stated that gardeners generally have not rallied round and identified themselves with the welfare of the garden charities as they ought. I do not know why; it is not from the want of kindly thoughts and feelings, I am quite sure, and I do not think it can be from the want of 5s. a year. Let each of those who does not subscribe answer for himself this eventful year in the best of all ways, by sending to Mr. Barron his subscription. What we want is for both the garden charities to become in reality national garden charities, to embrace the name of every gardener worthy of the name throughout the land, so that those who do not support the charity will be the exception rather than the rule, as at present. Gentlemen, we must greatly acknowledge the valuable and increased help given by our earnest and kind friends in the provinces, and on their continued valuable help must largely depend the future welfare of this charity.

But the greatest source of our strength as regards the future must, I think, lie with the rising generation of young gardeners. To make it easier for them to join the institution may I suggest, if your rules will permit of its being done, that you reduce the subscription to 2s. 6d. a year, and if this can be done I would ask every gardener who has the interest of the charity at heart to bring the subject before his young men, and I am sure a liberal response would be the result. This would open an easy door of entrance for the young, and once you secure his interest and sympathy you may depend upon it that in the great majority of instances he will prove a steadfast friend and supporter of the charity, and at the same time become a much better gardener.

It cannot be too well-known that this is a purely benevolent institution, and that no question is asked as to the nationality of the candidates, or of what religion their parents may have been. Neither are the orphans debarred from the benefits of the Fund if the fathers in their lifetime have neglected to support the institution. At the same time I cannot help saying that I would not give much for that man's love or care for his wife and children who refuses to do what he can whilst in health, on the funds of which those who are near and dear to him may be compelled to throw themselves through death or misfortune. Gentlemen, I ask you to drink to the "Continued Success and Prosperity of the Royal Gardeners' Orphan Fund."

SHOULD TURNIPS BE PROTECTED?

QUITE recently a professor lecturing on agricultural subjects was asked by one of his audience whether Turnips, which were mostly exposed above ground, were better or worse than those mostly covered by soil. He had never had this question put to him before, and it evidently had not occurred to him, for he was unable to answer the question. Possibly the professor thought it a matter of small importance either way, but I have a different opinion.

As to the question of the roots growing under the soil, I think it might be answered as an unprofitable speculation to attempt in practice. In loose soil the roots are often found largely buried, but such never attain a large size. From the standpoint of garden cultivation, this might answer well enough when the roots are intended for the kitchen; but for exhibition purposes the ground would have to be finely prepared to ensure shapely roots. In field cultivation, the roots would never attain sufficient size to give the desired weight of crop; for those Turnips which are freely exposed on all sides usually swell much better. The same applies to Mangel Wurzel, large roots of which are always a desirable feature. Garden Beet on the contrary is best of small size, and the more nearly the roots are covered by the soil the better.

There are two more points to be considered in the case of Turnips, and they would apply to roots grown in the garden for kitchen use, as well as to field crops for the feeding of stock. These points refer to the depth of the soil, and to the proper preservation of the roots in winter.

Where the soil is naturally shallow it would be advantageous to have the tuber or swollen portion of the root above soil, so that the proper roots would get all the benefit of the good soil and what it might contain in the way of plant food, whether naturally there or applied as manure. Very shapely roots can be obtained from light sandy soils, and if they are smaller than those grown on rich, deep soils, they contain more sugar proportionately to the watery tissue.

The preservation of Turnips in winter, as far as garden crops are concerned, would only apply to the late or winter sowings. In mild winters protection is little wanted; but when we get visitations of snow, cold east and north winds like what we have been getting for some weeks past, together with alternate freezing and thawing every few days, then the question of protection is an important one. Roots that are covered up in some way to prevent the injurious effect of this freezing and thawing, are always sweeter and better flavoured than those left exposed in the ground. Protection may be given in various ways, firstly by pulling them up in November and storing them in some shed or outhouse where they will be kept dry and the frost to a great extent warded off. The want of storage room often prevents this plan being adopted. Then the roots may be laid in heaps on the ground and thatched with straw or bracken; or what is simpler still, a thin layer of earth may be laid over then with a spade. This plan would keep the roots moist, and prevent rapid freezing and thawing in our changeable winter climate. Another plan still is to earth up the roots in autumn, after they have nearly finished growing, much in the same way as we do with growing Potatos in summer. The furrows would help the surface water to run off in winter.—*Devon.*

TOMATOS NEW AND OLD.

AFTER some years' experience in growing Tomatos, I have come to the conclusion that the varieties or names are legion, and I must say some of the so-called new ones are no better nor so good as many of the old ones. I have grown in my time a good many varieties, and will admit improvements have been made within the last forty-five years both in colour and shape; and as a rule these new varieties come pretty true to colour and shape. When, years ago, we only used to grow the old red variety in the open Tomatos were not often used. Then it became the fashion to grow them inside, gardeners took great interest in Tomatos, and a dish of good samples on a basket of vegetables had a very striking appearance, and told its part anywhere. The old Trophy was a great favourite in those days, although not very true to shape; but I have seen this grown and shown in splendid condition, smooth, round, and a splendid colour. I do not say all the fruits came true, but Trophy done well is hard to beat.

A few years ago I grew on the boards of a greenhouse, facing south, some Tomatos, such as Crimson Queen, Hackwood Park, Ham Green, Trophy, and Early Ruby, and a splendid crop I had. I well remember a gentleman, Mr. Simpson, a seedsman from London, making the remark "they are a grand lot, but why don't you grow Tennis Ball?" so the next season I had a change and grew Tennis Ball, Mayflower, Frenchman, Lady Bird, and Reading Perfection. These, to my mind, were all improvements on the old ones, but Early Ruby I shall stand by as one of the best to grow for general use. Hackwood Park and Ham Green are too coarse to my mind; and of the others, Tennis Ball, Mayflower, and Frenchman were the best.

Then the next season I introduced into a house Tennis Ball, Mayflower, Frenchman, Ladybird, Reading Perfection, Crimson Queen, Challenger, and Hathaway's, and in my opinion for general crop or for exhibition work nothing can be better than Tennis Ball, Mayflower, Crimson Queen, or Frenchman. They are all good setters, good in shape and colour, while Challenger is a splendid Tomato, a heavy cropper, and a good market variety. But for flavour, in my opinion, nothing beats Hathaway's Excelsior, although it is not quite such a heavy cropper as Challenger.

This last season I had another change and tried Chemin, and a fine Tomato it is, splendid in colour, early, prolific, and one that has none of those large, watery cells that we find in many of the coarser varieties. Duke of York is a very fine one too, but not so free setting as many others; and in my humble opinion nothing better nor so good as Trophy. It may be a little brighter in colour. I have also grown some of the beautiful yellow Tomatos, and I often wonder why more of these are not grown in private gardens, as many others whom I have asked to taste these beautiful yellow fruits, say they are as a rule more acid and a better blood purifier. Many doctors say they possess the best flavour. Sorts such as Golden Gage, Golden Nugget, and Golden Queen, I have grown.

Last season I had a trial of Frogmore Selected, and this proved to me a very free setting variety, very fruitful and useful; but, out of sixty plants I grew last year, I had only one that could be said to be anything like or after the style of the plants or fruit as represented in our leading catalogues. The reports from the committee of the Royal Horticultural Society say "the fruit is of medium size, bright in colour, smooth, and almost round, very firm and solid, with flesh of an unusual depth having very minute seed space, while the flavour is delicious." It is a most prolific and continuous cropper. To all this I agree, and I had one plant out of my lot that would answer this description. All the others set well and bore very well. The fruit was much larger, of very good flavour, with much heavier foliage; and the fruits, instead of being of nice round form, were all more or less corrugated; and I do not believe, truthfully speaking, there were three plants out of the whole anything like each other. Now I showed these to many people and they all said "What do you call this lot? there's not two alike." One gentleman, Mr. J. Cocks, spotted out the only one I considered to be anything like the stock should be. This one I had set store by; and I cut one fruit and gave him a taste, and he pronounced it grand. Therefore I am going to grow some more of that this season to see how it turns out. I shall also have some grown from the same packet of seed as last season, which came to me from a noted seed firm in a sealed packet, and printed Frogmore Selected. I have properly stated how it turned out with me, but this is the disappointment we are to expect when buying these new things so strongly recommended by the committee of the Royal Horticultural Society.

I feel justified in saying that many things require proper testing and proving, and to be seen growing side by side with other good standard varieties before they are pronounced better than the good old ones. This is not the case with Tomatos only, but with many other things as well, and especially in the fruit and vegetable department. We all well know that vast improvements have been made; but there are many things sent out and said to be improvements, or new, and after a year or two, they are lost sight of and old varieties taken in to grow again in their place. I am not making these remarks to condemn anyone's judgment or opinion, for I well know many men of good honest opinion who attend the R.H.S. meetings, and who, I do not think, would give their word wrongfully; but to see things shown as a dish and so on is very different to seeing them growing side by side with other varieties under the same treatment and skill. This, to my mind, would be the proper way to test these new vegetables and fruits.

I well know that many men who grow things for show, treat these show plants, whether rows of Peas, Beets, Onions, or any other thing they want for exhibition, with more trouble and care than the other rows, as a rule. Therefore, men who raise seedlings and bring them out new do all they can to show the public the plant, bloom, or fruit to the best advantage; but then what we want is to see these growing side by side and see the style of growth, habit, and flowering qualities. When people see a dish of Peas at a show they say "Oh, how splendid." But what we want to see next is the row where they

grew. Perhaps you may find a good row of Peas. I have known men grow only a few, just enough to obtain a dish for show, cutting plenty of others off, just that they might get plenty of pods to show, this being all they require. This is the same with Tomatos. If people thin out the fruits, well may they expect to get some fine samples and make a good dish. Therefore, if these things were put to the test, and say Jones has a splendid dish of Tomatos to-day before the committee. Yes; then let it be grown by some two or three practical men under just the same treatment with another sort which is thought as good as this noted seedling, and a prize be offered for the best dish of either, to be shown at a proper date, which may be fixed by the said committee. This would, in my opinion, bring out the true quality of these things, and the members of the committee would have a better chance of judging for themselves which was the better variety.—*J. L., P.*

INSECTS INJURIOUS TO PLANT LIFE.

The fortnightly meeting of Reading and District Gardeners' Mutual Improvement Association was held in the Club Room, British Workman, Reading, on Monday evening, when Mr. T. Neve presided over a very large attendance of members. After the usual business had been disposed of and five new members elected, Mr. P. H. Foulkes, B.Sc., Edin., of the staff of the University Extension College, Reading, gave an exceedingly interesting and practical lecture on "Insects injurious to Plant life."

Mr. Foulkes, in opening his subject, dealt with the great damage done annually by the various pests, and drew attention to the fact that the annual loss to the country runs into thousands of pounds sterling. In instancing some of the most noticeable pests, he quoted the Hop aphis as doing damage in one year to the extent of £500,000. Besides true insects there is a number of pests which do a great deal of damage, the most noticeable of which are the eelworm and red spider. Passing on to the distinguishing features of insect attack, he dwelt on the different stages of an insect's life, how in some cases the damage is done in the larvae or grub stage, in the mature stage, and in some cases insects are capable of doing damage in both stages.

Of the various kinds of attack there are those insects which attack the seeds, flowers, the seedling leaves, and the mature leaves; those which live on the roots and underground stems, and also those which live in the stems and boughs of trees, Reference was made to the conditions which are essential if the various stages of insect life are to be successfully passed, conditions which are just as much required as are those necessary for the germination of seeds. Of these, shelter, suitable food, and warmth are most requisite. The fact that insects are not so lowly organised as is generally believed, was shown by the statement of Linter, as to the presence of certain organs of scent of many insects, by means of which an insect can detect its food when a long distance off, hence insects often make their appearance on a field after the weeding and thinning of a crop, the bruising of the plants resulting in the operation causing them to give forth a smell, which no doubt attracts the insects.

The lecturer touched upon the resemblance of fungoid growths to the results of insect attack, and showed this more clearly by throwing on the screen photographs of Swedes which had been attacked by "finger and toe," and Swedes which had been attacked by the "Turnip Gall Weevil." The habits of insects as to appearance and time of feeding were also dwelt upon, as well as the manner in which an insect fed.

Passing on to the types of insects, an account of the life, history, and habits of the Winter Moth was first given. No insect is a better example than this one of the value of knowing the habits and characteristics of a pest, when adopting measures for prevention and remedy of attack. In this case it is known exactly when the moth will appear, when and where the eggs are laid, and when the caterpillar will come out to do the damage. Knowing these features, the gardener was in possession of valuable facts which he could make use of to overcome the pest. Passing over the various measures adopted, he showed by the aid of the lantern a useful form of moth guard for preventing the female moth climbing up the trees to lay her eggs.

The eelworm was next taken as a type of garden pest. Pictures were put upon the screen, showing the attack on Cucumber and Tomato roots, as well as the various life stages of this pest. In dealing with the measures of prevention and remedy, he instanced among others the use of "capture" plants as a means of clearing the ground of the eelworm; a practice which has been adopted in Germany on a large scale, with considerable success. In concluding, the lecturer said that, though we knew the habits and characteristics of a number of our pests, yet there was a great deal of information still to be obtained, and he pleaded for the help of those, who by their natural habits and calling were continually coming into contact with insect pests. A number of questions were asked as to the chafers, Vine Weevils, Crickets, &c., and an interesting discussion followed, in which Messrs. Bradley, Neve, Callaghan, Webster, Martin, Hobbs, Clarke, and Dearlove took part.

On the table were some bunches of Princess Beatrice and Gloire du Bourg Violets (the latter being exceedingly large and sweet scented) brought by Mr. Lever, The Gardens, Hillside; a perfect head of flower of a hybrid Clivia, raised by Mr. Bright, of Whiteknights; and a pot of blue Primrose (Wilson junr.) from Mr. Osborne, Holme Park Gardens; whilst an excellent display of insects injurious to plants, seeds, and trees, &c., was exhibited by Mr. H. Ham, of the Reading Natural History Society. A hearty vote of thanks was accorded to Mr. Foulkes for his lecture, and to those who had brought the flowers, &c., for the inspection of the members.

NOTICES OF BOOKS.

GUIDE TO VEGETABLE CULTURE. Intended for Amateurs and Cottagers. W. Drummond & Sons, Ltd., Stirling. Eighth edition revised.

As the announcement on the cover of this pamphlet states, it is an unambitious publication of some two dozen pages, and intended to help amateurs and cottagers in their initial attempts at the cultivation of the more useful vegetables. It is, in fact, meant to encourage a love for gardening amongst the working classes, many of whom we are pleased to say are excellent vegetable growers and annually give ample evidence of their prowess.

The pamphlet gives brief directions for the cultivation of at least forty-four different kinds of vegetables, salad plants, herbs, etc., and even includes fruit tree management, also Currants, Gooseberries, Raspberries, Strawberries, and Tomatos. Peas, Broad, French, and Runner Beans first receive attention, and besides cultural directions, the quantity of seed necessary for a given length of row is also given. The author states that the old method of allowing only 3 ft. to 4 ft. between the rows of Peas is not a good one. A space of 12 ft. to 20 ft. between every two rows should be given, and the space between filled with other and dwarfer kinds of vegetables. This will undoubtedly give every row the best chance of producing a full crop by proper exposure to light and air. Asparagus, Beet, Broccoli, Brussels Sprouts, Cabbage, Carrots, Cauliflower, and Celery are all dealt with in succession. German Greens or Borecole constitute the most popular of all winter vegetables in cottage and farm gardens in Scotland. We see no reason why this vegetable should not have been spoken of under the name of Scotch Curlies or Kale, for it is one of the oldest of vegetables cultivated there. It is undue modesty to use a foreign name for the oldest and best known vegetable. Leeks, Onions, Parsnips, Mushrooms, Rhubarb, Seakale, Spinach, Salsify, etc., are not forgotten. The chapters are necessarily short, but once their lesson has been learnt, a more extensive or exhaustive work may be secured. The pamphlet may be had gratis by post on application, as well as four other works of a similar description on other branches of gardening.

SWEET PEAS UP-TO DATE: with a Complete Description of all known Varieties, Including Novelties for 1897. By Rev. W. T. Hutchins. Published by W. Atlee Burpee & Co., Seed Growers, Philadelphia, 1897. Price ten cents. (5d.)

The author of this little work of seventy-two pages is an enthusiast in his particular hobby; but enthusiast and specialist, nowadays, are almost synonymous terms, and both are necessary to develop our garden flowers into something above the common level. If Mr. H. Eckford, of Wem, Shropshire, was the pioneer in this line, the Rev. W. T. Hutchins, of Indian Orchard, Mass., U. S. A., was the first on that broad continent across the Atlantic to give a lively fillip to the Sweet Pea cause from an amateur's point of view. Like all other amateurs who begin humbly, yet earnestly, to pry into the secrets of Dame Nature, he has met with his difficulties, but always proceeds with the view of surmounting them. He finishes up a chapter on the latest rules for culture, by saying that "A practical book on floriculture must be borne of the failures of the author." Many useful hints are given in this same chapter about the successful culture of Sweet Peas, and otherwise, in soils of a varying character. Heavy soils are those which give the most satisfactory results with the smallest amount of trouble. We may here say that the great heat and drought of the American summer, make the cultivation of Sweet Peas more or less difficult to manage. We have a similar experience during unusually dry seasons in the south of England.

The author advises early sowing to insure a slow and steady start. We are precisely of the same opinion; for if the season turns out a droughty one, late sowings generally come to grief. A dry and hot atmosphere never allows the flowers to attain their proper size, shape, or colour, even if they are not totally ruined by red spider, which is the worst enemy to Sweet Peas with which we are acquainted. The author speaks of a minute louse as the latest pest, which does not come till the summer is well advanced. We are very much mistaken if this is not a mite. Siphonophora Pisi attacks the Sweet Pea, but it is one of the largest of the Aphis tribe, and easily kept under by forcible syringing. Red spider might be managed in the same way if attacked sufficiently early and persistently, but not otherwise till the foliage is ruined. There is a short but useful chapter on watering with clear liquid, while liquid and other fertilisers are dealt with in an earlier chapter on cultivation. Illustrations of various forms of ornamental supports in the shape of trellis work or straight wires, stretched horizontally, are suggestive to those who care to put them to practical use in well kept parts of the garden, or where it is intended to make hedges for the purpose of screening one part of the garden or grounds from another.

The Sweet Pea is a native of Sicily; but a rose and a white variety were brought by an Italian botanist, Francois Cupani, from Ceylon, where they are said to be native. This pioneer lived from 1657 to 1711. One of the most interesting parts of the book is the list of 105 named varieties of Sweet Peas, all of which get a short description and should prove serviceable by way of reference to raisers of new varieties. Cupid and Red Riding-Hood are departures from the normal type, the former in habit, and the latter in the shape of the flower. Light Blue and Purple, and Painted Lady (apparently synonymous with Nellie Janes) are stated to date from 1700. Aurora and Daybreak are remarkable developments in the arrangement of their colours, particularly the latter, which shows wavy markings like the feathers of some beautifully marked bird. The colours, however, are now so numerous, varied, refined, delicate, intense, fantastic, chaste, pleasing, and otherwise, that the most fastidious and cultivated taste could hardly fail to be charmed with one or other of them, so that it would be futile further to particularise; yet improvements continue to be made. The book contains numerous illustrations and is well worth the money.

SPRING FLOWERS AT LONG DITTON.

MOST of our readers are aware that Messrs. Barr & Son have for long made a speciality of hardy flowers, and know that the nurseries of the firm at Long Ditton are a repository where many charming floral gems are to be found. The last week in February is certainly early to find hardy flowers in any great quantity, and we were agreeably surprised to find what a wealth of them, both with regard to quantity and variety was to be seen. The day upon which our visit fell was one of those rare occurrences for February, when nature appears in her kindliest mood, her sterner and wintry side being completely hidden. The air was soft and balmy, and the rays of a brilliant sun glanced lovingly over the bright faces of the flower children he had called into being, and whose bright faces

shone yet more brightly in the enjoyment of his life-giving beams. We have never been so far led astray as to perpetrate "spring poetry," but certainly here was a full and fair inspiration for the longest haired poet that ever bought a rhyming dictionary. Our readers, however, will doubtless appreciate the facts more than the poesy, and the following are some of the very charming facts that we saw.

The members of the genus Narcissus whose name is legion, are as yet only represented by the vanguard, which is long before the swallow, and in decided advance of the March winds. Of the "trumpet-flowered" section N. pallidus praecox is is the only representative in flower in the open ground. Its lemon-yellow flowers with their twisted perianth segments, and the prettily fimbriated corona are very showy. N. minimus, a form of N. Pseudo-Narcissus minor, is an exact replica of the type in structure, but a miniature of it with regard to size. It is only a few inches in height, and of a rich yellow colour. A fine lot of this was flowering under protection. Quantities of N. Cyclamineus were also blooming under similar conditions. The flowers of this pretty plant are very distinct with the long tubular corona, and the abruptly reflexing segments. It is a very useful subject for pot culture, to which it takes kindly.

The Chionodoxas are by no means behindhand in asserting themselves, and as considerable breadths are planted with the several species and varieties the effect when the sun shines is truly brilliant. The rich blue of C. sardensis would be difficult to beat, and although the popular C. Luciliae has larger flowers, the colour being much lighter it is not nearly so brilliant. C. sardensis alba is a novelty that deserves a hearty recognition. It flowers quite as freely as the type and is fully as hardy. The blooms are about the same size as those of the type, and are of the purest white. The habits of the two plants are identical. Another charming albino has been evolved from C. Luciliae. Here again the only great difference is the pure white of the flowers. The white variety, however, had been protected, and the type had not, and this would account for the slight advantage with regard to size obtained by the white form over its type. Of C. gigantea, otherwise known as C. grandiflora, we cannot be too loud in praise. The flowers are fully twice as large as those of C. Luciliae. This, combined with their soft lavender hue, makes the plant a most valuable acquisition to our spring-flowering subjects. Its constitution is vigorous and thus renders it suitable for massing in beds or borders, naturalising in grass, or for planting anywhere that C, Luciliae will grow. For pot culture it is certainly the gem of the genus.

Amongst the Scillas, S. bifolia is too well known to need any further description. S. sibirica taurica is a strong growing form collected from the Taurus Mountains. The flowers are slightly lighter in hue than those of the type with a darker stripe down the centre of the segments. They are borne in numbers of from 5—7 on a scape. A more important characteristic, however, is that it flowers two weeks earlier than its immediate ancestor.

The Saxifrages are not, as a whole, very early flowerers, but they have a few members to represent them even at this early season. A large breadth of S. ligulata had betrayed itself to the bees which were buzzing with unfeigned delight amongst the huge compressed panicles of pink flowers. S. oppositifolia, and S. o. alba in shaded corners of the rockery were just commencing to open a few decidedly precocious flowers.

Crocuses were much in evidence both in clumps upon the large rockery, and also in a plot of ground specially devoted to them. In this latter place they were distributed in breaks of one colour, and the hues varied from nearly white to rich yellow on the one hand to deep purple on the other. Amongst the species and sub-species were to be seen not a few interesting and pretty plants. C. aureus is noteworthy as being the parent of our common yellow or Dutch Crocus. C. stellaris is very dwarf, and has small flowers of a very rich orange colour. C. biflorus is another very variable species. The form argenteus has very pretty white flowers. C. tommasinianus has pale sapphire-lavender flowers, and is a continuous bloomer. The form albidus is well worthy attention.

The genus Iris is represented by some of its members throughout the greater part of the year. I. stylosa has been in bloom for weeks past. The flowers are large, and, although not quite so bright as those of other forms which flower amidst more favourable climatic conditions, are still very showy. The sheltering leaves which cluster round the flowers enable the latter to brave a moderate degree of cold. Other Irises growing in frames were I. reticulata, I. r. Krelagei, and I. r. caerulea, the last-named a light blue form. The spathes are two leaved and brown in colour. The leaves are narrowly lanceolate in shape and bright green. The falls, or outer perianth segments are not highly developed, being comparatively small. They are ovate in shape, light purple blue and much reflexed. The standards are light purple in hue with a purple-maroon margin. A broad yellow stripe runs up the centre, and at the reflexing tips developes into a crest. The three petaloid branches of the style are violet in colour margined with blue-white. They are bifid at the tips. The height of the plant is from 4 in. to 5 in.

Tulipa violacea was the only Tulip out in the open. The flowers are of medium size, and rosy-crimson in hue with a small basal area of deep violet.

Somewhat of a novelty to the general public, but a plant that should not long remain so, is Corydalis ledebouriana. The leaves are ternately divided, the lobes being unequal in size, and very glaucous. The flowers which are produced in long racemes are dull pink in colour. Although not very showy the earliness of this plant's flowering season is remarkable, as it has been in bloom for some weeks.

HELLEBORES receive special attention at the hands of the Messrs. Barr. In addition to plants of H. punctatus, H. olympicus, and H. foetidus which were flowering in frames, a considerable area outside is devoted to them. This includes a large batch of seedlings chiefly of continental origin, amongst which some very fine white and crimson varieties are to be seen. One seedling from H. orientalis has bright rosy-pink flowers, and will doubtless be heard of later on when it has a name bestowed upon it.

Owing to the way in which Chionodoxas and other bulbs have their nursery quarters shifted periodically, and the difficulty of getting the whole of the bulbs out of the ground a great part of the nursery is starred with various pretty flowers. Snowdrops were peeping out in one or two places. Galanthus nivalis, and its double form predominated. In one part of the nursery a few Roman Hyacinths were showing their pure white flowers. These have been afforded shelter by covering them with heather during frosty nights. In corners of the rockery clumps of Cyclamen Coum, in its white form were in full bloom, whilst in exposed parts the white Daphne Mezereum was very conspicuous. Cyclamen ibericum rubrum is a charming subject for pot culture. The flowers are of medium size for this class of Cyclamens, and rich red in hue, whilst the leaves are very prettily marbled; indeed, the plant is well worth growing for its foliage alone.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Plants for window boxes.—*D. W. D.*: Window boxes of big town houses are in many cases refilled at various periods during the summer, in order to keep up a good display. We have seen all sorts of plants used, from Creeping Jenny (Lysimachia Nummularia), up to Crotons, Dracaenas, and similar things We think, however, that you should confine yourself to such things as the best varieties of Zonal Pelargoniums, white or yellow Marguerites, Calceolarias, young Fuchsias, Petunias (single) and Ten Weeks Stocks. When the latter go out of flower, they could be pulled up, for by that time the other plants will require more space. To hang over the front of the boxes you might use Ivy-leaved Pelargoniums or scarlet Tropaeolums of the trailing kind, such as Ball of Fire, or even the ordinary T. majus.

Reineckia carnea variegata.—*Joss*: It is hardy in the southern counties at least, but it is never a very ornamental plant when grown out of doors, because the variegation becomes very indistinct, and shoots that are entirely green often develop. This, and many other variegated plants of a similar nature require to be grown in a fairly warm temperature to develop the variegation in its best form. In fact, we think it is scarcely worth growing in the open, although relatively hardy.

Young Vines.—*Conaglen*: Even if they have come from the nursery as fruiting canes, we should not allow them to bear the first year if intended for permanent vines. We should cut the canes back to 3 ft. above the soil, as they are not very strong according to your description. When digging out the soil for them you will see the state of the border. If the material is bad it ought to be renewed, even if you do one section of the border now before planting the young vines; the remainder could be done in September. The drainage may even be more important than fresh soil. We should spread out the roots of the young vines at 9 in. below the surface, encouraging them to keep there by mulching. As to the old vines being forced, it depends upon the time you want the grapes. Start them with a gentle heat in any case, and if the fruit is not wanted before September, allow them to come along slowly, with a little fire heat, and a night temperature of not more than 60° with fire heat, You had better aid them with a little fire heat, but never attempt forcing if you find the roots in a bad way. Avoid overcropping.

Hybrid Thistles.—*W. Napper*: No two authorities, scarcely, agree with one another as to whether the intermediate forms between the Meadow and Marsh Thistles are species, natural hybrids, or merely luxuriant specimens, all the three ideas being advanced by different authors. For instance there are hybrids or intermediate forms between Carduus crispus and C. nutans; between C. arvensis and acaulis; C. pratensis and C. acaulis; C. palustris and C. pratensis; and C. heterophyllus and C. palustris. C. pratensis is sometimes said to be allied to C. tuberosus, or a sub-species of it. Others reverse the order, making C. pratensis the species to which C. tuberosus is allied. The fact is that no agreement has been come to us to what constitutes a species. There seems no reason why, in the present state of science, these intermediate forms should not be regarded as natural hybrids.

Other wild hybrid British plants.—*W. Napper* Botanists have found many instances of British plants which they regard as natural hybrids, including one between Linaria repens and L. vulgaris. Amongst the Mulleins the following names indicate the parentage of wild hybrids:—Verbascum Thapso-Lychnitis, V. Thapso-nigrum, V. nigro-pulverulentum, and V. nigro-Lychnitis. In other cases we have Primula vulgaris crossed with P. elatior, and P. vulgaris crossed with P. variabilis. Linnaeus seems to have had the idea of hybrids in his mind when he described plants under such names as Campanula hybrida, Veronica hybrida, and Papaver hybridum. The Campanula and the Papaver are now regarded as good species, and the Veronica as a variety. The game fowl and the Cochin Cochin, mentioned by you, are generally understood to be simply domestic breeds of the domestic fowl.

Treatment of Ericas.—*Ericas*: The usual method of treating Heaths, after they have finished flowering, is to cut them down nearly to the base of last year's shoots. Erica hyemalis, E. persoluta alba, E. Caffra, E. wilmoreana, and E. melanthera, all submit to this form of treatment. After being cut down, less water will be necessary for a time, but you must not on any account allow them to become dry. After ten days or so you can place them in heat and syringe the tops to encourage fresh growth. As soon as the buds begin to push, give the plants a shift if necessary; but beware of overpotting, as they require but a small amount of root room. Keep them in heat till they have made good growth, syringing them every day more or less according to the weather. They must always be kept near the glass for the sake of light. After they have made their growth, place them in a cool, well-ventilated house. When the summer is well advanced the plants may be plunged in coal ashes out of doors in a sheltered place till the approach of frost obliges you to take them into the greenhouse. Black peat cut in the form of a thin turf where it grows, and containing fibre is best. It must be fairly dry peat, not that wet soapy material which is termed bog. You had better buy it, unless your home peat is the proper material.

Vine Spurs Bleeding.—*Conaglen*: You do not tell us whether your vines have been pruned or not. If they have been pruned, then it is all right. We suspect that the sap is simply rising again, as the spring is now far advanced. There is no need for ventilation into the border. That is an old notion, now obsolete or discarded. The principal point is to see that the border has been properly drained in the bottom. If not, it ought to be remade, even if you are obliged to use the old soil. It should not be more than 2½ ft. deep, and 1 ft. of that, or nearly so, should consist of rubble for drainage. If the situation is naturally damp, a drain should be connected with the lowest part of the bottom of the border, either at the side or end, to take away superfluous moisture. The adventitious roots on the rods might or might not indicate that the border is in a wet condition. You say that such roots are few, so that the roots in the border might be all right: but you should dig down carefully with a fork and ascertain.

Plants for table and drawing room decoration.—*D. W. D.*: Of those genera which you mention, we should select varieties of Adiantum cuneatum and A. Capillus-Veneris or A. formosum; Kentia

belmoreana and Chamaerops Fortunei or C. humilis (Palms); Pelargonium Radula and P. denticulatum; Dracaena rubra, and D. Lindeni, or Cordyline indivisa, the first and last being green, the other variegated; also Aralia Chabrierii, A. Veitchii and A. Sieboldii. Aspidistra lurida and A. l. variegata are excellent, as is Ficus elastica, because all three can be kept in the windows of dwelling rooms all the year round, if you move them away from the windows during severe frost. Dracaena (or Cordyline) australis is equally hardy, as are Aralia Sieboldii and A. S. variegata. Amongst Ferns you might use Pteris cretica albo-lineata, P. c. cristata, P. umbrosa, Asplenium bulbiferum, A. b. fabianum and A. flaccidum, as well as Polystichum angulare in variety and Scolopendriums, especially S. vulgare crispum.

Names of Plants.—*J. M.*: 1, Erica carnea; 2 Forsythia suspensa; 3, Ligustrum ovalifolium aureum; 4, Pyrus japonica.—*A. L.*: 1, Daphne Mezereum; 2, Cupressus pisifera plumosa aurea; 3, Juniperus chinensis aurea.—*Y. K.*: 1, Masdevallia polysticta; 2, Gongora truncata; 3, Dendrobium crepidatum; 4, Cypripedium Sedeni porphyreum; 5, Dendrobium aggregatum; 6, leaf not recognised. —*T. W.*: 1, Narcissus minor; 2, Eranthis hyemalis; 3, Scilla sibirica.—*D. C.*: 1, Cryptomeria elegans; 2, Cupressus pisifera plumosa; 3, Cupressus Lawsoniana; 4, Berberis stenophylla; 5, Cupressus macrocarpa; 6, Berberis Aquifolium.

Communications Received.—G Gordon —J. Laing & Sons.—J. F.—J. H. Ansell.—Omega.—G.—R. M.—W. L. N.—J. Williams.—Henry R.—Fay. —Onion.—T. R. S.—Q

TRADE CATALOGUES RECEIVED.

Fotheringham & King, Corn Exchange, Dumfries.—Catalogue of Agricultural Seeds.

Little & Ballantyne, Carlisle.—Farm Seeds.

John Sharp & Son, Bardney, Lincolnshire. Farm Annual for 1897.

FIXTURES FOR 1897.

March.

9.—R.H.S., Committees and Lecture.
10.—Renfrewshire Gardening Society.
13.—Royal Botanic Society Meeting.
17.—Devon and Exeter Show.
18.—Linnean Society.
18, 19.—Birmingham Botanic Gardens Show
23.—R.H.S., Committees and Lecture.
27.—R.B.S. Meeting.
30, 31.—Truro, Daffodil and Spring Flower Show.
31.—R.B.S. Spring Show.

April.

1.—Linnean Society.
1.—R.H.S. of Ireland Spring Show.
6, 7.—Brighton and Sussex Show.
7.—Shropshire Horticultural Society's Show.
8, 9.—Royal Caledonian Society's Show.
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
15.—Linnean Society.
24.—R.B.S. Meeting,
27.—R.H.S. Committees and Lecture.

May.

6.—Linnean Society.
7.—R.B.S. Lecture.
8.—R.B.S. Meeting.
11.—R.H.S. Committees and Lecture.
14.—R.B.S. Lecture.
19.—R.B.S. Summer Show.
21.—R.B.S. Lecture.
22.—R.B.S. Meeting.
24.—Linnean Society's Anniversary.
24 to 28.—Bath and West and Southern Counties Show at Southampton.
26.—Gardener's Royal Benevolent Institution, Annual Dinner.
26, 27, 28.—R H S. Temple Show.
28.—R.B.S. Lecture.

June.

3.—Linnean Society.
4.—R.B.S. Lecture.
11.—R B.S. Lecture.
12—R.B.S. Meeting.
15.—R.H.S. Committees and Lecture.
16, 17, 18.—York Floral Fête.
17.—Linnean Society.
18.—R.B S. Lecture.
23.—National Rose Society's Show at Portsmouth.
23 to 28.—R.A.S. Show at Manchester.
25.—R.B.S. Lecture.
26.—R.B S. Meeting.
29.—R.H S. Committees and Lecture.
29.—Royal Oxfordshire Horticultural Society's Commemoration Show.

July.

1.—R H.S. of Ireland Summer Show.
2—N. Rose Society Show at Crystal Palace.
7, 8.—County Boro. of Hanley Fête.
8, 9, 10—Newcastle Show
10.—R.B.S. Meeting.
13.—R H.S. Committees and Lecture.
13, 14, 15.—Wolverhampton Floral Fête.
15.—N. Rose Society's Show at Norwich.
24.—R.B.S. Meeting.
27.—R.H.S. Committees and Lecture.
28.—Beckenham Show.
28, 29.—Chester Fête.
28, 29.—Carnation and Picotee Society's Show at Birmingham.
31 and Aug. 2.—R.H.S. of Southampton Society's Show.

Secretaries are invited to send early intimation of Fixtures.

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COVENT GARDEN MARKET.

March 3rd, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Apples..... per bushel	2 6	4 0	Grapes, per lb	2 0	3 0
Black Currants ½ sieve			Pine-apples.		
Red " ½ sieve			—St Michael's each	2 6	6 0
Cherries half sieve...			Plums per ½ sieve.....		
Nova Scotia Apples per barrel			Strawberries, per lb.		
Cob Nuts per 100 lbs	00	00	Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
Artichokes Globe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus, per bundle	5 0	7 0	Horse Radish, bundle	2 0	4 0
Beans, French, per pound	1 6	2 0	Lettuces ...per dozen	1 3	
Beet..... per dozen	2 0	3 0	Mushrooms, p. basket	1 0	
Brussel Sprouts, per half sieve	1 6	1 9	Onions.....per bunch	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunch	0 3	
Carrots ... per bunch	0 3		Radishes... per dozen	1 6	
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket	1 0	1 3
Celery.....per bundle	1 0		Small salading, punnet	0 4	
Cucumbers per doz.	1 6	3 0	Spinach per bushel	2 0	2 3
Endive, French, doz.	1 6		Tomatos..... per lb.	0 3	0 4
			Turnips ..... per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0	Orchids, doz. blooms	1 6	12 0
Asparagus Fern, bun.	2 6	3 0	Pelargoniums, 12 bun.	6 0	9 0
Azalea, doz. sprays...	0 6	0 9	Pyrethrum doz. bun.	2 0	4 0
Bouvardias, per bun.	0 6	0 9	Roses (Indoor), doz.	1 0	1 6
Carnations doz. blms.	1 6	3 0	" Tea, white, doz.	1 0	2 0
Chrysanthemums, doz. blooms	1 0	4 0	" Niels	4 0	6 0
Eucharis ...per doz	4 0	6 0	" Safrano	1 0	2 0
Gardenias ...per doz.	4 0	8 0	" (English),		
Geranium, scarlet, doz. bunches	6 0	9 0	Red Roses, doz.	4 0	6 0
Hyacinths (Roman) doz. sprays	0 6	1 0	Pink Roses, doz.	3 0	5 0
Lilium longiflorum per doz.	2 0	6 0	Smilax, per bunch ...	6 0	8 0
Lilac, White (French) per bnch.	3 6	5 0	Tuberoses, doz. blooms ...	1 0	1 6
Lily of the Valley doz. sprays	0 6	1 0	Primula, double, doz sprays	0 6	0 9
Marguerites, 12 bun.	2 0	4 0	Violets (French) per doz. bnches.	1 0	1 6
Maidenhair Fern, 12 bs.	4 0	8 0	Violets (English) per doz. bnches.	1 6	2 6
Mimosa, per bnch. ...	1 0	1 6	Violets (Parma) per bnch.	3 0	4 0
			Violets Czar, large, per bnch.	2 0	3 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
Azaleas, each	2 0	3 6	Erica, per doz.	9 0	12 0
Arbor Vitae (golden) per doz.	6 0	12 0	Ferns, invar., per doz.	4 0	12 0
Aspidistra, doz.....	18 0	36 0	Ferns, small, per 100	4 0	6 0
" specimen	3 0	5 0	Ficus elastica, each	1 0	5 0
Azalea, per plant.....	2 0	3 6	Foliage Plants, var., each	1 0	5 0
Chrysanthemums, per doz.	6 0	9 0	Genista, per doz.	10 0	15 0
Cineraria, per doz....	8 0	10 0	Hyacinths, per doz. ...	9 0	12 0
Cyclamen, per doz....	9 0	15 0	Lycopodiums, doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0	Marguerite Daisy doz.	9 0	12 0
Dracaena viridis, doz.	9 0	18 0	Myrtles, doz.	6 0	9 0
Euonymus, var. doz.	6 0	18 0	Palms in variety, each	1 0	15 0
Evergreens, invar. doz	6 0	24 0	Palms, Specimen ...	21 0	63 0
Erica Hyemalis, per doz.	12 0	15 0	Poinsettia, per doz....	9 0	18 0
			Solanums, per doz.	9 0	12 0
			Spirea.....per doz. ...	8 0	10 0
			Tulips, doz. pots.....	6 0	9 0

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Awarded to my Collection of Tuberous Begonias in 1896, including one from the R.H.S. The Begonias I am offering are equal to those that obtained the above award, and are positively the best value for money ever offered. They are up-to-date in quality and price. Cash returned if not satisfactory. All in dry tubers, free for Cash with Order. Single Begonias for Bedding.—Very fine, all colours, mixed, 12, 3/-, 100, 21/-; second size tubers, 12, 2/3, 100, 15/-. Very fine in 8 distinct colours, 12, 4/6, 100, 28/-; second size tubers, 12, 3/-, 100, 21/-. Single Begonias for Exhibition and Conservatories.—Very fine, in shades of Bronze, Coffee, Orange, Buff, Fawn, Terra Cotta, etc., 6, 4/6, 12, 8/-; second size tubers, 6, 3/6, 12, 6/-. Very fine in 12 distinct colours, 6, 4/6, 12, 8/-. Extra fine in 12 colours, 6, 7/-, 12, 12/-. Very finest in 12 colours equal to named kinds, 6, 10/-, 12, 18/-; 12 grand named kinds, 24/-. Mixed Double Begonias for Bedding.—I have a very fine lot carefully selected, 12, 6/-, 50, 25/-, 100, 42/-. Semi-double for bedding, these are very pretty and free flowering, 12, 3/-, 50, 10/-, 100, 16/-. Double Begonias for Exhibition and Conservatories.—These I can offer in the following colours: Blush, Pink, Red, Rose, White, Yellow, Crimson, Salmon, Scarlet, and Orange Salmon, erect sturdy habit and Camelia-shaped flower. Very Good selected, 1/- each, 6, 5/6, 12, 10/-. Fine selected, 1/6 each, 6, 8/-, 12, 15/-. Very finest selected, equal to named kinds, 2/6 each, 6, 14/-, 12, 25/-.

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For **CHRYSANTHEMUMS,** ditto	..	7/6
For **LAWNS,** ditto	..	6/0
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Beans, Broad, best. 4 pints.
Beans, Dwarf, ½ pint.
Beans, Runners, 1 pint.
Beet, the best, 1 packet.
Borecole, best, 1 packet
Broccoli, 3 packets.
Brussels Sprouts. 1 packet.
Cabbage, 3 packets.
Carrot, for succession, 2 oz.
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Couve Tronchudas, 1 pkt.
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Endive, best, 1 packet.
Herbs, 3 packets.
Leek, 1 packet.
Lettuce, 3 packets.
Melon, 1 packet.
Mustard, 4 ounces.
Onion, best, 4 ounces.
Parsley, best, 1 packet.
Parsnip, best, 1 ounce.
Radish, 3 ounces.
Salsafy, 1 packet.
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Tomato, 1 packet.
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A POD OF CARTER'S EARLY MORN. Copyright J.C.& Co.

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The Gardening World.

Edited by J. FRASER F.L.S.

SATURDAY, MARCH 13th, 1897.

TERRIFIC GALE AND DESTRUCTION OF GLASSHOUSES.—When the wind soughs in Piccadilly we may take it for granted that it blows hard in exposed places, but particularly at sea and round our wave-lashed shores. About midnight on the 2nd inst. a severe gale suddenly burst over London and the south and west of England. The gale continued all night, and culminated in a fierce hurricane between seven and eight o'clock on the morning of Wednesday the 3rd inst. It seems to have done the greatest amount of damage in Devonshire, and besides the destruction of the roofs of houses and chimneys, many a tree and avenue of them on Exe-side came to grief.

From a horticultural point of view the city of Exeter has suffered the greatest amount of damage. The nurseries of the Exeter Nursery Company (formerly Messrs. Lucombe, Pince & Co.) Alphington Road, suffered to the extent of £2,000. Several of the glass houses were smashed and two of them utterly wrecked. The greatest amount of damage was suffered by the Camellia house which, a correspondent informs us, was regarded as one of the best of its kind in the world. The house was over 70 years old, 200 ft. in length, 24 ft. in width and 20 ft. in height, and cost £1,000 to construct. Though put up 70 years ago it was restored to the extent at least of a new roof at a cost of £600 or thereabout, by the late Dr. Woodman about 20 years ago.

It was repaired again, at considerable expense, only about a year ago. The stock alone was worth £500.

The Camellias were over 70 years old, and at the time of the disaster were in full bud and bloom. There were also ten thousand blooms on the Marechal Niel Roses as well as Azaleas, most of which would have been cut for Easter decorations. About the time of the culmination of the hurricane, three men were in the Camellia house picking Camellias, but hearing the report of a house that was demolished by the wind in another part of the nursery, they rushed out to render assistance in preventing further damage. Immediately afterwards the whole structure was blown down with a terrific crash, demolishing the plants, the glass, and walls, and twisting the 9 in. hot-water pipes out of their position. The roof was blown on to that of a lean-to house close by, wrecking it, and destroying many of the valuable plants it contained. The lean-to had been built within the last 18 months at a cost of £200. Other damage was done all over the nurseries; sashes of frames were blown away, and trees and shrubs uprooted. One fine tree torn down was more than a hundred years old. Efforts are being made to raise a subscription on behalf of the owners, both by the trade and the general public. Most of the employés were more or less cut in their endeavours to prevent damage.

The abundance of Spring Flowers.—On the disappearance of the short but sharp snowstorm with which we were visited about the end of January, the spring flowers both in public and private gardens began to appear in quick succession; and now they are practically abundant wherever the owners or keepers of parks and gardens have taken the precaution and forethought to secure and plant bulbs of various kinds now so easily obtainable. While March has been ushered in with gales of wind, rain and showers of snow in the southern countries, we are aware that in the far north there has practically been a renewal of winter in the shape of frost and snow. Even there, however, it is regarded as probably the "teuchits" storm, that is, the last small storm which is supposed to precede the advent of the lapwing to the inland fields. Until such inclement weather disappears, spring flowers in the north will be retarded, except perhaps, in the case of the Snowdrop which often passes part of its flowering period under the snow.

In the southern counties, Snowdrops were abundant and fine early in February, and the weather being cool, the flowers long remained in excellent condition. The Winter Aconite appeared almost simultaneously. Both these types of spring flowers are old friends; and the same might be said of Crocuses. Outside of botanic gardens, however, most prominence is given to the large, improved forms of Crocus vernus and C. aureus. It is a pity, however, that C. susianus and the finer forms of C. biflorus are more or less neglected, compared with their abundance ten to twenty years ago. The great development that has taken place in recent years in the planting of Crocuses on the grass, seems to be the revival of a plan that prevailed in cottage and other gardens, when the scythe and not the machine mowed the grass. Scattered about promiscuously on the grass of public parks, public and private gardens, they have a very brightening effect at a season when cultivated ground and beds are bare. Another advantage is that such plantations are permanent and require little attention besides preventing the leaves from being cut too early, when the grass is being mowed.

Scilla bifolia and S. sibirica are at the command of the planter, but more important than either are the various species or forms of Chionodoxa or Glory of the Snow. They are well named for they often appear on the edge of the melting snow and push into bloom very rapidly when frost has left the ground. C. sardensis is the first to make its appearance, but quite a number of forms have been in full bloom for a fortnight. So long as the weather remains cool, the scapes remain short, with the flowers near the ground. The brilliant blue of the species just named is conspicuous for a great distance when planted in beds on the grass or in masses upon the sward itself. The effect is fine as that of the best of summer bedding plants of similar stature, and vastly more interesting. C. Luciliae and C. gigantea are notable for their paler but larger flowers, with a white centre. On the grass they give an unwonted glow during early spring, but they make better growth and give more flowers when planted in soil that is kept clear from everything else. No more important introduction to the spring garden has been made for many years than the Chionodoxas. Being perfectly hardy, in the south at least, they require no protection, and get none. The Daffodils are distinctly later than those of the above, but a few of the early varieties have been making headway for some time past. We shall have a perfect galaxy of them before the end of the month and the last of them will not disappear till June, unless the weather continues warm and fine, making them earlier than usual. The above are but a few of the popular and more common bulbs, readily obtainable for spring gardening and which may be planted in duly prepared beds or borders, or planted out permanently upon the grass or in semi-wild portions of the grounds of an estate.

Mr. Neil McShee, late gardener at Dunkerron Castle, has been appointed head gardener to Sir John C. R. Colomb, K.C.M.G., Dromquinna Castle, Kenmare, Co. Kerry.

Mr. James Dunbar, from Mr. John Downie's Beechhill Nurseries, Edinburgh, has been appointed head gardener to Henry Herbert, Esq., Dunkerron Castle, Co. Kerry.

Cocoanut Trees in certain parts of India, after presenting an almost lifeless appearance, have been restored to vigour and made to bear abundantly again by using salt as a manure.

The first Blue-flowered Hydrangea.—A Ghent contemporary, *Le Messager de Sciences* is responsible for the statement that the first blue Hydrangeas appeared in the gardens of M. Hopsomere at Wetteren in 1801. Some Hydrangea cuttings had been put in a bed of virgin soil, at first meant for bulbous plants. The cuttings ultimately produced trusses of blue flowers. Soon after this the florists of Wondelghem found the means of obtaining the same results, and since then, blue-flowered Hydrangeas have made their way in the world.

The Hamburg Exhibition.—Progress continues to be made with the arrangements for the international exhibition to be held at Hamburg during 1897, and the prospects are good. The committee lately received an official communication from South Australia concerning the exhibition. Valuable prizes are offered for papers, &c., in the science section, the success of which has already been assured. Various congresses will be held during the summer, and gardeners are invited to take part in those things which concern their profession. Exhibitors intending to compete at the spring exhibition should communicate with the committee of the German Horticultural Exhibition before the end of March.

Sparrows Eat Oats faster than they can be planted according to the farmers near Red River, Texas.

Squirrels are the latest pest on some Scotch estates, notably Lord Reay's woods at Carleside, near Earlston,

Ireland, it is generally admitted, is more free from insect pests and diseases injurious to forest trees, than, perhaps, any other country in the world.

Evaporation from Trees.—It is calculated that a plantation of 500 healthy, vigorous and fully grown trees emits nearly 4,000 tons of moisture in twelve hours of daylight.

Spelled it 'Mum.—"Jack," said Mrs. Snaggs to her husband," how do you spell 'Chrysanthemum?'" "I don't think I would put any Chrysanthemums in a letter if I were you," replied Mr. Snaggs. "They will make the letter overweight." *Mrs. S.*: "O, if you don't know how to spell it you needn't try." *Mr. S.*: Who said I didn't know how to spell it?" *Mrs. S.*: "Well, how do you spell it?" *Mr. S*: "The right way." And Mr. Snaggs resumed his perusal of the evening paper.—*Pittsburg Telegraph.*

Dried Palm Leaves.—In the preparation of these, they are at first immersed in a weak caustic lye. When they commence to bend without breaking, they are washed with water, then left to drip. They are then dipped in molasses diluted with water and treated with heat, in which they remain for some weeks. At length they are washed superficially and left to dry under cover from light. The leaves so treated are more or less stained, but they are cleaned, painted, and covered with a supple varnish resisting the changes or inclemency of weather.

A Harrowing Orchid Yarn.—Under this heading an American contemporary recently published a sensational account of the relation of Orchids to dead bodies. It states that $50,000 was paid by the Right Hon. Joseph Chamberlain for a unique specimen of Dendrobium Phalaenopsis schroderianum that was growing over and firmly attached to a human skull. The account goes on to say, that in New Guinea, when a man dies his sorrowing relatives place his body upon the limestone rocks beneath the shelter of trees laden with Orchids. The roots of these Orchids attracted by the seething mass of putrefaction beneath would find their way amongst it, and even after all the flesh had left the bones the roots would still cling lovingly round the latter, as in the case of the plant under notice. Civilisation cannot appreciate the luxury of having our ancestor's bones entwined with flowers, hence the Papuans have gone a step beyond, as since we only plant flowers upon the graves of our dead, whilst they have driven the matter to its logical conclusion. Still whether savage or civilized the human being in death, as in life, is closely associated with flowers.

Woolton Mutual Improvement Society.—The usual fortnightly meeting was held on the 4th inst. at the Mechanics' Institute, Mr. W. Tunnington presiding over a good attendance. The subject under consideration was "Vegetable culture suitable for exhibition," introduced by Mr. J. Hathaway, superintendant of parks and gardens at Southport. The lecture was in every way an excellent one, the details being those followed by Mr. Hathaway, which has placed him in the forefront as a grower and successful exhibitor in the northern counties and Shrewsbury. The preparation, sowing, cultural details, with hints as to the prevention and eradication of insect pests were fully set forth. The list of kinds most suitable for exhibition from July onwards were as follows:—the best six Potatos, Cauliflowers, Onions, Carrots, Peas and Tomatos; the next best six—Celery, Leeks, Beet, French Beans or Scarlet Runners, Artichokes and Cucumbers, failing any of these, Parsnips or Vegetable Marrows. At the conclusion of the paper a capital discussion ensued in which Messrs. Todd, Stoney, Disley, Thomas, Rae, Waterman, and the chairman took part, the chief items under review being the special difficulties that growers have to contend with in various districts, the Woolton rock being considered very bad for Parsley, Onions and Carrots, and in some cases rust on Parsnips. A cordial vote of thanks was accorded to Mr. Hathaway for his excellent paper and to Mr. Tunnington for presiding. The next meeting on the 18th inst. (the last of the session), was announced as a social evening, with plants, flowers and music, when the proceeds will be devoted to the Victorian Era Fund.

It is all Nansense to talk of the flora of the North Pole, with its ever-green icebergs and microscopic ice plants.

Camellias in white, red, and pink colours, and supported with stiff, glossy, green leaves, are the artificial flowers of the day.

Death of a Frogmore gardener.—Mr. George Crookshanks, a foreman in Her Majesty's gardens at Frogmore, died rather suddenly on Thursday, March 4th. The deceased, when alive, was held in great esteem by the Queen, and the various members of the Royal Family.

Mr. T. W. Saunders, the editor of *Amateur Gardening*, we are pleased to learn, is steadily recovering from the injuries he received on the 22nd ult., as we announced a fortnight ago. He met with an unfortunate accident resulting in nasty wounds about the head, a sprained left arm, and a general shake up.

Hailstorm Insurance Corporation.—This company, which was started under the title of "The Nurserymen, Market Gardeners' and General Hailstorm Insurance Corporation," has lately completed its second year, during which 33% more income has been received than in the first year, with a lessened expenditure. This is getting to be a very big concern. Mr. Alexander James Munro is the general manager and secretary.

Exhibition at Berlin.—The oldest German horticultural society, "Verein zur Beforderung des Gartenbaues in den preussischen Staaten," will celebrate the seventy-fifth anniversary of its foundation by a grand general exhibition, extending from the 28th April to the 9th May next, inclusive. Foreigners can take part in it. Besides the ordinary prizes amounting to £2,500, many prizes of honour, including a very valuable one from His Majesty the German Emperor, will be offered for competition by German as well as foreign exhibitors. The general secretary's address is Berlin, Invalidenstrasse, 42.

Cape fruit growing in Favour.—As evidence of the growing popularity of Cape fruit in this country it may be stated that a consignment of thirty-five tons arrived by a recent mail. A choice selection of it is now on view in the Cape Colony Section at the Imperial Institute. It includes fine samples of Williams' Bon Chretien and Louise Bonne of Jersey Pears, also Barbarossa and Hermitage, both black varieties of Grapes, as well as red and white Harrepoot Grapes. The rest of the consignment was bought by several well-known fruiterers with whom it is now on sale. Never before, it has been declared, has fruit from the Cape arrived in finer or fresher condition.

Orchids at the Sale Rooms.—A very handsome natural hybrid Odontoglossum, allied to O. elegans, turned up at the Sale Rooms of Messrs. Protheroe and Morris, Cheapside, on the 5th inst. The sepals and petals are rather narrow, but more obtuse than that of O. elegans, and white, blotched with claret. The flowers, moreover, were of good size and very handsome. The piece was finally secured by H. T. Pitt, Esq., Rosslyn, Stamford Hill, for the sum of 26 gs. At the same sale, a fine piece of Laelia elegans was sold for 6 gs. Imported Cattleya Trianaei sold at prices ranging from 5s. to 10s. apiece. The beautiful Laelia anceps seegeriana reached 3½ gs., but did not change hands. The flowers are pure white, with the exception of some lilac lines in the throat. The sale was a large one.

Wild Bird Protection and Nesting Boxes.—This is is the title of a book written by John R. B. Masefield, M.A., vice-president of the North Staffordshire Naturalists' Field Club. The book is in four parts, and is intended to furnish reliable particulars of the ancient and modern laws relating to wild bird protection, including orders obtained by county councils for the local protection of wild birds and their eggs, and to give full particulars and illustrations of artificial bird nesting boxes, ledges, and holes, with instructions how to make and affix them. The text is accompanied by illustrations of various designs of nesting boxes recommended by the Rev. Julian Tuck, the author and others; also by nine full-page collotype plates taken from photographs of nesting boxes, &c., *in situ*, which have been actually used by wild birds. The publishers are Taylor Brothers, Leeds.

Peristeria elata was named "Holy Ghost Flower" by the Spaniards who discovered it in South America. It is also known as the Dove Orchid.

A Notable Year.—According to an old refrain

Hops, Reformation, Carp, and Beer
Came into England all in one year.

Adiantum Capillus-Veneris Semilunatum.—This variety was collected some years ago by J. T. Bennett-Pöe, Esq., Holmwood, Cheshunt, when staying at the village of Lisdoonvarna, Co. Clare, noted for its sulphur and iron spas. He found it growing in the deep and narrow clefts of waterworn limestone-rocks overlooking the Atlantic Ocean. Considerable difficulty was experienced in getting at the plants. He has grown the variety ever since, and sent specimens to Mr. J. G. Baker, keeper of the Herbarium, Royal Gardens, Kew, who determined it to be the above variety as named by Mr. E. J. Lowe. That it should have been discovered in Ireland is very interesting.

An enterprising Adam.—A Glasgow contemporary speaks of having heard of a young Glasgow draper who recently set out to seek his fortune in the Metropolis, but by-and-by found himself homeless on the (Victoria) embankment. Noticing an advertisement, a "gardener wanted," he promptly applied and succeeded in getting the appointment, though he had never handled a spade in his life and scarcely knew a Beetroot from a Begonia. All went smoothly till the third day when he got some seeds to sow. When his employer found him planting these seeds contrary to all horticultural canons, he demanded an explanation. Fortunately for the would be Adam an opening in his own line occurred, and he returned to his yardstick with which he was more familiar.

Vitality of Seeds.—Professor de Candolle, has recently given some interesting facts concerning the latent life of seeds, and their ability to withstand low temperatures. After giving instances of seeds which had germinated after having lain apparently dead for hundreds of years—in one case as many as 1,500 years—he furnished results obtained by experiments made in the direction of subjecting seeds to various degrees of cold. Corn, Oats, Fennel, and some flower seeds were exposed for 118 days to a temperature of 40° Fabr. below zero. Taken out of the cold and placed amidst favourable surroundings it was found that most of them germinated. From such results he concludes that the protoplasm in a resting seed is in a state of inaction, something like a chemical mixture which has the power of forming a combination whenever the circumstances of temperature and light are favourable.

Benefit Association for Ireland.—Messrs. W. Drummond & Sons, Ltd., of 58, Dawson Street, Dublin, and Stirling, Scotland, have initated a Benefit Association for Ireland, with its centre in Dublin. They have now laid the rules of the association before the horticultural and agricultural community of Ireland for their co-operation and support. The objects of the association shall be :—(*a*) Giving assistance to members while out of situations. (*b*) When incapacitated from work by old age, or when out of situation through sickness. (*c*) The granting of aid to widows, orphans, or those who were dependent upon deceased members. Messrs. Drummond & Sons guarantee the association an annual payment of a sum equal to the total subscriptions received in each financial year up to 100 gs. All information may be had of the secretary, Mr. D. MacLeod, 58, Dawson Street, Dublin.

Potato Culture.—At a meeting of the Farmers' Club, under the presidency of Carrington Smith, Esq, a paper written by Mr. Arthur W. Sutton on "The Potato," was read by Mr. M. J. Sutton. He said the Potato was indigenous to Chili, and was first introduced to Europe from the highlands of that country. The present annual production of Potatos in this country would amount to 2½ cwt. per head of the population. The quantity raised in France was three times as great, and in Germany six times; but in those countries the tubers are largely used for distilling. The lecturer went on to speak of the causes of the Potato disease, and the methods of dealing with it. He first dealt with the practice of spraying with sulphate of copper and lime; but he strongly advocated the raising of new disease-resisting varieties from the seed of the Potato Apple. Mr. Sutton finished up by giving some statistics concerning the cost of growing Potatos, as given by farmers in different parts of the country.

The Irish Yew, which resembles the Cypress in habit, is said to have originated at Florence Court, Fermanagh.

Poison in Potato Sprouts.—It is reported that specialists have advised the French Minister of War that the eyes of the Potato, when growing, contain poison, which poison gives rise to grave indisposition in those partaking. It is stated that cases of this kind have terminated fatally. The Minister has therefore issued orders that the eyes shall be carefully removed from those Potatos which have commenced to sprout. This is supposed to be rendered necessary because of the fact that the Potato is a staple article of the French soldier's diet.

Jamaica Oranges.—The annual report on the trade of Jamaica shows that the value of the imports has risen above that of any previous year. There has been a heavy export of Oranges, amounting to 97,000,000, at an estimated value of £169,800, whereas the previous year the value was only £48,700. It is stated that the blizzard of 1894, and the disaster which overtook the Orange groves of Florida, account for the greatly increased output in Jamaica. The Governor of the island says that much yet remains to be learnt concerning the cultivation and proper packing of the fruit.

County Councils and Rare Birds.—Mr. Joseph Collinson pleads in the *National Observer* for the better protection of rare and beautiful birds, and points out that if their destruction is allowed to go on, there will soon be none left in these islands. In this country a large number of birds have become extinct as breeding species during the present century, and others are vanishing altogether. Mr. Collinson has compiled from the newspapers some acts of barbarism which are positively exasperating. Our county councils, he says, would do well to bestir themselves. The powers given them by the Wild Birds Protection Acts of 1880 and 1896 ought to be enforced more vigorously, and it is to be hoped that the Home Secretary will be asked to give rare birds of all kinds protection all the year round.

The Woodbridge Nursery.—We learn that Mr. R. C. Notcutt, F.R.H.S., of the Broughton Road Nursery, Ipswich, has taken over the nursery at Woodbridge, which for over 100 years had been carried on by the late Mr. John Woods and his predecessors. The grounds are well known; they cover an area of some fourteen acres, and the reputation established by the late Mr. Woods for sending out trees, shrubs, and seeds on which perfect reliance can be placed is of the highest. That Mr. Notcutt will maintain that reputation may be relied upon with certainty, and it should be stated that he has arranged to retain the services as foreman of Mr. Wm. Morse, who has been at the nursery for sixteen years, and during the last three years has had sole charge of the tree and shrub department. Mr. Notcutt will continue to carry on his nursery at Broughton Road, Ipswich, where he will continue to pay special attention to Chrysanthemums, pot plants, and cut flowers, as a grower and exhibitor of which he has gained more than local honour.

International Exhibition at Trevueren, Brussels.—This is intended for the promotion of horticulture, market gardening and pomology. The inauguration show is to be held from May 9th to 12th, inclusive. The removal of these exhibits will commence on May 13th, and ought to be concluded by the 15th. Gold medals to the value of 300, 200 and 100 francs will be offered as prizes; also silver-gilt and silver medals, for choice plants remarkable for their rarity, culture or flowering. The schedule shows that prizes are offered in 114 classes for various subjects at this initial show. There will be an exhibition of cut Roses on June 12th, 13th and 14th. Here there are twenty-three classes for Roses. A general exhibition will be held from July 21st to 25th, inclusive. Similar prizes are offered as on the first opening of the international exhibition, in 214 classes, for a great variety of subjects. A Chrysanthemum show will be held during November 6th, 7th and 8th. Shows devoted to market gardening and pomology will be opened on May 15th, June 11th, August 2nd, September 25th respectively. There will also be scientific conferences at which money prizes are offered for essays, &c., on different subjects. The secretary is M. L. Lubbers, superintendent of the Botanic Garden of the State, at Brussels.

SPECIMEN CHRYSANTHEMUMS.

No doubt the *beau ideal* of all growers will to some extent differ; but it may be fairly assumed that the reproduction from an original photo which you gave last week will, in the main, accord with most people's conception of what a specimen Chrysanthemum should be. At the same time it seems to me that the Mrs. G. Rundle, as represented, was not quite up to the mark in respect to the number of flowers. They seemed rather too wide apart. My notion is that to reach perfection, not only should the foliage be well retained, but the flowers ought not to be more widely distributed than just enough to show them off to advantage. Either the individual blooms should have been much larger or largely increased in numbers. As an illustration of the wide divergence of opinion upon this subject, I will relate an incident which occurred at one of the Royal Horticultural Society's meetings at South Kensington during the early part of the seventies. When a small prize was offered for six specimen show Chrysanthemums, I am not quite certain, but think there were only two lots put up, one by Mr. Forsyth consisting of some of the leading varieties of that day, grown after the style of the specimen represented in your last issue, and the other by Mr. James, then of Isleworth. Those of the latter were incurved varieties grown in either No. 24 or 16 pots, after the present style of growing cut blooms for exhibition purposes, three flowers to a plant, and very well done. To the surprise of most and disgust of some present, the judges placed these first and the big specimens second; and although quite contrary to the general procedure, and having seen a fair amount of Chrysanthemum shows since, I cannot bring myself to call in question their decision. The one lot had an artificial look about it; the other looked fresher and more natural. I suppose that as the show boards have been enlarged to properly display the large mops which have come into fashion, gardeners will have to enlarge the house accommodation for the 22 ft. specimen which Brother Jonathan is going to treat us with.—*W. B. G.*

GARDENING MISCELLANY.

CYCLAMEN AT GODINGTON PARK, ASHFORD, KENT.

The Cyclamen is a most popular flower and growing more so every year, and rightly too when seen as here. No florists' flower is more useful, and none other at this season of the year produces such a succession of flowers which last a considerable time than these. I was most agreeably surprised to find some 200 to 300 well-grown plants, some with as many as six dozen expanded flowers in 32-pots, and many in 60-pots carrying two dozen. Such grand varieties as Sutton's Butterfly, the best of whites, the deep coloured Vulcan, the delicate Salmon Queen, and this giant strain are everything one could wish. Mr. William Frost is to be congratulated upon his success. The dozen plants he showed in London, at the Chrysanthemum Show at the Aquarium on December 3rd, astonished many of our brother gardeners and professional growers, and for which he was most worthily awarded 1st prize, and which were only a few of the many grand examples of Cyclamen culture as seen here..—*Rusticus.*

APPLE BRABANT BELLEFLEUR.

British Apples become scarce by the time that March comes upon us; nevertheless, there are several varieties that maintain their reputation for another three months under good treatment. Some samples of the above that reached us recently from a correspondent were both attractive in colour, in excellent preservation and palatable. The fruits are of large size, varying in shape from conical to oblate, the former being the prevalent form. The sunny cheek at this season of the year is bright red, streaked with crimson, while the other is clear yellow. The flesh is of a clear yellowish-white or almost pure white for an Apple, crisp, tender, juicy and slightly acidulated rather than sweet, a quality which should make it useful for culinary purposes, even if it should not please the palate of those who give preference to such as have the sweetness of Cox's Orange Pippin. The variety is much liked by a large number of growers for late use.

AESCHYNANTHUS LOBBII.

Less attention is paid to the species of Aeschynanthus as basket plants for the stove, than they deserve. Numerous species have been introduced to cultivation at one time or other, and that under notice, though not the most gorgeous, is undoubtably one of the most easily managed. It only wants a compost of peat and loam, to be suspended in a basket from the roof of an intermediate or moderately warm stove, and to be attended to with water. The ovate, light green, bronzy tinted, leathery leaves abundantly clothe the drooping stems, which are slender and about a foot long. The curved and tubular flowers are borne in succession from the axils of the leaves. The outer face is bright scarlet, and the interior yellow, spotted with crimson in the throat of the flower. A plant has been flowering for months past in the garden of E. H. Watts., Esq., Devonhurst, Chiswick, under the care of Mr. J. Gibson.

CONOCLINIUM IANTHINUM OR HEBECLINIUM IANTHINUM.

Amongst the many novelties of grand culture at Hothfield Gardens, Ashford, Kent, is the above. There are, I believe, only two species in commerce, and both are well worth growing as winter-flowering stove plants. The other is C. atrorubens, which varies from the one above mentioned by being slightly coarser in growth, more woolly in the leaf, and a shade darker in colour, which is a lavender-blue. C. ianthinum, as seen at Hothfield, in grand plants in 32-pots, about 2 ft. high, as much through, and producing eight to nine heads of flowers like gigantic Ageratum trusses, will be found a useful plant for winter work. This grand old place has greatly improved during these last few years in every department, and will continue to do so in the practical hands of Mr. William Craik.—*Rusticus.*

FREESIA REFRACTA ALBA.

For some time past a splendid batch of this popular plant has been a feature of one of the houses at The Croft, Park Hill, Ealing, the residence of T. Lilley, Esq. The bulbs had been more thinly potted than we are accustomed to see them, there being only about five in each 48 size pot. The plants were brought on slowly, and must have been admirably treated in every respect, judging from the remarkably vigorous growth they made. The leaves would remind one of Crocosmia aurea when well grown under favourable conditions, or even of Gladiolus Colvillei. The stems, leaves, and flowers varied from 18 in. to 2 ft. in height or more; the trusses of flowers were correspondingly large, deliciously fragrant, and in every way testified to the ability of the gardener, Mr. John Hay. Richardia africana was equally vigorous, the strength and bulk of the leaf stalks being remarkable. The spathes were of good substance and measured 6 in. across. Mr. Hay evidently understands these soft-wooded plants, but he is also an excellent fruit and vegetable gardener.

MESSRS. LAING'S CYCLAMEN.

The other day we received samples of the strain of Cyclamen grown by Messrs. J. Laing & Sons, Forest Hill, London. The colours ranged from pure white to dark reddish-crimson. The latter belonged to the ordinary C. persicum type, as a giant strain of a real crimson or maroon-crimson still remains a desideratum. Intensity of colour for some reason or other seems to cling to the smaller size of flowers. Nevertheless the floriferous character of the plants makes compensation for lack of size. One or two shades of an intense purple or reddish-purple were also very pretty. Then came white and blush varieties with a dark purple base, and which serve to increase the number of colours, adding value to the strain. The giant strain was also represented by white flowers with a purple base. The pure white flowers belonging to the giant strain are always highly appreciated in every establishment. The flowers in this instance were notable for the great breadth of their segments, and the consequent massiveness of the flowers. The popularity of the Cyclamen is increasing every year, and we may assume that to be a true indication of their usefulness.

BEGONIA GLOIRE DE SCEAUX.

The bold character of the bronzy olive-green leaves of this garden hybrid are very striking in themselves; but they become more valuable from a decorative point of view in association with flowers. The latter in themselves would be easy to surpass by those of many garden plants, but owe their value in a large measure by association with such fine foliage. Each leaf is of great size, and this is increased in proportion to good cultivation; it is obliquely heart-shaped and purple beneath. For the last few years great attention has been given to this Continental hybrid the popularity in its favour setting in practically since the first group of it made its appearance in public. It is now cared for and well-grown in many private establishments and elsewhere; and this comes as a result of what is likely to happen when a neglected plant is taken up by a sympathetic cultivator, and its capabilities shown off to the best advantage. These facts were again brought to mind on seeing some fine, bushy and pyramidal specimens 1½ ft. to 2½ ft. in height in the gardens at Falkland Park, South Norwood Hill.

SUCCESSFUL CULTURE OF CANNAS.

The beautiful new forms of Canna are yearly becoming more popular. Those of Crozy's hybrids, with dwarf habit and gorgeous flowers in the hands of the florist, are rapidly gaining favour both for bedding out and for decorative purposes. A happy idea struck Mr. Fox, the gardener of Batteshall Mount, Worcester, last summer in connection with these beautiful and useful subjects. A new span-roof house having been erected and finished too late for the purpose he intended it, for a stop-gap arrangement he planted out a bed throughout the centre of the house, intermixing with them Lilium auratum. The result was a grand show. The Cannas assumed, with free root run, noble proportions, reaching 6 ft. to 8 ft. high, with correspondingly firm spikes of bloom; not only did the plants flower well, but long. I saw in November cut spikes a foot in length; the flowers were beautifully marked, stout and firm in texture.—*A.P.*

GOLD LACED POLYANTHUS.

A question was asked in The Gardening World of February 27th concerning the qualities of Polyanthus Middleton Favourite as compared with Mrs. Brownhill. Middleton Favourite is a red ground, well laced with gold, a free grower, and one of the best of its class or colour in cultivation. Mrs. Brownhill is a black ground, well laced with gold, and the best of that colour grown. The following sorts are grown in our neighbourhood:—Mrs. Brownhill, Middleton Favourite, Cheshire Favourite, Lancer, Exile, Sidney Smith, George IV., William IV., and President, besides some seedlings that are not yet named.—*George Thornley, Hebers, Middleton.*

CORDYLINE ARGENTEO-STRIATA.

A very handsome and somewhat rare Cordyline is this, the merits of which should be made known far and wide. The leaves are linear-lanceolate in shape, acuminate, and gracefully arched over from the stem. The variegation consists of narrow lines of silvery-white running from base to apex. The plant naturally takes on a symmetrical habit, and holds its leaves well to the bottom.

VEGETABLE CALENDAR.

A few remarks on seed sowing may be useful to beginners at this important season in the kitchen garden. It is always desirable to make an early start with every crop, but the state of the soil and the surrounding condition of atmosphere must be taken into consideration if early germination is expected. The barometer should be studied for settled weather, and a thermometer a foot under ground will give a useful guide to the degree of warmth. When this rises to 40° or 45° all hardy plants will germinate, and when the heat reaches between 45° and 50° germination soon takes place. Where it is desirable to have an early plant, the beds or rows should be covered at nights after sunny days, this will preserve a much more equable temperature and facilitate growth. The nature of the soil must also be considered. A cold heavy soil will require special care, or the loss of good seed will be the result. In such a case it is always advisable to cover the seed with a prepared light sandy soil. In drawing the drills the point of the hoe and not the back of a rake should be used, as the latter method forms a firm channel in

heavy land through which the water does not pass away freely, and this causes many seeds to rot during cold weather. Light soils give little trouble or anxiety, but in all cases it is desirable to have a light covering over seeds at this season, as this is more readily permeated by the warmth of the atmosphere, the average temperature of which is several degrees higher than the ground at this season of the year.

ONIONS —Where the main crop has not been got in, no time should be lost. As soon as the ground gets into the condition that it can be freely trod upon without binding, it will be quite safe to sow. A good dressing of soot, wood ashes, and guano raked into the surface will be a great help to the young crop. Sow in drills 8 in. apart and tread the seed in firmly.

LETTUCE.—Advantage should have been taken of the late fine weather to transplant the early spring crop raised from seed sown in frames in autumn. Special precautions must be taken against slugs as they are very fond of this crop and soon do irreparable mischief among the young plants. The hoe should be frequently used among the growing crops of this plant. Another sowing, both of Cos and Cabbage kinds should also be made in a warm position outside.

POTATOS.—A warm sheltered position must be selected for this crop. A method I can recommend for growing a few rows for an early supply is to take out trenches as for Celery, and fill the bottoms with six inches of bush tree prunings, and over this a layer of long dung, then a few inches of soil, on which to plant some of the strongest sets, covering these with fine pulverised soil. By adopting this plan I have dug Potatos in the third week in May of excellent quality. A watering may be necessary during dry weather at the end of April or beginning of May, but the results are worth the trouble. Successional sowings of Peas and Beans should be made, also small sowings of Celery, Brussels Sprouts, Leeks, Turnips, Cauliflowers, Cabbages, and Carrots; good beds of Radishes, and Spinach may be sown, the latter between Peas or other crops that do not fill the whole ground.—*J. R.*

THE PLANT HOUSES.

The Cool Conservatory.

THERE should be no lack of flowers in the conservatory now, for the bulk of the forced material which has only been forwarded gently during the winter is now in flower. The mild season has exercised a hastening effect upon under-glass plants, as well as upon those growing in the open. The present season demands a deal of watchful care in dealing with this department, and constant attention must be paid to ventilation. Cold nights will call for a little fire-heat, in order to keep the house up to about 45° Fahr., but this must be applied with great caution, since the dryness and aridity of fire heat materially shorten the life of the blooms. Turn off the fire-heat the first thing in the morning if the day promises to be fine. This will allow the pipes time to cool before the sun is very high in the heavens, and the temperature of the house begins to rise rapidly as the result.

In bright days there will be a considerable difference between the night and the day temperature, even if air is given freely, but this will do no great harm. The same cannot be said of draughts, which are easily generated by incautious opening of the ventilators. If the wind is keen and cold, the top ventilators on one side only, and that the sunny one, should be opened.

SHADING —Whilst ordinary plant houses are not likely to suffer for another fortnight from the effects of the sun, it is high time that some of the blinds were fixed to the conservatory, as the flowers must be shielded from the bright sun if they are to last for any length of time. To commence with, the blinds may be let down from about 11 a m. until 3 p.m., just for the brightest part of the day.

WATERING is daily becoming a more arduous task, and one that must not on any account be neglected. The bulk of it should be performed in the morning, until the end of the month, but a second look round will be necessary about 3 p.m. Manure water may be applied occasionally with advantage to any plant that is developing its flowers, but not to those upon which the flowers are already expanded, as they are then too far advanced to benefit by it.

LAPAGERIAS.—Attend closely to the tying-in of these at frequent intervals. If pruning was judiciously performed, there should be plenty of room for laying in the young growths without undue crowding. The shoots should not be allowed to cross or intertwine, but must be laid in side by side with each other. This will admit of some of the growths being loosened and allowed to hang down when in flower, the general effect being thereby greatly improved. Be ever on the watch for the appearance of green-fly, and if the plants are so situated that a syringing can be occasionally given them, do not fail to pay this little attention, which will go far towards keeping them clean and in good health. Growths from the bottom must be watched for, and protected as soon as seen, otherwise they will be likely to fall a prey to slugs. These little pests may be kept at bay, however, by enclosing the young shoot with a little cotton wool, or by sprinkling a little salt on the soil so as to form a ring of about 1½ in. in diameter round it. The slugs will not cross this.

AZALEAS.—Not a few growers fail to get the utmost out of their plants by neglecting them after the flowers have fallen. Sometimes the poor plants are huddled into cold draughty houses where growth is much retarded, and the "set" of buds towards the end of the summer poor as a natural consequence. This is not the way to treat them. If potting is required, it is best to catch the plants just after the flowers have fallen, but before new growth has commenced. If no potting is required the plants should be removed to a light pit where they will get a gentle heat. Here the syringe may be plied freely among them morning and afternoon, and the new growth will thus be made under the most auspicious circumstances.

ERICAS AND EPACRISES that are now out of flower must be cut back at once close to the old wood. It is only by a regular annual pruning that symmetrical plants can be obtained. After pruning place the plants in a gentle heat. A heated frame is a capital place, as plenty of light is obtainable. An occasional syringing will be helpful.

FUCHSIAS, whilst they are great favourites for pot work are not utilised as rafter and pillar plants to the extent that they might be. Taken up with a single stem, and without stopping, they soon reach a considerable length. Each autumn it will be necessary to spur the lateral growths back to within a couple of eyes of their bases. Plants treated in this way have broken strongly into growth and are advancing rapidly. Watch for mealy bug, which finds a congenial refuge amongst the roughened bark of the stems.

Pits and Frames.

HERBACEOUS CALCEOLARIAS.—If these have not received their final shift it must be given them at once, as if potting is delayed for too long, and until the flower stems begin to make their appearance, the result will be an over-luxuriance of foliage at the expense of the flowers. For the largest plants a 10-in. pot may be allowed, whilst for those of medium strength an 8-in. size will be amply roomy enough. The soil should consist of mellow loam two parts, and leaf soil one part. Add a fair allowance of sand and a sprinkling of soot. After potting, the plants may be kept a trifle warmer than before, but still not coddled. A place in a cold frame on a bottom of ashes suits them well. After the check of potting has once been surmounted air must be given freely. Spread a piece of thin tiffany over the glass so as to prevent the plants from suffering from the effects of the sun.

Other plants in 32-pots that are too forward to warrant potting may be allowed to remain as they are. They will bloom rather earlier than the others, and, moreover, being in smaller pots, will come in very useful for decorative work for which the others, on account of their size, are unfitted. They will need liberal feeding in order to get the most out of them.

ACHIMENES.—Nothing will be gained by keeping the tubercles any longer in the old dry soil. They should be picked out and potted up at once. Suitable successions may be easily arranged by putting a part of them in heat, and allowing the rest to come on just as they like in a cold frame. The earliest batch started at the beginning of February is pushing away nicely. Do not delay staking, as it is far better to do this too soon than too late.

CLERODENDRON FALLAX.—Seed sown in February has now produced sturdy little plants, which must be potted off singly into thumb pots at once. Use a compost of equal parts of loam and leaf soil with sand. A good batch of this Clerodendron will be of the utmost service in the autumn. Bear in mind that it revels in a high temperature, with plenty of moisture both at the root and in the atmosphere. A bottom heat of about 70° is also a great help.

Old plants that are to be grown on for another season have now made growths 2 in. or 3 in. in length. They should therefore be potted up at once. Shake as much of the old soil away as possible, and it will then be found that a pot of similar size to that accorded them last summer will accommodate them this. We do not believe in overpotting, as the plants not only do not flower so well, but also do not stand the low temperatures of the conservatory during the latter part of the autumn so well.—*A. S. G.*

THE ORCHID HOUSES.

SHADING.—If not already done, no time should be lost in getting the blinds into position for use during the middle of the bright sunny days which we are most likely to be favoured with during this month. Shading of some kind is as essential to plants grown under glass as are water and air, if the cultivator is to be successful. At the same time it can be overdone. Therefore it must be attended to with great care and consideration, only running the blinds down when the sun is very powerful. This will obviate giving top air, which would be a most injudicious proceeding during this month when cold east winds are prevalent.

FIRING.—Whilst it is necessary to have good fires during the cold nights we are still getting, they should be drawn, say at 9 o'clock on all bright mornings. This with the judicious use of the blinds keeps the temperature from running up too high, and causing the plants to start prematurely into growth.

GENERAL WORK.—Push along with the potting of all plants that require fresh material, such as Dendrobium wardianum, D. nobile, D. Ainsworthii, D. aureum, &c., that have done flowering; Cattleya Trianaei as it goes out of bloom; C. gigas that was not done in August, and the later flowering Laelia anceps. In fact, anything that to the cultivator's eye requires a fresh supply of material to root into, should be afforded it as the plants pass out of bloom, and are beginning to make new growths and fresh roots.

Continuing my dissertation on the best twelve Orchids for beginners, I come to Cymbidiums; and in taking C. lowianum, I am actuated by a desire to put forward only those varieties that under ordinary circumstances will give the best results for the least possible outlay. The one under notice is a most beautiful species, and one that only requires the temperature of the Cattleya house to grow it to perfection. The only possible thing that can be urged against it, is that it takes up a good bit of room. However, being evergreen plants, they are always handsome whether in or out of bloom.

We grow ours in a compost consisting of peat, loam, dried cow dung, chopped moss, and bits of crocks broken up fine. Being a moisture-loving plant, the drainage should be put in carefully and well, so that the water may pass freely away. Yet it is not advisable to put in more than 2 in, as being a plant that makes large fleshy roots and plenty of them they require plenty of room, and for that reason should not be too much confined.

CYPRIPEDIUMS.—In taking C. insigne I am atraid I shall be considered a bit behindhand; yet for all purposes what is there to beat some of the varieties? Take C. i. punctatum violaceum, and some of the montanum forms for instance; besides, everyone grows it, and that easily too. Some of the best plants I have seen were grown in cold pits all the summer, with just a little whitening on the glass for shade. About the end of September they were transferred to a warm greenhouse, and at Christmas they were a pleasure to behold.

CULTURE.—Use compost as recommended for Cypripediums. Give plenty of water when growing, and keep the atmosphere well charged with moisture, and there you are.—*C.*

HINTS FOR AMATEURS.

Chrysanthemums.—Young plants that are in large 60-sized pots will now require very careful looking after. The best place for them is, of course, a cold frame. To grow them in heat is a practice that will be sure to result in disappointment. If the frame is of so great a depth that the plants would be far removed from the glass, if stood upon the bottom, it will be necessary to erect a temporary stage to bring them up close to the glass. Give plenty of air on fine days, but avoid cold draughts if possible. If the plants are subjected to such experiences as the latter, mildew will be almost sure to make its appearance, and then good bye to the lower leaves. Accordingly the first spot of mildew must be looked for, and as soon as seen dusted over with sulphur, which will at least help to prevent its spread.

Later Cuttings which have been inserted several in a pot, and are now rooted, should be potted off singly into 60-sized pots at the first opportunity. They will make good bush plants. Stopping need not trouble the amateur just now. Let the plants grow on for a while, and then cut them back to within about 3 in. of the ground. This may be done about the third week in March. They will then make good bushy and dwarf specimens.

Lapagerias.—As these are now growing away vigorously, they will require a good deal of attention with regard to tying. The growths move pretty fast and soon commence to twine. Hence if any length of time is suffered to elapse before they are tied in, they become tangled in such a manner that it is impossible to straighten them without bruising the tender stems and leaves. Go over the plants at least once a week, as this is not a bit too often if matters are to be kept straight. If the other plants in the house permit it, give a syringing on fine mornings. Green fly is apt to be rather troublesome, and an occasional washing will assist in keeping it down.

Ericas that have gone out of flower, should be pruned at once. Cut the old flowering growths back nearly to the point at which they originated. In doing this, take care to preserve the symmetrical appearance of the plants. After pruning, they should be placed in a gentle heat and given an occasional sprinkling with the syringe to assist them in starting into growth. Naturally enough, rather less water will be required after so much of the tops has been cut away, but the plants must on no account be allowed to get dry, or they will inevitably succumb. The water they get from the syringe will not be enough of itself, and it is apt to be somewhat deceiving since it makes the tops wet, whilst the interior of the ball may be dry. It is often difficult to tell when Heaths really want water, for the pots will not give the familiar hollow sound that to the practised ear bespeaks the want of water, until the balls are dust dry. When this stage is arrived at, the mischief is done, and a deluge of water immediately afterwards, which is the most likely thing for an amateur to do, only aggravates the evil. The surest and most satisfactory method of ascertaining whether an Erica wants water or not is to lift the pot in the hands by the rim. Its weight will tell in a moment if the plant needs more moisture. A little practice will soon enable the operator to discern what is required.

Fuchsias.—If these have not been potted, they must not be neglected any longer, as they are breaking strongly even where they have been kept back as much as possible. Prune the plants into shape by cutting back the growths about half way in such a manner as to give an even outline. Very strong growths may be pruned rather harder than the weak ones, as this will help to maintain the balance of even distribution of energy to all parts of the plant. After pruning, potting may be proceeded with. Shake away as much of the old soil as possible and transfer into pots of a fair size, not too large, for this is a point concerning which amateurs not infrequently make mistakes, as many have an idea that very large pots are necessary. The exact size will, of course, depend upon the use to which the Fuchsias are destined to be put. Thus if they are intended for bedding purposes, the pots should be as small as possible. A moment's reflection will reveal the cause for this, viz., that the period during which the plants will be in pots will be comparatively short, until the beginning of June at the latest. A comparatively confined space will therefore meet all requirements for the ten weeks or so that remain between the bedding-out time and the present.

Plants that are intended for conservatory decoration, and which will have to pass through the whole season in pots, may have a little more room given them, but even in this case it must not be overdone. An 8-in. pot is quite large enough to contain a really good specimen; if trained in pyramidal fashion, a shapely plant from 4 ft. to 5 ft. in height may be accommodated in this size. Other sizes of plants and pots will be in proportion. A 32-pot is amply big enough for a small greenhouse, and if proper feeding is given, some very neat specimens may be obtained. To give a plant a lot of room at the root and plenty of rich soil is to induce it to make unduly rank growth, which would defeat the ends in view, as such subjects rarely flower so well as others that have their vigour restrained within proper bounds.

The compost may consist of three parts of good mellow loam, one part of leaf soil, and a similar proportion of old horse droppings or dried cow manure, with a sprinkling of coarse river sand.

After potting, Fuchsias require a gentle heat to enable them to do well. A light house or pit with a temperature of about 55° by night suits them well. A vinery that is being forced usually affords congenial accommodation, but as the shade from the leaves of the Vines begins to get dense the Fuchsias must be taken out, or they are likely to become drawn.

Cuttings.—As soon as the cuttings taken in February have rooted, which fact may be easily ascertained by knocking one potful gently out and taking a peep at the soil next to the sides of the pots where the roots, if there are any made, are sure to be, they must be potted off singly. A 3-in. sized pot will make a good shift. Use rather light soil, and do not pot too firmly. Return the plants into a gentle heat, shade them carefully, and sprinkle them occasionally by means of the syringe.

The latter remark will apply to all the Fuchsias whether young or old. Syringing is not only very helpful in keeping down insect pests, but it serves to cleanse the foliage of dust and dirt.

Bedding Calceolarias.—If the cuttings are very crowded it will be a good plan to give them an intermediate shift. Make up a bed of soil in a warm corner outside, and put the plants into it, allowing from 6 in. to 8 in. of space each way. This bed must be enclosed on the sides with boards over the top of which a few light spars may be thrown. Then in the event of frost, a few mats may easily be thrown over, and the plants will be as safe as if they were still in the frames. This practice is not infrequently carried out by gardeners who want exceptionally bushy and forward plants.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Cocoa-nut Fibre for Potting.—Will you tell me if Cocoa-nut fibre refuse is suitable for mixing with the soil for potting plants, more especially Ferns.—*Q.*

You may mix a little of the fibre with the soil used for potting young Ferns, with excellent results. The young roots take to it very kindly. For plants which have to stay some time in their pots, on the other hand, it is not at all a good plan to use it in mixture with the soil, and we should strongly advise you not to try it. The fibre soon decays, and renders the compost, of which it is a part, sour and unwholesome.

Stopping and Pinching.—*Onion*, in a very amusing communication asks how it is that if you pinch a man you will make him move, but if you pinch a plant you only stop it.

Dividing Maidenhair Ferns.—You may split up your plants as soon as you like, *Fay*. We do not advise too much division, or the plants will be a long time before they pick up strength, but a plant in a thirty-two pot may easily be divided into four pieces, each of which may be put in a small forty-eight. Shade the divisions carefully, and look closely to the watering, but do not syringe or sprinkle them. This latter treatment does not suit Adiantums, and its effect will soon be seen in the way in which the fronds go off.

Pimelea spectabilis.—At what time of the year does this plant flower? I have a nice specimen of it, which was given me last autumn, and there are no signs of flowers yet. I am keeping it in a greenhouse which has had a temperature of about 40° Fahr by night throughout the winter. Is this suitable for it? *Henry R.*

Pimelea spectabilis flowers in May or thereabouts, according to the treatment it receives. It is a greenhouse plant and your house will suit it very well.

Plants Underneath a Greenhouse Stage.—*T.R.S.* wishes to know what plants would succeed under a greenhouse stage, where there is not much light. He would like something dwarf.

Ferns might do if there was plenty of light and not too much drip from overhead, through the plants on the stage being watered, but as to that we cannot speak definitely without further particulars. Possibly the best thing would be Selaginella kraussiana. This will do very well in such a position, and nothing could look prettier.

Three Good Crotons.—Please give me the names of three good Crotons that would look well as table plants. They should be easy to grow, as I have not had much experience with them. *McAllister.*

You will find C. Warrenii, C. Queen Victoria, and C. Weismanni as good as any. These three sorts will furnish a good variety of habit as well as colour. All three are very showy table plants when well grown.

Chionodoxa Luciliae.—You are quite right in your surmise, *P.*; this charming Chionodoxa does very well in pots, and may be then had in bloom very early in the year with very little trouble.

Palm for Window.—Cocos weddeliana is a very pretty Palm, *N.O., Derby*, but you would find it rather difficult to manage as a window plant. Kentia fosteriana, or K. belmoreana, although scarcely so elegant in appearance as the Cocos, are capable of standing the vicissitudes of window life much better.

Pentstemons for bedding.—You could not well have a more showy subject that Pentstemons to fill a bed with, *Y., Oxon.* They look best, to our way of thinking, when a collection of varieties is grown, and these are mixed indiscriminately. Planted in rows or in small beds of one colour they are likewise very effective.

Grafting Clay.—*G. Wilson* asks how grafting clay is made, that is if anything is mixed with ordinary clay.

Clay by itself, no matter how tough and well kneaded, would not be strong enough. It would stick very well as long as it was wet, but when it became dry would crack and fall off in pieces. Accordingly it is necessary to mix something with the clay to make it more adhesive. Two parts of clay, and one of cow manure well mixed together, and worked up into a plastic mass answer well. Some cultivators, to make the "clay" tougher, add some finely chopped hay. Grafting clay prepared in this way does not fall off when dry.

Spiraea japonica.—The plant is certainly of some good, *F. N.*, after the flowers have been taken off, but it will be better out of the pot. It should be planted out presently in the open garden, and allowed to grow as it likes. It will do no good at all if left cooped up in a pot, for you will never be able to keep it properly supplied with water. It will not be fit for forcing again next autumn, but it will the autumn after, when it may be lifted, potted up, and placed in heat.

Celosia pyramidalis plumosa.—*T. Emerson* made a note of some Celosias, which were used as bedding plants in the London Parks last year, and was greatly struck by the fine appearance they presented. He wishes to know how he can obtain plants like them for his own garden, and whether they would be likely to do with him.

A sowing of seed should be made at once. Sow rather thinly, for the plants have to get fully an inch in height before they are strong enough to be potted off. Place the seed pan in a heat of not less than 60° Fahr., if 65° so much the better. Be careful not to let the plants sustain a check of any kind, but pot

them on until they are in 32 sized pots, when they will be ready for anything. There should be no difficulty about their doing well, provided the soil is fairly good, and the bed is not overhung by trees.

Carnations.—Many Carnation growers have cause to complain this year of layers looking sickly. I think the cause may be either or neither of the things you suggest to "L. L. A." (p. 424). I grow several thousands—border varieties, and pot varieties of all sections—and I find hundreds of my layers are sickly looking and without roots. They were layered by an expert hand, carefully, and in good time—July and August—and gave every promise of a good stock; but when we lifted we found a very large proportion without any roots whatever, and now such assume a very sickly appearance. I can only suggest one reason. The season mentioned was one of drought and great heat, and the earlier ones to be layered seem to have suffered most. I imagine the great heat and drought had an injurious effect, although we plied the hose freely on the newly layered beds. My Malmaison and other choice pot varieties suffered similarly, and here I must mention I departed from my usual practice. Hitherto I have always layered this section in frames, shading from bright sun and syringing, and the layers have been ready to pot in about a month; but last year I left them exposed, and did not shade, but syringed and kept moist. The result was they took longer to root, and a number failed to root at all. 'Tis an ill wind that blows nobody good, though, and the heat and dry weather which proved disastrous to some layers, induced others to make riper growth and produce flower stems, with the result that I have not been without blooms of Uriah Pike, Souv. de la Malmaison and others since October. I was able easily in January to cut several dozen good blooms of U. Pike to form a ballroom bouquet. Perhaps a few remarks in another issue will not be amiss as to the best means of treating Uriah Pike as a winter flowering variety, which is very simply done.—*A. P.*

Name of Apple.—*Subscriber*: Dutch Mignonne.

A FIELD OF PAEONIES.

THE value of Paeonies for garden decoration has risen immensely within the last ten or fifteen years. We have had single Paeonies for a great number of years, but they were not very widely cultivated. The double form of Paeonia officinalis has been known for a great many years, and the glory of many a cottage garden during May or June, according to locality. Semi-double varieties of the Moutan Paeony were also grown in private establishments to some extent; but it is more to the remarkable advance which has been made in P. albiflora that we wish to allude. The wild form, a native of Siberia, had white flowers, and was remarkable for the bright red colour of its young stems and leaves. Its numerous progeny, now numbering some hundreds, probably have the same beautiful tints in spring, and might well be associated with Daffodils or other white or yellow flowers.

The numerous, grand double forms of P. albiflora can be grown in any good garden soil, and will even flourish in that of a poor or sandy nature provided it is well enriched with farmyard manure. Some idea of the extent to which they are cultivated may be gleaned from the fact that Messrs. Kelway & Son, Langport, Somerset, cultivate ten acres of them in various soils, and therefore under different conditions. The accompanying illustration, lent by them, shows a portion of a field of these Paeonies in bloom. In Messrs. Kelway's nurseries some are grown in a clay soil, overlying white lias rock; some are on a heavy soil about a foot in depth, on a bed of 6 ft. of gravel; some on a medium loam on a bed of 6 ft. of yellow sand; and others on a heavy soil of about 12 in. in depth, on a bed of blue clay. On all of these soils they seem to do equally well with the use of an artificial manure, which to some extent is also used by the customers of the firm. The free use of farmyard or stable manure is, however, responsible for the splendid results obtained every year by the firm.

When the spring or early summer happens to be dry, a liberal supply of water is very beneficial in assisting the Paeonies during the flowering period, as well as in the development of strong crowns to produce good flowers the following season. This is Messrs. Kelway's practice, and their fine exhibits at the Temple and other London shows amply demonstrate their successful cultivation. A mulching of manure saves a deal of labour in watering, and is always of great advantage to the plants.

We have already alluded to the ornamental character of the young stems and foliage, but the latter is attractive at all stages, but particularly in spring, and again in late summer and autumn, when it proves valuable for church decorations at harvest thanksgivings and other festivals. The plants vary very much in their growth; the shoots of the several varieties come up in various shades of green, purple and red, varying as the season advances, and maintaining their decorative value till Christmas or the new year. P. corallina, the British species, is very distinct in its way, having leaves of a pea-green colour, changing to pink. The seed pods are also very striking, being more bulky than those of other kinds. When mature they expand and expose two rows of bright, shining seeds resembling the colour of an amethyst. The seeds remain attached to the capsules for a long time, so that the trusses of fruit when cut with a foot of stem prove very useful for decorative work, and are highly ornamental if left on the plant.

The flowers of many of the varieties of P. albiflora are distinctly and agreeably scented, as we have repeatedly determined in collections near London, including the trials at Chiswick. The bulk of Messrs. Kelway's collection consists of the recently-raised double varieties of the Siberian P. albiflora; and for outdoor culture, the great popularity of Paeonies within recent years is due to this extensive and beautiful race of hardy flowers.

A FIELD OF PAEONIES

Holly has been exceptionally well berried this year, and has fetched from £6 to £10 per ton.

EARLY FLOWERS AT TOTTENHAM.

HARDY flowers are well cared for at Mr. T. S. Ware's establishment at Hale Farm Nurseries, Tottenham, and no matter at what time a visit is paid there is always something to be seen in flower amongst the extensive collection of bulbous and other Alpine and herbaceous plants. The inclemency of the weather with which March, true to ancient traditions, has been ushered in this season has sorely knocked about those subjects which had been invited by a genial February to make their appearance above ground. The Hellebores, as may be expected, hold their own. The dark plum colour of H. colchicus is very distinct and pretty. H. abchasicus exhibits a dull purple suffused with green.

The Chionodoxas, as may well be supposed, were much in evidence, and their bright flowers were peeping out from numerous nooks and crannies in the rockery, as well as from other parts of the grounds, where they prove most charming weeds. Once they are planted it becomes a matter of difficulty to get rid of them, so quickly do they increase. Several clumps of C. Luciliae, for instance, were pointed out to us as having proceeded from a single bulb last season, which had seeded freely. The seedlings were coming still up all round for a radius of fully eight inches from the parent bulb. One fine form of C. Luciliae was bearing flowers fully as large as those of C. gigantea, commonly, but erroneously, known as C. Alleni. The segments, however, are narrower, and the whole flower is of a lighter blue, whilst the plant is more vigorous in habit. C. sardensis was likewise looking very gay, and the two albinos, C. L. alba, and C. s. alba, must not pass without due mention, for with the pearly white of their flowers they specially merit the popular name of the members of the genus, viz., "Glory of the Snow."

Of the Snowdrops Galanthus Ikariae caught our gaze. This is certainly distinct from anything else. There is no mistaking the massive recurving leaves, which are fully three quarters of an inch in diameter. The flowers are large and pure white, except for a slight tinging of green on the inner sides of the inner segments. Anemone blanda pallida, as the varietal name denotes, is a light-coloured form of A. blanda. Of the Scillas S. bifolia was nearly over, though S. b. grandiflora and S. b. Whitalli were still in bloom. The latter has flowers of a deeper blue than the type. S. sibirica alba was likewise very noticeable. Leucoium carpaticum was nearly over, only a few of the later bulbs being in flower. Iris reticulata in the open had succumbed, but I. r. Krelagei was still fully sustaining its credit in a sheltered nook.

Passing to the glass department, where various subjects were cultivated in pots, and protected from stress of weather, a fine display of flowers greeted us. First and foremost was a batch of various Narcissi, in seven and eight in. pots, that for vigour of growth, abundance of flower, and general excellence would be hard to beat. N. princeps, N. Sir Watkin, N. telamonius plenus, N. moschatus, N. tortuosus, N. incomparabilis plenus, and N. sulphureus plenus were all a picture. Special mention should be made of N. maximus, one of the largest of the Narcissi, and one of the most useful for cutting from. It has very large, rich yellow flowers, and forces well. N. incomparabilis Leedsi, with narrow bright lemon yellow perianth segments, and orange hued cup or corona, is very chaste. N. i. Cynosure, or as it is sometimes called N. albidus Leedsi, has primrose yellow segments, and a deeper yellow cup, margined with an irregular band of rich orange. N. poeticus ornatus was in grand form, and it has never fallen to our lot to see a better batch of forced material. Passing to N. minimus and N. cyclamineus, which looked smaller than ever by the side of their giant relatives, the contrast was very striking. Both these charming miniatures are worthy of all the praise lavished upon them at various times.

Primula denticulata alba, as grown at Tottenham, is more vigorous than the type, especially in the size and substance of the flower scape, and the size of the umbels. After a great deal of trouble the lilac exhibited by the blooms of the type has been eliminated and a pure white obtained. In the same house a variety of Iris stylosa, named Elizabethiae was flowering. This appears to be identical with I. s. speciosa. It has the same narrow foliage, and the same build of flower, the segments being much narrower and of less substance than those of the species.

Several Saxifragas in pots were just commencing to flowers; of these the deep yellow flowers produced in short dense spikes springing from the mossy tufts of S. sancta were very conspicuous. S. apiculata has flowers nearly twice the size of the latter, and much lighter yellow in hue. It is to be frequently met with under the name of S. Mayi. S. burseriana was over, for owing to the mild February this species was very early this year. S. Boydi, and S. b. alba were still in flower, and their yellow and white flowers, respectively, were very gay. S. oppositifolia was also just commencing to expand its blooms. We must not forget to make mention of Androsace carnea, with its tufts of pink flowers closely clinging to earth, and evidently too modest to look upwards.

In a frame we came across a batch of a charming little plant that is but very little known, viz., Ranunculus anemonoides. When grown in pots and allowed to come along gradually, the flowers appear about the end of February, the leaves coming up later. The blooms vary from 1 in. to 1½ in. in diameter, and are a delicate lilac in colour. They are borne singly on peduncles from 3 in. to 5 in. in height. The foliage closely resembles that of R. rutaefolius, which is of course a much later species in blooming. R. anemonoides was brought from the Styrian Alps in 1883, so that it is by no means a new thing with regard to age.

The genus Scoliopus is a complete stranger to the majority of gardens, although it has the honour of containing only two species. S. Bigelovii is both a curious and a pretty plant, and would undoubtedly become a favourite but for the evil odour exhaled by the flower, and which is more like putrid fish than anything else. It is closely allied to the Trilliums and has lanceolate leaves spotted heavily and irregularly with dull purple. The outer perianth segments are of medium width, and reflexing; the inner are very narrow and erect. Both are green in colour, and spotted and striped with purple maroon. The stigma is very distinct on account of the great development of the three spreading lobes, which are each as long as the style. The plant does well in pots, and when planted outdoors, loves a shady place.

URCEOLINA MINIATA.

FOR many years past Urceolina pendula has been more or less grown in gardens, where it is forced like many other bulbs for winter flowering purposes. The plant under notice was figured in the *Botanical Register, in 1839, tab. 68*, and whatever popularity it may at first have enjoyed, it has for a long time past been neglected and, for the matter of that, may be considered as having "been buried in the obscurity of a learned language." To all appearance, judging from a well executed, and full-page illustration of it in the *Revue de L'Horticulture Belge* for March, it is worthy of a better fate than it has received, and even more deserving of attention than U. pendula. The species in question was named Pentlandia miniata by the famous Dean Herbert of bulb fame in his day; but it has been placed under the name of U. miniata by the authors of the *Genera Plantarum*, where it is said to differ from the type chiefly in having narrower leaves, always petiolate, and in some other minor particulars.

It is a native of Peru, whence it was sent to Dean Herbert in 1836. The rootstock is a bulb which throws up a solitary lanceolate leaf before the advent of the flowers. The scape varies from 12 in. to 16 in. in height, and bears an umbel of two to four pendulous flowers, as in the better known but fewer-flowered species. The flower is tubular, narrow at the base, swollen in the middle, and again slightly narrowed below the shortly six-lobed lamina. From base to apex they are of a beautiful and uniform orange scarlet. The yellow stamens are protruded beyond the mouth of the flower, The latter makes its appearance in August and September, when flowers are comparatively plentiful, but notwithstanding this, it seems well worth cultivation. The species is propagated by offsets from the bulbs; and in other respects the plant is cultivated much in the same way as the Eucharis.

It is, moreover, as easy to cultivate as other Peruvian bulbs, and really hardier than the Eucharis. The idea on the continent is that the bulbs may be grown in the open air during the summer, lifted in autumn after the first frost, or as soon as growth has ceased, and planted in the soil under the benches of a greenhouse, or placed in pots. Pot culture is easy. Sometime during February or March, the bulbs may be potted in a good, rich, sandy soil. The pots at first should be kept in a frame, and afterwards placed in a cold or temperate greenhouse. When the flower stem has died down, water must be entirely withheld till the potting time arrives. For outdoor culture, the bulbs may be replanted during March or April in a good, friable and very sandy soil, to which is added a good proportion of well rotted manure and leaf soil.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

THE annual general meeting of this society was held at the Caledonian Hotel, Adelphi, Strand, London, on the evening of Monday, the 8th inst., under the presidency of Mr. A. Dean. The chairman first called upon the secretary, Mr. W. Collins, to read the minutes of the last annual general meeting, which were passed. The report for 1896 was then read as follows:—

The committee have great pleasure in presenting to the members the annual report and balance sheet for the year ending January 11th, 1897. The society continues to prosper, the net increase of members being sixty-six. One benefit member and one lapsed member died in the early part of the year, the amount standing to their credit being paid to the widow in each case. Mr. James George (late trustee), having reached the age of seventy, withdrew the amount standing to his credit (£82 10s.) The amount of subscriptions paid by members to the benefit fund, including arrears for 1895, was £1,010 1s. 10d, The sick list has again been a heavy one, the sum of £196 15s. having been paid to fifty-one members. The deductions from members' deposit account to meet this amount is 7s. 7d., and 5s. in the two scales of contributions respectively.

"Subscriptions to the benevolent fund from benefit and honorary members amount to £134 10s. 6d. Small sums amounting to £12 3s. 6d. have been granted to four members from this fund. The convalescent fund is steadily increasing, the amount received being £18 12s, including £3 3s. from W. J. Nutting, Esq., and £5 from N. N. Sherwood, Esq., at the annual dinner. Three members were benefited from this fund to the extent of £3 10s. The management shows a balance of £44 14s. 7d. The treasurer has again invested £1,100 during the year in corporation (3 per cent.) stock, and has a fair balance in hand.

"The annual dinner was held at the Holborn Restaurant under the presidency of W. J. Nutting, Esq., who fulfilled his office in an admirable manner, and kindly paid for the music. The accounts have again been carefully audited by Messrs. W. Gunner and Geo. Dixon, and found correct. The committee specially invite all young gardeners and seedsmen to join this excellent society, feeling sure they cannot do better than join the good ship 'United.'"

The secretary then read the balance sheets for the various funds, of which we here give a condensed report. Benefit fund receipts: balance brought forward, £7,929 5s. 4d.; interest to members, £227 14s. 3d.; subscriptions, £983 8s. 1d.; arrears of subscriptions, £26 13s. 9d.; total, £9,167 1s. 5d. Benefit fund expenditure: pay to sick members, £196 15s.; deducted from members' rest fund, £15 4s.; paid to three members, £95 0s. 7d.; interest to lapsed members, £25 16s. 5d.; balance to date, £8,834 5s. 5d.; total, £9,167 1s. 5d.

Benevolent fund receipts: balance in hand, £2,396 19s. 2d.; interest on do., £69 10s. 3d.; subscriptions, £72 0s. 6d.; arrears of subs., £6 17s.; subscriptions of honorary members, £55 13s.; deductions from rest fund, £15 4s.: total, £2,616 3s. 11d. Benevolent fund expenditure: by amounts granted to four members, specified, £12 3s. 6d.; balance at date, £2,604 0s. 5d.; total, £2,616 3s. 11d.

Voluntary convalescent fund receipts: balance in hand, £281 1s. 6d; interest on do., £8 3s.; subscriptions of honorary members, £10 9s.; Messrs. Hurst & Son, £5 5s.; W. J. Nutting, Esq., £3 3s.; total, £307 16s. 6d. Voluntary convalescent fund expenditure: amounts paid to three members, specified, £3 10s.; balance at date, £304 6s. 6d.; total, £307 16s. 6d.

Management fund receipts: balance in hand, £30 8s. 8d.; subscriptions of members, £70 13s. 2d.; arrears of subscriptions, £6 11s. 7d.; revocation fees and rules, 10s. 6d.; interest on £890 8s. 7d.,

£25 16s. 5d.; advertisements in annual report, £11 9s. 6d.; total, £145 9s. 10d.

Management fund expenditure: secretary's salary and bonus, £32 3s. 6d.; rent of rooms and National Safe Deposit Company, £10 13s. 6d.; stamps, &c., £12 9s. 5½d, ; stationery and printing, £28 8s. 2d.; auditors' and brokers' fees and sundry expenses, £17 0s. 7½d.; balance in hand, £44 14s. 7d.; total, £145 9s. 10d.

The treasurer, Mr. J. Hudson, next read his statement of accounts, showing that the total receipts were £1,672 4s. 9d.; the expenditure, £1,612 0s. 4d.; balance in hand, £60 4s. 5d.; the two previous items total £1,672 4s. 9d.

The statement of liabilities and assets showed liabilities to the four respective funds of £11,787 6s. 11d.; balance, £172 17s. 6d.; total, £11,960 4s. 5d. The total assets invested in various stocks were £11,900; cash in hands of treasurer, £60 4s. 5d.; total, £11,960 4s. 5d. The receipts of the annual dinner were £27 13s. 6d., and, the expenses being paid, left a balance in hand of £1 3s. 4d.

Mr. A. Hemsley proposed the adoption of the report and balance sheet, which was seconded and adopted *nem. con.*, they being considered satisfactory in every way. It was then proposed by Mr. W. Collins that 2,500 copies of the report and balance sheet be printed and distributed, and this was agreed upon.

The Chairman then spoke at considerable length upon the prosperous condition and prospects of the society, and dwelt particularly upon the claims it had upon gardeners generally by reason of the advantages it offered to members who might join it. As an instance of this he spoke of the substantial sum which fell to the share of Mr. James George upon his retirement, namely £82 10s., which was a more handsome sum than fell to the lot of hundreds of men who had paid large amounts to various other benefit societies. He (the Chairman) had been looking up the membership of the society at various periods, and had noted how rapidly the numbers mounted up during the past few years. At present the list stands at 641. If increase goes on at the same rate for the next five years the list will have mounted to 1,000.

The society, he continued, was worthy of the highest confidence and support. He himself was over age before learning of the existence of such a useful society, otherwise he would have joined it. He, however, invited young gardeners throughout the country to come forward and join it for their own advantage. The present members and their childrens' children would grow old and gray before the old age pensions scheme, of which we hear so much, would become a reality. Societies like the United Horticultural should not wait for such a consummation, but continue to support and further the interests of their own great scheme of self help. He often wondered whether our numerous and great charities would not ultimately produce harm by serving to pauperise the people as a nation. He urged upon society in general and gardeners in particular to be more self dependent, relying upon their own resources, either individually or by the united effort of societies like that to which they belonged.

The next business on the agenda was the election of five members of committee to fill that number of vacancies. Various members proposed Mr. Kelf, Mr. Cole, Mr. E. T. Cook, Mr. Winter, and Mr. A. Hemsley, and these various propositions being seconded, they were carried unanimously. Mr. James Hudson was re-elected treasurer, by acclamation, on the proposition of two of the oldest members of the society and the support of the chairman. Mr. Hudson returned thanks. Mr. W. Collins, 9, Martindale Road, Balham, S.W., was re-elected secretary, thanked for his past services, and voted an honorarium of £5 together with 6d. per head of members on the list over and above two hundred. Votes of thanks were accorded the trustees, committee, and to the Press for assisting the society by giving publicity to their proceedings. Mr. Robert H. Pearson, Mr. W. P. Thomson, and Mr. J. Fraser replied for the Horticultural Press. Several members urged upon all present to induce young gardeners to join the society. The meeting lasted nearly an hour and a half, and a vote of thanks to the chairman brought the proceedings to a close.

MESSRS. CORRY & CO'S GARDEN SUNDRIES.

Without the gates and a little beyond the city walls of ancient London, we came upon the old established business of Messrs. Corry & Co. The business was first established in 1848; but the firm rapidly became known when a manufactory, bonded tobacco stores and warehouses were set up at Fogg's Wharf, 91, Shad Thames, S.E., in the vicinity of the Tower Bridge in 1866. The warehouses of this branch of the establishment have recently been rebuilt and enlarged. The show rooms are at 13 and 15, Finsbury Street, E.C., while the equally commodious offices and warehouses are at No. 16 on the opposite side of the same street. These were the premises we visited the other day, and we were surprised at the enormous number of the wants of a garden, and the endeavour to meet that ever-increasing demand for articles of every imaginable description. Messrs. Corry & Co. are merchants and manufacturers of nurserymen, seedsmen, and florists' sundries, but their business is entirely a wholesale one, and there are doubtless hundreds of our readers who use the articles that come from here, yet have no conception from whence they emanate.

Owing to the fact that this is only a wholesale business, it follows that the articles sold can only reach private and other garden establishments through the medium of those whose business is to retail them. Here, however, according to the old adage, we found practically everything from a needle to an anchor. The show rooms contain a most varied assortment of articles, and looking across the street crowded with all sorts of vans and waggons, we noted the warehouses of some seven floors one above the other crowded with all sorts of things. Something like 1,607 kinds of articles independently of varieties of them are kept in stock. Every new article of value or patent is taken up when they first come out, so that the list continues to increase every year, and fresh space has to be found for them.

Amidst such a vast assemblage of articles, useful and ornamental, it is impossible to deal with more than a few of them taken practically at random. The glassware used for the culture of Hyacinths in glasses is of a most varied assortment, and often of a highly ornate character. Akin to this is the white china ware in all the latest novelties for the holding of plants and flowers. The ornamental vases for the holding of flower pots, are equally varied, adorned with flowers, and fashioned in every mould. The terra cotta flower pots, vases, window boxes, and other articles defy description in their varieties of form. Nor can we overlook the Martin flower rack which can be adapted to glasses, vases, bowls, etc., of a varied description. In private establishments, where cut flowers are in great demand, they have been very useful. We gave an illustration of the Martin rack in Vol. X., p. 87.

The trade in dried grasses, Gnaphaliums, or French Immortelles, and similar ornamental articles, is very extensive. Some are merely dried, others are dyed as well. Ornamental baskets of a fancy character may be seen in the most varied forms. Light cardboard and other boxes, in all sizes, are meant for the packing and sending away of bouquets and cut flowers in a fresh condition. Virgin cork has been put to very varied uses in the making of brackets, pockets, and rustic work of all kinds where flowers may be used or plants used for decorative purposes Artificial plants, flowers and leaves are not overlooked. Wire baskets, wire stands, protectors, arches, and trellis work are endless in variety. Seats, chairs, summer houses, and ornamental garden furniture, are made to suit every taste and use.

Teak baskets in variety, cylinders and rafts are meant to meet the wants of the Orchid grower. Handlights of many shapes come in handy for various purposes in gardens, where, in fact, they are indispensible for the protection of all sorts of half hardy plants, particularly in spring, when every glass house is crowded and various things require planting out before it is safe to trust them to the tender mercies of our fickle climate. Garden baskets of a varied description supply the wants of every establishment. None of them are more useful than the truck or Sussex baskets, which are made of thin laths, and are light and durable. They are useful for carrying weeds, vegetables, flowers, fruit, or, in fact, almost anything; and are made in various sizes to meet the hundred and one wants of a gardener.

The number of kinds of insecticides is simply legion; and the wonder is that insects can exist with so many means and methods of destroying them. Amongst these we would mention Tobacco juice in various forms, from the ordinary juice to pure nicotine, paper, rag, powder, &c., in bond. Messrs. Corry & Co. manufacture these articles, and many others we have already mentioned; whilst every insecticide that has established its name in the market is kept in stock, and the appliances for distributing them. Manures include all the leading established makers and all the ordinary fertilisers required for a garden, together with Standen's, which is the oldest and best known manure, containing a very high percentage of ammonia and phosphate. Fowler's lawn sand destroys weeds and at the same time makes the grass grow; it has now been before the public for twenty years, so that its reputation is well established.

Cutlery and garden implements generally are extensively represented in all the best kinds, including budding, grafting, propagating, and pruning knives. Shears, flower gatherers, grape and other kinds of scissors, and sécateurs of all shapes and sizes are a special feature. French sécateurs made by Aubert's successors in France, and having what is termed the "double cut" are of the very best of their kind. They are somewhat dearer than English made articles of a similar description, and for that reason are not handled by Germany at all. They are all hand-made tools of the best description. Garden tools include implements for seed sowing, spades, rakes, forks, cultivators, mowing machines, lawn tennis markers, hoes, hand forks, etc. The spades are of all sizes and weights to suit the soils of different localities.

In another direction are syringes of various types, lawn sprinklers, garden pumps, and meteorological instruments, such as thermometers, barometers, and rain gauges, in an endless variety of form and pattern. Other sundries are raffia, mats, wooden and zinc labels of every size and design. Messrs. Corry & Co. have the plant for making the zinc labels. Sticks and canes of various sizes for the staking of plants constitute an industry in themselves. Something like twenty tons of them pass through the establishment in a month. Travelling boxes for the conveyance of flowers to exhibitions constitute another item, with the various other accessories the exhibitor requires, such as Rose supports and tubes, Springthorpe cups and tubes for Chrysanthemums, Pansies, etc. Window cases and aquaria receive due attention. "Summer Cloud" shading is a sort of thin paint of a light green colour, which, when applied to the roofs of glasshouses, keeps on all the summer, and forms a light screen to break the fierce rays of the sun, thereby protecting fine foliage plants from being injured, and prolonging the duration of flowers. In the autumn it can easily be washed off with warm water. The above is merely an indication of the thousand and one articles kept in stock.

ARE PEAS PROFITABLE FOR COTTAGERS?

This is a question which is of considerable importance! It may be asked at the outset why should not the cottager enjoy a few boilings of green Peas as well as the richer members of society? and certainly we can find no valid reason why he should not. Whether it would pay him to grow them or not is another question that we think would, after due consideration, have to be answered in the negative.

First of all there is the question of space to be attended to. The cottager (we allude now to the countryman) has to rely upon his garden to aid considerably in supplying food for his family, and he is, therefore, from necessity compelled to grow such vegetables as yield the heaviest return for each square yard. Now, however high in the scale of nutritive values Peas may be, it can scarcely be claimed for them that they yield as good a return for the space occupied as a breadth of Cabbage, Onions, Potatos, or Parsnips. Runner Beans, although they take up fully as much room as the tallest growing varieties of Peas, afford a supply of food over a very long period, whereas the yield from a row of Peas is of a comparatively transient nature. In rural districts, however, the garden is not infrequently a large one, and space can readily be afforded for a few rows of Peas. No more profitable way of growing Peas in cottage gardens exists, than by sowing single lines between different kinds of vegetables.

Stakes again are expensive, and it is not infrequently a matter of difficulty to obtain them in any other way than by buying them. This may not mean a very great sum by itself, but it is all outlay which has to be made good. If the seed has to be bought as well there is still further expense to expect an equivalent for.

Added to all this there is the labour to be thought about, although in this direction Peas do not cost more than other vegetables. Still they cost enough, taking all things into consideration, to make it cheaper in the long run for a cottager to buy a peck or two of Peas than it is for him to grow a row for himself, for, in addition to the expenses that have to be borne, there is the fact that if we get a season like that of last year the drought will result in no crop at all. We noticed several places last year where the haulm seemed literally dried up and was in fact in a worse condition on the leavy land, than it was upon the light. Of course water may be given, but it does not have the same effect as rain, for the pods will not fill well during drought, no matter how much water is given them in other ways than the natural supply from the clouds.

SOCIETIES.

ROYAL HORTICULTURAL.—*March 9th.* Orchids were plentiful at the meeting of Tuesday last, and Chinese Primulas, Cyclamen, winter-flowering Begonias, Hippeastrum, Cinerarias, Freesias, Lenten Roses, hardy flowering shrubs, Violets, Palms, Ferns, and other things were represented in great abundance.

A large and well-flowered group of Orchids was exhibited by Messrs, J. Veitch & Sons, Ltd., Chelsea. Dendrobiums were very abundantly represented including some beautiful and valuable hybrids such as D. Aspasia, D. Wiganiae, and Edithiae. More common but fine were D. splendidissimum, D. s. leeanum, D. crassinodi wardianum, D. wardianum, &c. D. Edithiae Veitch's var. had its sepals and petals much shaded with purple. D. atroviolaceum was in good form. Other prominent things were Dendrobium Waltonii, Cattleya Trianaei, Oncidium cavendishianum, and the hybrid Epidendrum elegantulum in various shades of colours (Silver Flora Medal). A cultural commendation was accorded to Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, for two magnificent spikes of Calanthe Baron Schroder.

A group of Orchids, including some fine pieces of Lycaste Skinneri pulcherrima, L. s. aurantiaca, Miltonia Roezlii alba, D. amethystoglossum, and Miltonia cuneata, was exhibited by Messrs. F. Sander & Co., St. Albans. A cultural commendation was awarded for a large piece of Dendrochilum glumaceum in grand condition. They also exhibited a fine piece of Cymbidium eburneo-lowianum, being the reverse cross to C. lowiano-eburneum (Silver Banksian Medal).

Sir Trevor Lawrence. Bart., M.P., exhibited a mixed group of Orchids including fine spikes of Cymbidium lowianum viride, and C. lowiano-eburneum. Very pretty was Dendrobium micans in its delicate colouring. Very handsome also were Cattleya Trianae Reine des Belges, Brasso-Cattleya lindleyana (Cultural Commendation), Dendrobium murrhinianum, Cypripedium hirsuto-sallieri, Masdevallia Pourbaixii and various others. He had some very interesting small-flowered things including Pontheiva maculata (Silver Banksian Medal).

Messrs. Hugh Low & Co., Upper Clapton, London, staged a fine group of Dendrobium crassinode, profusely flowered. Other things were Cymbidium lowianum, Odontoglossum crispum and allied types, Miltonia Roezlii, Restrepia elegans and various others. Some of the stems of Dendrobium crassinode bore forty or more flowers (Silver Banksian Medal).

A cultural commendation and a First-class Certificate were awarded to a fine piece of Cymbidium eburneum exhibited by the Right Hon. Earl Brownlow (gardener, Mr. R. B. Lowe), Ashridge, Great Berkhamstead, Herts. A cultural commendation was accorded to Walter C. Walker, Esq. (gardener, Mr. George Cragg), Percy Lodge, Winchmore Hill.

An interesting group of hybrid Dendrobiums was exhibited by the Right Hon. Joseph Chamberlain (gardener, Mr. H. A. Burberry), Highbury, Birmingham. C. L. N. Ingram, Esq. (gardener, Mr. T. Bond), Elstead House, Godalming, set up a conspicuous group of well-grown and profusely flowered plants of Dendrobium splendidissum grandiflorum, with large and richly coloured flowers. T. B. Haywood, Esq. (gardener, Mr. C. J. Salter), Woodhatch Lodge, Reigate, exhibited the hybrid Laeliocattleya Haywoodii. Bulbophyllum Ecrissoni, a singular looking species, was exhibited by The Hon. Walter Rothschild (gardener, Mr. E. Hill), Tring Park, Tring.

A natural hybrid named Odontoglossum William Stevens, and Odontoglossum cirrho-Hallii, raised by Messrs. Linden, L'Horticulture Internationale, Brussels, were exhibited by them. They also staged O. crispum Ami Charles, and O. c. Kegeljani, both of which were most attractively spotted and marked. A. Warburton, Esq. (gardener, Mr. T. Lofthouse), Vine House, Haslingden, exhibited Odontoglossum crispum Victoria Regina.

Messrs. J. Veitch & Sons, Ltd., exhibited several new and interesting hybrids, including Dendrobium Ainsworthii intertextum, Cattleya intertexta, C. miranda, Epidendrum Endresii, and the pretty E. elegantulum langleyense. Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Sunningdale, showed a well-flowered piece of Dendrobium atroviolaceum. A piece of Odontoglossum Hallii, with a flower stem, 6 ft. long and branched, was shown by F. A. Bevan, Esq. (gardener, Mr. W. H. Lees), Trent Park, New Barnet.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., set up a very showy group of miscellaneous flowering and foliage plants, chiefly the former. Some well flowered specimens of Prunus sinensis flore pleno, Liliums, Cyclamens, Azaleas, and Boronias were also in evidence. A box full of very fine Lilies of the Valley was by no means the least attraction here (Silver Banksian Medal).

Spring flowers were contributed in great quantity by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. A principal feature was forthcoming in the shape of a collection of Narcissi flowered in pots, and in first-class condition. N. Ard Righ, N. obvallaris, N. telamonius fl. pl. N. Sir Watkin, N. Golden Spur, N. incomparabilis Cynosure, N. poeticus ornatus, and N. Leedsii were some of the showiest forms. The pretty little N. minimus was represented, and placed in front of its statelier relatives, showed up strongly by way of contrast. Side by side with the Daffodils appeared a general collection of spring flowers in considerable variety, and including nice clumps of Primula denticulata alba, P. acaulis caerulea, Megasea speciosa, M. crassifolia, M. Stracheyi, M. ciliata, Saxifraga burseriana major, S. sancta, S. apiculata, and Androsace carnea. A Silver Flora Medal was awarded for this fine display.

Near the entrance Messrs. Wm. Cutbush & Sons, Highgate, N., had set up a semi-circular group of miscellaneous plants. At the back and immediately behind the Palms which constituted the last row were well flowered specimens of Forsythia suspensa. Pyrus Malus floribunda appeared in clumps, next to this, whilst in front were batches of seedling blue Primroses, Boronia megastigma, Erica wilmoreana, and G. melanthera, the whole making a very effective display (Silver Banksian Medal).

On the other side of the door Messrs. Wm. Paul & Son, Waltham Cross, held the floor with a grand array of Camellias. Well-flowered specimen plants of such varieties as C. H. Harvey, Delicatissima, Exquisite, and Corallina, formed the backbone of the exhibits. In the front of these were cut flowers of a great number of the leading varieties, exhibiting a good range of colour. All of the blooms were of great size and splendid development (Silver Gilt Flora Medal).

Messrs. Barr & Son, King Street, Covent Garden, contributed a group of hardy flowers, amongst which were many charming floral gems. Narcissus Henry Irving, N. pallidus praecox, N. cyclamineus, Tulipa violacea, Hellebores, and Chionodoxas in considerable variety were much in evidence (Silver Banksian Medal).

A superb batch of Cyclamen was forthcoming from Mr. John May, Gordon Nursery, St. Margarets, Twickenham. The plants which were in large 48-pots were cleanly grown, full of flower, and indeed in every way excellent samples of the cultivator's art. Mr. May evidently understands the Cyclamen (Silver Banksian Medal).

Messrs. James & Son, Woodside, Farnham Royal, Slough, are well knowm to be in the fore front of cultivators of the Cineraria. A long table was filled on this occasion with their plants, the wonderful dwarfness and compactness of which, together with their great uniformity of size was most noteworthy. The flowers were of immense size and lay closely upon the foliage, thus throwing up their bright colours to the utmost advantage by contrast with the dark green below. An award of a Silver Gilt Banksian Medal bespoke the commendation of the committee.

Messrs. Hugh Low & Co., Bush Hill Park, Enfield, had a showy group of Epacris. Hyacinthiflora, Fulgens, Fireball, Alba Odorata, Viscountess Hill, Vesta, Diadem, Her Majesty, Rubra superba, and Rosea elegans were a few of the best varieties. The colour of the flowers varies from pure white to deep cerise.

Mr. Mowbray, gardener to the Hon. H. C. Legge, sent a very nice lot of Freesias. Although the plants were only in small 48 pots they were full of flower, and the individual blooms were of medium size and very sweet scented. Mr. Mowbray received a Bronze Flora Medal.

Cyclamens were well shown by the St. George's Nursery Co., Hanwell, W. Although the plants were of huge size the majority of them were only yearlings. A few of the largest were of two years' growth. Throughout the whole exhibit the same vigour and abundance of flower were discernible. In some of the forms a charming fimbriation of the segments added a quaint look to them. The foliage too of these plants exhibit a marked tendency to fimbriation (Silver Gilt Banksian Medal).

Messrs. Wm. Paul & Son sent samples of the new forcing Rose, Enchantress. This is a very free flowering variety and the samples shown by the Messrs. Paul were clean and free from mildew or insect pests. Other varieties of Roses exhibited by this firm were President Carnot and Charlotte Gillemot.

Mr Slogrove, gardener to Mrs. Crawford, Gatton Lodge, Reigate, had a neat batch of Cyclamen, the plants being healthy and full of flower (Silver Banksian Medal).

A collection of seedling Azaleas, obtained by crossing A. mollis and A. sinensis, came from Messrs. R. & C. Cuthbert, Southgate. Several rich shades of yellow and orange were very praiseworthy, and the whole of the plants were well grown and flowered.

One of the features of the exhibition was a grand display of Hippeastrums (Amaryllis) which came from Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames. The size of the flowers was immense, and many of the scapes carried four large flowers. The two varieties "The Hon. F. W. D. Smith" and "Charles Penney," have already received Awards of Merit at the hands of the floral committee of the Royal Horticultural Society. These were again shown in first-class condition. The other varieties were unnamed (Silver Banksian Medal).

Primula White Lady was shown in splendid style by Messrs. H. Cannell & Son, Swanley, Kent. Some of the plants were nearly 2 ft. in height, and all were full of flower. The umbels of flower are borne in tiers the one above the other, the whole plant assuming a pyramidal form, thus rendering it most useful decorative material. A collection of winter flowering Begonias also came from this firm. It included shapely samples of the rare B. manicata aureo-marginata, B. Paul Bruant, B. semperflorens, Dr. Chassagny, B. Erfordia, and B. President Bourevilles (Bronze Banksian Medal).

Mr. George Mount, The Rose Nurseries, Canterbury, gave a taste of his quality and his undeniable skill in dealing with Roses by showing a number of blooms in magnificent condition; Captain Hayward, Mrs. John Laing, Catharine Mermet, and The Bride were the varieties exhibited. The colours were as brilliant as if the blooms had been grown naturally in the open air, and the foliage in its way was as fine as the flowers, for it was clean, vigorous, and of that dark green hue that bespeaks perfect health and perfect cultivation (Silver Banksian Medal).

A large amount of table space was filled by the Primulas sent by Messrs. Jas. Veitch & Sons, Limited. Both single and double varieties were on view, the colours ranging from pure white to blue, deep red

and purple. The whole collection was shown with a view to illustrate the quality of the plants employed as seed bearers. From the same firm came profusely flowered samples of Prunus Cerasus Watererii, and Cytisus scoparius praecox; also the curious Corylopsis spicata, and the rare, but beautiful, Cytisus elongatus. Spiraea confusa admirably set forth its many good qualities, and it would be hard indeed to find better flowered plants than those which were to be seen here. Rhododendron Early Gem might be described in the same way. The small purple-mauve flowers entirely hid the foliage. Messrs. Veitch also showed a small group of Hippeastrums, including the named varieties, Clonius, Leontes, Zephyrus; likewise cut blooms of Lachenalia Nelsoni, L.Cami., L. tricolor, and Hecla. A silver Gilt Banksian Medal expressed the recognition of the committee for this extensive exhibit by the Chelsea firm.

A Silver Gilt Banksian Medal was also awarded to Mr. J. Douglas, gardener to Mrs. Whitbourn, Great Gearies, Ilford, Essex, for a grand lot of Cinerarias. The plants were of medium height but of bushy and compact growth, and with large and heavy heads of well formed flowers.

Mr. Charles Turner, The Royal Nurseries, Slough, sent pans full of Violets Italia, Princess of Wales, Amiral Avellan, and Primavera. All the flowers were large and deliciously scented.

Messrs. R. Veitch & Son, Exeter, had several plants of Violet Sulphurea, with light yellow flowers. Mr. Isaac House, Coombe Nursery, Westbury-on-Trym, Bristol, sent a quantity of the giant Violet California, evidently a fine form; also cut blooms of Hellebores. A Bronze Banksian Medal fell to the lot of Messrs. Paul & Son, Cheshunt, for a very neat and comprehensive group of hardy spring flowers.

A Silver Banksian Medal was awarded to Messrs. W. Balchin & Sons for a grand lot of Boronia megastigma and Primula verticillata. All the plants were marvels of high development.

Messrs. John Laing & Sons, Forest Hill, S.E., set up a highly ornamental group of miscellaneous plants, in which some grand trusses of Clivias were the *piece de resistance*. Ericas, Crotons, Dracaenas, and Begonias were all of the best, and were no small tributes to the skill of this well-known firm. Centradenia rosea is a rather rare plant that was represented in this exhibit by a fine specimen.

Hellebores.

As had been previously announced in the schedule there was a competition for "a group of 12 plants of Helleborus orientalis, containing at least six distinct varieties." The conditions were that the plants were to be judged mainly by their fine growth and abundant blossom, and they were to have been entirely grown in the open air. The prizes were offered by W. Robinson, Esq.

The first prize fell to the lot of Messrs. Paul and Sons, The Old Nurseries, Cheshunt, who had the following varieties:—Atrovirens, Olhan Otto punctatus, Colchicus punctatus, C. guttatus, Gretchen Heinemann, Lutescens, Councillor Benary, Colchicus coccineus, Dr. Moore, Bocconi superbus, and the type H. orientalis.

The second prize was won by Messrs. Barr and Sons.

Hardy fruit was also well represented, considering the time of year. Thirty dishes of Apples were shown by Mr. Tallack, gardener to E. Dresden, Esq., Livemere Park, Bury St. Edmunds. The fruit was well preserved and a Silver Knightian Medal was voted.

Mr. G. W. Empson, gardener to Mr. Wingfield, Ampthill, sent upwards of thirty dishes of Apples in first-class style. A Silver Banksian Medal was awarded.

In the classes for the best flavoured Apple, Mr. Chas. Ross, gardener to Captain Carstairs, Welford Park, Newbury, was first with Cockle's Pippin. The second prize fell to Mr. Roger Leigh, gardener to G. Woodward, Esq., Barham Court, with Adam's Pearmain.

The best flavoured Pear was Beurré Rance, sent by Mr. Roger Leigh.

A Silver Banksian Medal also went to T. S. Massey, Esq., for a collection of Apples.

Mr. G. Wythes, gardener to Earl Percy, exhibited some superb samples of Asparagus and Chicory.

OBITUARY.

Mr. Charles Sharpe.—We regret to announce the death of Mr. Charles Sharpe, J.P., of the firm of Messrs. Charles Sharpe & Co., Ltd., Sleaford, Lincolnshire, which took place at Sleaford, on Monday last. He was formerly sole partner in one of the largest seed-growing firms in Britain, and was known as a keen and successful business man far beyond the boundaries of Sleaford, where he was well known and highly respected. Lincolnshire will therefore be much the poorer for his loss.

Besides his seed business proper, he was a farmer and landowner. He had great belief in the *petite culture* for working men, and in that belief bought a large estate at Heckington, which he divided into small holdings and allotments, in which his tenants have proved very successful. He was also an alderman and a justice of the peace for the district of Kesteven, in Lincolnshire. He was in his sixty-ninth year, and leaves a daughter who is married to Mr. Augustus Jessop, a solicitor at Sleaford.

Amongst the gardening fraternity generally he was known as a raiser of vegetables, amongst which Sharpe's Queen Pea, and Sharpe's Victor Potato have obtained wide reputation, the former on account of its fine appearance, good habit, excellent cropping qualities and flavour, and the latter on account of its extreme earliness. Various other vegetables also bear his name as the raiser.

QUESTIONS AND ANSWERS

Early Potatos and Gladioli.—*T. H. Ansell*: By early Potatos, we should imagine that you will plant fairly dwarf ones, and if so, the Gladioli would have plenty of space to make good growth. It is merely a question of light for the foliage of the Gladioli, because if that is assured, the bulbs will grow well in company with the Potatos. The soil would be practically fresh for that kind of thing, and fresh soil is of great benefit to Gladioli. There will not be much space for digging the Potatos without treading on the Gladioli, so that you will have to be unusually careful. We suppose it is a question of space that leads you to plant Gladioli between Potatos; otherwise we should advise you to plant the Gladioli by themselves on another piece of the same ground.

Pruning Marechal Niel Rose.—*Omega*: You do not state whether the plant is under glass or out of doors. In the former case it is the custom to prune the plants as soon as they have done flowering, unless it is desired to keep them back. Heat is applied according to the time it is desired to have the Roses in bloom. Out of doors you may perform the operation at the end of March or the beginning of April. The long shoots you mention are very valuable, and should be left almost their full length, merely cutting off the slender and badly ripened tips. Whenever the shoots get crowded, cut away more or less of the old stems, and train in the young ones. Thin out or cut away most or all of the very slender and useless shoots. Flowers will be produced freely by the side shoots that spring from the tall and strong ones of last year.

Names of Plants.—*P. M.*: 1, Tydaea Madame Heine; 2, Selaginella apus.—*T. C.*: 1, Forsythia suspensa; 2, Jasminum nudiflorum; 3, Viburnum Tinus; 4, Corydalis solida.—*H. J.*: 1, Nuttallia cerasiformis; 2, Cornus mas; 3, Cupressus pisifera squarrosa; 4, Thujopsis dolobrata variegata; 5, Scilla sibirica; 6, Cattleya Trianaei.—*W. M.*: 1, Cypripedium venustum; 2, Cypripedium Sedeni; 3, Cymbidium eburneum; 4, Masdevallia tovarensis.—*A. G. A.*: 1, Draba ciliaris; 2, Pulmonaria augustifolia; 3, Narcissus Pseudo-Narcissus var.; 4, Crocus susianus; 5, Crocus vernus var.—*J. S.*: 1, Billbergia nutans; 2, Eriostemon lanceolatus; 3, Spiraea media (often called S. confusa in gardens); 4, Eriostemon lanceolatus.

Flowers for a North Border.—*Omega*: There are many things that will grow on a north aspect border provided the soil is fairly good and not overhung by trees. Amongst perennial plants you can grow Lilium candidum, L. tigrinum, L. Martagon, L. auratum and various others. Polyanthus, Primula vulgaris, P. elatior, P. japonica, P. Sieboldi, in their several varieties should do well. Christmas and Lenten Roses succeed admirably; also Hemerocallis, Iris, Hepaticas, Trilliums, Anemones, Aquilegias, Campanulas, Violas, Pansies, Chrysanthemum maximum, C. uliginosum, Doronicum in variety, Epilobium angustifolium, Helenium, Helianthus rigidus, H. multiflorus, and various others that are not particular about direct sunshine. Annuals would include Poppies, Godetias, Larkspurs, Collinsia bicolor, Clarkias, Malope trifida grandiflora, Lavatera trimestris, Phlox Drummondi, Nemophilas and various others. The soil should in all cases be fairly moist and well exposed to light above and to rain. If so, you should have no difficulty.

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March 9th, 1897.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report: Trade in Agricultural seeds continues slow owing to rainy weather; prices steady.

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FIXTURES FOR 1897.

MARCH.

17.—Devon and Exeter Show.
18.—Linnean Society.
18, 19.—Birmingham Botanic Gardens Show.
23.—R.H.S., Committees and Lecture.
27.—R.B.S. Meeting.
30, 31.—Truro, Daffodil and Spring Flower Show.
31.—R.B.S. Spring Show.

APRIL.

1.—Linnean Society.
1.—R.H.S. of Ireland Spring Show.
6, 7.—Brighton and Sussex Show.
7.—Shropshire Horticultural Society's Show.
8, 9.—Royal Caledonian Society's Show.
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
15.—Linnean Society.
24.—R.B.S. Meeting,
27.—R.H.S. Committees and Lectnre.

MAY.

6.—Linnean Society.
7.—R.B.S. Lecture.
8.—R.B.S. Meeting.
12.—R.H.S. Committees and Lecture.
14.—R.B.S. Lecture.
19.—R.B.S. Summer Show.
21.—R.B.S. Lecture.
22.—R.B.S. Meeting.
24.—Linnean Society's Anniversary.
24 to 28.—Bath and West and Southern Counties Show at Southampton.
26.—Gardener's Royal Benevolent Institution, Annual Dinner.
26, 27, 28.—R.H.S. Temple Show.
28.—R.B.S. Lecture.

JUNE.

3.—Linnean Society.
4.—R.B.S. Lecture.
11.—R B.S. Lecture.
12.—R.B.S. Meeting.
15.—R.H.S. Committees and Lecture.
16, 17, 18.—York Floral Fête.
17.—Linnean Society.
18.—R.B.S. Lecture.
23.—National Rose Society's Show at Portsmouth.
23 to 28.—R.A.S. Show at Manchester.
25.—R.B.S. Lecture.
26.—R.B.S. Meeting.
29.—R.H.S. Committees and Lecture.
29.—Royal Oxfordshire Horticultural Society's Commemoration Show.

JULY.

1.—R.H.S. of Ireland Summer Show.
2.—N. Rose Society Show at Crystal Palace.
7, 8.—County Boro. of Hanley Fête.
8, 9, 10.—Newcastle Show
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
13, 14, 15.—Wolverhampton Floral Fête.
15.—N. Rose Society's Show at Norwich.
24.—R.B.S. Meeting.
27.—R.H.S. Committees and Lecture.
28.—Beckenham Show.
28, 29.—Chester Fête.
28, 29.—Carnation and Picotee Society's Show at Birmingham.
31 and Aug. 2.—R.H.S. of Southampton Society's Show.

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March 10th, 1897.

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	s. d.	s. d.
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Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nnts per 100 lbs.	00 00	
Grapes, per lb	2 0	3 0
Pine-apples, —St. Mlcbael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberrles, per lb.		
Tasmanlan Apples per case		

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Asparagus, per bundle	5 0	7 0
Beans, French, per pound	1 6	2 0
Beet..... per dozen	2 0	3 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bnuch	0 3	
Caulliflowers.....doz.	2 0	3 0
Celery.....per bnndle	1 0	
Cncumbers per doz.	1 6	3 0
Endlve, Frencb, doz.	1 6	
Herbs .....per buncb	0 2	
Horse Radlsh, bnndle	2 0	4 0
Lettuces ...per dozen	1 3	
Mnsbrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radlsbes... per dozen	1 6	
Seakale...per basket	1 0	1 3
Smallsalading, punnet	0 4	
Splnach per bushel	2 0	2 3
Tomatos..... per lb.	0 3	0 4
Tnrnlps .....per bnn.	3 0	

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Arnm Lilles, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 6	0 9
Bonvardlas, per bnu.	0 6	0 9
Carnations doz. blms.	1 6	3 0
Eucharis ...per doz	4 0	6 0
Freezla per doz. bunches	2 0	3 0
Gardenlas ...per doz.	4 0	6 0
Geranlum, scarlet, doz. bunches	6 0	9 0
Hyacinths (Roman) doz. sprays	0 6	1 0
Lilac, White (Frenoh) per bnch.	3 6	5 0
Lillum longlflorum per doz.	3 0	6 0
Llly of the Valley doz. sprays	0 6	1 0
Mrrguerites, 12 bnu.	2 0	4 0
MarlenhairFern, 12bs.	4 0	8 0
Mimosa, per bncb. ...	1 0	1 6
Orcblds, doz. blooms	1 6	12 0
Pelargonlums, 12 bun.	6 0	9 0
Pyretbrum doz. bnn.	2 0	4 9
Roses (Indoor), doz.	1 0	1 0
" Tea, wbite, doz.	1 0	2 0
" Niels	4 0	6 0
" Safrano	1 0	2 0
" (Englllsh), Red Roses, doz.	4 0	6 0
Pink Roses, doz.	3 0	5 0
Smllax, per bunch ...	6 0	8 0
Tnberoses, doz. blooms ...	1 0	1 6
Primnla, double, doz sprays	0 6	0 9
Violets (French) per doz. bnches.	1 0	1 6
Violets (Englllsh) per doz. bnches.	1 6	2 6
Violets (Parma) per bnch.	2 0	3 6
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" speolmen	3 0	5 0
Cioerarias, per doz....	8 0	10 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena vlrldls, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, Invar. doz	6 0	24 0
Erica Hyemalls, per doz.	9 0	15 0
Erica, per doz.	9 0	12 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, eacb	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Geulsta, per doz.	8 0	12 0
Hyacinths, per doz. ...9	0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in varlety, each	1 0	15 0
Palms, Specimen ...21	0	63 0
Solanums, per doz.	9 0	12 0
Spirea.....per doz. ...	8 0	10 0

The Gardening World.

ESTABLISHED 1884,

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MARCH 20th, 1897.

A PLEA FOR ALPINE AND ROCK PLANTS.—There are so many ways in which these can be utilised that the wonder is they are not taken up more extensively by those who want a hobby in some special line of plants. A large proportion of them are inexpensive, easily cultivated and so hardy that no amount of frost we are likely to get in this country will destroy them. Indeed, we may say that the heat of summer is more injurious to many of them than the cold of winter; but the means of counteracting this are manifold, and those who are most successful would derive the greatest amount of pleasure. A collection of alpines would entail a certain amount of labour in proportion to the number of kinds, but in a like ratio would the cultivator get pleasurable occupation and remuneration. Plants of the character we indicate above are amongst the earliest harbingers of spring; and though the flush of them are out of season by the end of July in the southern counties, not a few continue to bloom till a much later period. The aim should be to prolong the season as much as

possible, and those who give their attention to the subject in earnest would probably be able to show that it is merely a question of thoroughly investigating the case in order to prolong the flowering period till cold and frost puts a stop to the growth of all vegetation.

The system of cultivation to be pursued will naturally depend upon the grower, upon taste, convenience, circumstances and surroundings. The rockery readily suggests itself, but this presents endless variation in form. The chief aim should be to construct it with the view of the successful cultivation of the plants, and mere fanciful ornamentation should be a secondary consideration. The rockery should not be merely a "dry as dust" heap of stones and soil, but should be constructed with the view of catching the rain and of retaining the moisture as long as possible. This would serve to minimise labour. The culture of aquatic plants in tanks or small ponds might well be associated with rockeries. On the other other hand a collection of alpine and rock plants might very successfully be grown in pots or pans so that the plants in bloom might be transferred to prominent positions where they would be most readily seen, or frequently under the eye. This might be in an unheated glasshouse offering every facility for inspection. Pits or frames might answer the same purpose. The approach to the mansion, even in close proximity to the house, might be ornamented with a kind of rockery or raised beds having spaces filled with coal or coke ashes or cocoanut fibre according to fancy, and in which to plunge the various subjects in season, so that constant variety and change could be maintained.

Such a scheme would afford novelty and variety such as no class of summer bedding plants is capable of supplying. The alpine and low growing subjects that could be utilised in this way could be numbered by hundreds; but only the really showy species and varieties need be taken in hand. The spring could be ushered in by Snowdrops, Crocuses, Chionodoxas, Squills, and Daffodils; and continued by later flowering species of the same class. Saxifragas commence the season early and continue till mid-summer in profusion. The dwarfer Bellflowers are numerous and varied, as are the Sedums, Primulas, Phloxes, Silenes, Dianthus, Veronicas, Candytufts and a host of others too numerous to mention.

The Horticultural College, Swanley. —The fifth annual report of the Women's Branch of this College is before us, and we note that the prospects are still hopeful. The Women's Branch was opened in 1891 with a solitary student, but before the end of the year there were five, and since then the number has increased annually, till there were thirty-nine last year. Altogether eighty-two women joined the college during the past five years, but not all of them continued their training for the whole period of two years. Indeed only seventeen have done this. This is to a great extent due to the fact that a large number never intended to do so. The objects for which they joined were various. As is almost inevitable, several of the women discovered that gardening was not the paradise their youthful imagination had depicted, or that such occupation was unsuitable. The same thing happens with young men who change their occupation accordingly, if, indeed, they take the trouble of putting the question to themselves; for we know that many young men hang on to gardening for years without apparently troubling themselves as to whether they and their profession are compatible messmates or not.

The destinations the women students have in view are various, such as market gardens, public and private gardens, institutions, teaching and lecturing. The committee of the college recognise the qualifications only of those who have studied for the prescribed two years, and, in preference, those who have taken the college diploma. This honour has been accorded to six students during the past year. Every properly qualified student on leaving the college has been able to get paid employment, and testimonials have been received from their employers as to their efficiency for the work they have undertaken. Time only can tell how this gratifying state of matters will continue; but surely it is too much to expect women to be capable of undertaking much responsibility after so short a period of work and study, when young men in the ordinary course of gardening are not expected to know much till they have been at least four or five years in the profession. A properly organised system of education, and the compelling of the students by example and precept to give their whole-hearted attention to their work and study, may, however, break down old notions as to the time required to get a competent knowledge of the profession. If so, the sooner we get horticultural schools and colleges for young men as well as women, the better.

All the women students professionally employed speak heartily of the pleasure and healthfulness of their work. There is no doubt a yearning amongst many young women to get healthy outdoor occupation. Only the other day we had an enquiry for a school of gardening for ladies. We note from the report that the Royal Botanical Gardens at Edinburgh and Dublin, as well as Kew, are now open to receive lady students as improvers, or for "ad interim" employment. We suppose the term "journeymen" would be inadmissible. Miss Gulvin, the gold medallist, has now left Kew, and accepted an appointment in which she has charge of large private grounds, and the management of several gardeners.

Candytuft owes its name to the fact that it originally came from Candia in Crete.

Mr. Edwin Beckett, the Gardens, Aldenham Park, Elstree, Herts, has been engaged by the Ulster Horticultural Society to act as judge at their Chrysanthemum show to be held at Belfast on the 16th November next. This show has grown to be one of leading importance.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, March 23rd, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Bud Transference and its Effects on Fruit" will be given at 3 o'clock by the Rev. Gordon Salmon, M.A.

Renfrewshire Gardeners' Mutual Improvement Society.—The last of the fortnightly meetings for this session was held on the 10th inst, in Yeilder's Hall, Paisley, Mr. Grandison in the chair. Two subjects were under consideration; firstly, Mr. Morton, Ross Hall, read an excellent paper on the "Rock Garden," in which he ably described the different features to be aimed at in the formation of such; he also gave a characteristic list of plants both alpine and herbaceous, most suitable for rock work. Secondly, Mr. H. Maxwell, Ralston gave a paper on the "Rose: its history and culture," the historical part of which was very much appreciated. The cultural details of both papers were ably discussed by the majority of those present. A hearty vote of thanks was accorded those gentlemen for their interesting papers, and to Mr. Grandison for presiding. The meetings during the session have been extremely popular amongst the young men of the district.

Snow has rapidly accumulated to the depth of 33 in. on the top of Ben Nevis.

The Primrose is generally supposed to come from *primus*, first, and rose in allusion to its being the first amongst spring flowers. The name, however, was at one time spelt differently.

The eggs of the Lapwing are to be protected after the 1st April in Banffshire. The County Council has also asked the Scotch Secretary for the protection of the eggs of a large number of useful birds, and for an order to prohibit the killing of the birds.

A Golden-leaved Passionflower.—A correspondent of the *Florists' Exchange* had a plant of the Passionflower Constance Elliott which threw up a sucker from the roots, bearing golden leaves. The sport resembled the parent in every way, except that the leaves were smaller and different in colour.

A Robbery at the R.H.S.—A cool robbery was perpetrated at the R.H.S. on Thursday, March 11th. The sacred precincts of the Council Room were invaded by a thief who quietly and expeditiously appropriated the overcoat of Mr. J. Weathers, the assistant secretary. The latter was on the other side of the dividing curtain, but heard nothing. The thief very considerately left behind a bundle of papers which he had taken from the pockets.

Orchids at the Sale Rooms.—There was a good demand for the Cymbidiums offered at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 12th inst. A small piece of C. hookerianum went for 14s., but the rest fetched from one to two guineas each. C. traceyanum varied from £2 to £3 15s. each. Some pieces of what were described as white C. lowianum collected on mountains rapidly went at prices varying from £2 5s. to 5½ guineas. Pieces of a bottle-green and crimson variety of C. grandiflorum fetched from 20s. to 32s. each. A considerable amount of amusement was caused by several lots of Orchids being sold under fanciful English names, and which were mostly secured by amateurs.

Diamond Jubilee Prizes for Chrysanthemums.—There seems a healthy determination on the part of the committees of the various large Chrysanthemum societies to commemorate the Queen's Diamond Jubilee by the offering of valuable prizes in certain classes to be competed for by exhibitors. The Scottish Horticultural Association, Edinburgh, offers special prizes to the value of £150, to be awarded to successful competitors, in the form of Victorian Gold and Silver Medals, together with a valuable money prize in each case, for twenty vases of Chrysanthemums, in twenty varieties, three blooms of each, and set off with their own foliage only. Six prizes are offered in this class, but additional Silver Victorian Medals will be awarded to other meritorious exhibits in this class. For details see advertisement.

National Auricula and Primula Society (Southern Section).—The twentieth annual report of this society for 1896 is before us, and we note that the membership is increasing. The committee regret to report the resignation of Mr. James Douglas of the post of honorary secretary, after a period of nearly twenty-one years of excellent and valuable services to the society. Mr. T. E. Henwood, Auricula Villa, 16, Hamilton Road, Reading, the hon. treasurer, has consented to act also as hon. secretary for the present. The twentieth exhibition of the society, held in the Drill Hall, James Street, Westminster, on April 21st of last year, proved more successful than had been anticipated, notwithstanding the earliness of the season and the disadvantage at which the southern growers had been placed. The stand of twelve show Auriculas, shown by the Rev. F. D. Horner, was of exceptional merit, comprising as it did ten varieties of his own raising. The premier Auricula of the exhibition was Mrs. Henwood, raised by the late Mr. Samuel Barlow. The balance sheet for last year shows that £70 8s. 6d. was obtained in subscriptions and the balance in hand run it up to £82 7s. The expenditure consisted of £63 16s. 6d. in prize money, £7 18s. 3d. for printing, stationery, luncheons, &c., and a balance in hand of £10 12s. 3d., making up a total of £82 7s. The 21st exhibition of the society will be held in the Drill Hall, James Street, Westminster, on Tuesday, April 13th, 1897.

The Elm is reputed to live for 335 years under favourable conditions.

The word Pansy comes from the French *pensée*, a thought, probably in allusion to the drooping habit of the flower as if pensive or thoughtful.

To prevent rot in Potatos.—Concerning this evil the *Irish Farming World* says, "Throw air-slacked lime plentifully over and through them. You need not be afraid to use it freely. I have tried it when the rot was bad, and it stopped it at once.

Cost of Insect Pests.—According to the calculations of a well-known statistician, insect pests cost the fruit growers of the United States $200,000,000 annually, whilst entomologists say that 75 per cent. of this loss can be prevented by the application of suitable insecticides at the right time and in the right way.

Dr. D. G. Fairchild, the special agent of the U.S. Department of Agriculture, Division of Vegetable Pathology, during a visit to Ceylon, has been spending some time at the Botanical Gardens, Peradeniya, investigating a certain fungus found in the combs of Termites. He has also been visiting Java and Australia.

Royal Horticultural Society.—Constant complaints having been made to the council to the effect that the business of each of the committees has lately been disorganised on account of the disregard of the society's rules and regulations, the council hereby direct that:--(1) The rule whereby all objects presented for certificate must be entered with the clerks at the table *before 11.30 a.m.* be in future rigidly enforced, and that (2) all such objects *must* be placed on the special table provided for plants for certificates. After the plants have been presented to the committee they can, if the exhibitors wish it, be incorporated in their groups.

The American Horticultural Society.—Under this title a National Society has been formed, having for its object the affiliation of all existing American horticultural clubs and societies under one governing head. There are several items mentioned in the constitution of the society with this ambitious scheme that are in the highest degree commendable. They are:—The holding of an annual exhibition by the society; the helping of auxiliary societies in the matter of essayists and lecturers; and the keeping of a bureau of registration and information. The latter feature, we take it, is especially intended to aid gardeners in securing situations, and employers in finding gardeners to suit them.

Shirley Gardeners' Mutual Improvement Association.—The annual general meeting was held at the Parish Room, Shirley, Southampton, on the 15th inst., when the chair was occupied by vice-president, W. F. Mayos, Esq, in the unavoidable absence of the president. The annual report and statement of accounts were read, the report showing that there are 140 members, that thirteen meetings were held during the year, and the attendance averaged forty-two. The accounts, showed a balance of £4 in favour of the society, there being some outstanding subscriptions, however, which might still come in. The election of officers and committee resulted in the re-election of the president, W. F. G. Spranger, Esq., C.C., and an enlarged committee of fifteen instead of nine as formerly. Votes of thanks were most heartily accorded to the president, and also the Press, both local and horticultural, for the valued reports of the meetings, which they have from time to time given in their papers. Mr. A. Dean, lecturer in horticulture to the Surrey C. C. gave a brief but telling address on "Horticultural Progress during the Victorian Era," during which he drew attention to a few of the splendid horticultural businesses which have sprung up and flourished during Her Majesty's reign, as proof of the advances made; also to improved methods of building and heating horticultural structures. Gardeners' associations which have sprung up all over the land, he thought to be good institutions, tending to an interchange of practice and views amongst gardeners and amateurs. A hearty vote of thanks was accorded to Mr. Dean, for his admirable address, and an hour was then spent with music, songs, and recitations, kindly given by some of the members of the association, who were most warmly received by the meeting, and a vote of thanks to the performers and the chair, ended a pleasant evening. There was a good exhibition of miscellaneous plants by the members.

Addington Park, the so-called white elephant of the see of Canterbury, is to be sold and the proceeds devoted to practical uses for the Primate and the church.

The Carnation is often supposed to come from the Latin word *caro*, flesh, in allusion to the colour; but old writers speak of it as the coronation flower, which would refer to its use rather than its colour.

Mr. Dodwell's Carnations.—We learn that Mr. Arthur Medhurst, the relative who succeeded the late Mr. E. S. Dodwell, at the Cottage, Stanley Road, Oxford, is about to leave the city; and the plants etc., are to be sold by auction on the premises, on the 25th inst. The many horticultural notabilities now living who have met, and conversed with, the noted Carnation specialist in his grounds, will now have the opportunity of paying a last visit there.

Syndical Chamber of Belgian Horticulturists.—At the monthly meeting of this society in the Casino, Ghent, on the 7th inst., Certificates of Merit were accorded as follows:—To Clivia Mme. Gustave de Cock, presented by M. Gustave de Cock; to a hybrid between Cypripedium villosum and C. Stonei, shown by M. Poelman-Maenhout; to Vriesia leodiense Closoni, shown by the last named exhibitor; to Azalea Mme. J. Baumann, staged by M. J. Baumann; to Dendrobium Hildebrandti, shown by M. A. Dallière; to a collection of Anthurium, with spotted flowers, presented by the Ghent Horticultural Society; to Tillandsia Lindeni vera, shown by M. J. de Cock; to Miltoniopsis bleuana rosea, a group of new Odontoglossums, and Odontoglossum hystrix var., all shown by M. Jules Hye; and to Pandanus pacificus, presented by M. A. Rigouts. Other awards were made for culture and flowering, &c.

National Carnation aud Picotee Society (Southern Section).—The twentieth annual report for the year 1896 shows that the society is not only maintaining its position in public favour, but making rapid advances. There has been an accession of eighty new members during the past year raising the total number to 300. The exhibition held at the Crystal Palace on July 22nd proved too late for the southern exhibitors. The unusual heat and drought of the summer brought the flowers on too rapidly with the result that many of the growers had nothing of importance left to show, so that quantity and quality were deficient as compared with the exhibition of 1895. The Midland and northern growers partly redeemed the show from being a failure, and helped to manifest the great advance that had been made in the self, fancy and yellow ground sections of Picotees. Groups of Carnations in pots were a feature, and table decorations were better and in excess of those of 1895. The prize list for 1897 has again been somewhat enlarged, and a feature is to be made of undressed flowers in the hope that they will prove attractive to amateurs. They are to be shown with a sprig of foliage only. The thanks of the society are also due to the president, Martin R. Smith, Esq., for the prizes given by him for flowers grown in the open border. The experience of the past year shows that the date of future exhibitions must be left open until it can be seen whether the season is to be early or late. This matter will be settled at a meeting to be held early in June. This year's exhibition will be held in the gardens of the Royal Botanic Society, Regent's Park. Mr. T. E. Henwood, the hon. treasurer, consents to act as interim hon. secretary in place of Mr. J. Douglas, resigned, after nearly twenty-one year's service. The balance in hand from 1895 was £195 19s. 1½d., but after paying all expenses last year, the balance in hand of the treasurer is £238 1s. 3d. The society may therefore be considered very prosperous.

Gleanings from the World of Science.

Nitragin and Nitrogen.—As recorded in this column some weeks ago, it may be remembered that nitragin was the name proposed by Professor Nobbes to include the various species of bacteria which are found in the nodules of the roots of various leguminous plants, and which are the special agents concerned in the fixing of the free nitrogen of the atmosphere. It has been proved by various experimenters that leguminous crops leave the soil richer in nitrogen than it was previous to the sowing or planting of such crops. Advantage might well be taken of crops of Peas, Beans, Dwarf Beans, Scarlet Runners, and other species belonging to the same family for enriching certain portions of the garden to be sown or planted with subjects that require a good supply of nitrogen and have difficulty in collecting it for themselves. Independently of these valuable properties of leguminous plants, the seeds are rich in nutritive ingredients for man; and in the case of field crops the stems and foliage constitute valuable fodder for cattle, horses, and sheep.

Artificial Cultures of Nitragin.—For some time past Professor Nobbes has been experimenting with pure cultures of nitragin, which is confidently expected by many to be turned to practical use in the near future. Not every soil contains these nitrifying bacteria in sufficient quantity to ensure good crops of leguminous plants. The object of these experiments, therefore, is to ascertain whether cultures of nitragin can be produced in sufficient quantity and cheaply enough to pay for the sowing or seeding of fields to increase their fertility. If this can be accomplished on farm land, no doubt it would be found equally efficient in gardens, and probably fully as practicable. If this hope is realised, nitragin will prove less bulky by far, and more portable than any of the fertilisers yet in use. Though nitragin cannot be classed as a manure, seeing that it consists merely of various species of bacteria, yet in connection with the roots of members of the Pea family it is a fertiliser of the first importance, by fixing the free nitrogen of that inexhaustible source, the atmosphere, and storing it up in the surface soil.

A Strange Nut to Crack.—Master John Stogdon having recently returned from his trip to South Africa, picked up a strange nut the other day while rambling through a Hazel copse at Bellaggio, Surrey. It consists of six nuts completely amalgamated into one, slightly flattened piece, like a ribbed Tomato of small size. The line of union between every two nuts is perfectly visible throughout the whole of the exposed surface. As seen both at the base and apex there are three nuts belonging to an inner whorl and joined to one another in a triangular fashion, while the other three occupy the spaces between the angles. The nuts must have grown together in this fashion from their earliest stages in the bud, and have never been able to get liberated afterwards.

LACHENALIAS AS BASKET PLANTS.

Amongst the many grand examples of cultivation in the Nash Court Gardens, Faversham, Kent, are baskets of the above. L. pendula is the species used. Baskets 2 ft. in diameter, well covered with fine robust foliage and fine spikes of flowers make the most graceful display of aerial vegetation imaginable. The leaves hanging down, and the flower spikes turning upwards, render them most suitable for suspended baskets for conservatory decoration.

There is in addition to these, just now, a grand display of florist and other flowers in the conservatory; many fine Camellias are flowering freely; huge specimens of Imantophyllum miniatum with a dozen or so of enormous trusses of orange-scarlet flowers are very showy. A grand lot of well-grown Cinerarias of Sutton's Prize strain, throwing large heads of gigantic, well-shaped flowers of fine form and substance, are really superb. Amongst the strains of Primulas, Reading Giant, in its varied and distinct colours is most attractive; the Star Primula is extensively grown, and is found to be most lasting, as well as very graceful for decorative work. These combined with various bulbs, such as Hyacinths, Tulips, Narcissus, Freesias, Lily of the Valley, Spiraeas, Lilacs, Azalea mollis, and A. indica, which are grown extensively, make a fine display.

In the stoves is a grand collection of various foliage and flowering plants suitable for decorative work. Some good Orchids are also in the collection. Cymbidium eburneum with about two dozen flowers was most attractive; also several good Cypripediums and Vandas were flowering freely. The grand fernery, which was built and planted by Mr. George Humphreys, the present gardener, some years ago, has got quite a natural appearance, and is again

being rearranged, as many of the specimens have out-grown their positions. The fruit houses and vineries show most promising signs of producing fine crops of fruit. Pineapples are likewise well done here, and are throwing up good useful fruit. The many plant houses contain healthy stocks of useful plants suitable for decorative purposes and cut flowers. The demand is great, but Mr. Humphreys is well prepared to meet the like. A noticeable feature of this place is high cultivation all round; cleanliness, and good order are likewise prominent features.—*Rusticus.*

PEOPLE I HAVE MET.

MR. THOMAS DALE, OF AIKENHEAD.

FEW men in the horticultural world, particularly in the region of Southern Scotland, and the border counties of England, are better known, perhaps, than the subject of this sketch—Mr. Thomas Dale, whose portrait and life history is a worthy addition to the records of celebrated horticulturists that have from time to time appeared in this column of THE GARDENING WORLD. He is to-day, one of the most prominent men of his profession, full of enthusiasm for his work, and capable of turning out that work well, as many a competitor who has measured strength with him can testify.

Born at Brancepeth Castle, in 1858, where both his father and grandfather before him had held the position of head gardener to the Right Honourable Viscount Boyne for a period of some eighty years, Mr. Dale is still on the right side of forty. Under his father's tuition he there commenced the practical duties of his chosen calling, and like many another notable gardener, Mr. Dale probably owes much to these initial steps in the groundwork of his profession, which in after years have served him so well and upon which he has by energy and perseverance built so excellent a reputation for sound work and judgment.

A useful experience was gained at the well-known nurseries of Messrs. B. S. Williams & Son, Upper Holloway, where Mr. Dale was principally occupied in the Orchid houses. He subsequently had charge of the Orchids at Kidbrook Lodge, Blackheath, where some two-and-a-half years were spent, after which he came under the kindly guidance of that worthiest of worthy horticulturists, Mr. James Hunter at Lambton Castle, Durham. Then Mr. Dale received an appointment at Brayton Hall, Carlisle, Sir Wilfred Lawson's residence, where, as general foreman under the direction of the late Mr. Hammond, he spent five years, taking an active part in the preparation of the exhibits of plants and fruit, for which Brayton Hall has so long been famous.

Later on Mr Dale had sole charge of the gardens at Seaton Carew, West Hartlepool, the seat of the late Thos. Walker, Esq., where there was a fine collection of Orchids, and it was after that that he received his present appointment with John Gordon, Esq., at Aikenhead, a grand old place in the Cathcart country, where gardening in all its branches is encouraged by its worthy owner. Here is to be found an excellent general collection of things beautiful in horticulture, the Orchids being specially noteworthy. Cypripediums are a particularly noticeable feature, Mr. H. E. Gordon, jun. taking a great interest in this class of Orchids, of which there are some valuable and well-grown examples, besides seedlings in quantity in all stages, in several of which the plants will flower this season.

Chrysanthemums in their season are also a strong feature, some 800 usually being grown. These are grouped for effect in two houses, and they make a magnificent picture. It is from these groups that the blooms shown by Mr. Dale at Glasgow, Edinburgh, and other shows are cut; and readers have only to turn to our reports to realise the successful line which the cultivator has marked out for himself in this department.

Mr. Dale has been at Aikenhead some eight years, and, as will have been gathered from the foregoing remarks, is a familiar figure at the Northern shows. As a judge he is also in considerable request, and in 1896 he was chosen president of the Glasgow Chrysanthemum Society. Always ready to lend a helping hand and to forward the interests of horticulture, Mr. Dale enjoys the friendship of a large circle of horticulturists, both north and south, all of whom will doubtless welcome his portrait amongst our gallery of celebrities in gardening.—*Gyp.*

MR. THOMAS DALE.

HARDY PLANTS IN FLOWER.

ERICA CARNEA.—For either rockery or herbaceous border it would be difficult to over-estimate the value of this extremely hardy and very free flowering Erica. This year it commenced to flower early in January and the flowers are preserving their colour well and will do so until the end of April. The flowers are pale purple-red, the racemes being about 1 in. or from that to 1½ in. in length, and bearing a considerable number of flowers. Erica carnea was introduced from Germany in 1763.

NARCISSI.—These are now coming in in strong force despite inclement weather; indeed, the latter is an advantage in that it serves to set off the splendid weather-resisting powers of which the Daffodil is possessed; N. pallidus praecox is the first to open, but not for long does it pine alone, for its relatives soon follow it. Just now there is quite a number in flower. N. minor, a sub-species of N. Pseudo-Narcissus, is smaller in all its parts than the type. The leaves are usually about 4 in. in length, and ¼ in. broad, the flower being about 1½ in. in length. The segments are sulphur-yellow in colour, whilst the corona, which is ½ in. broad is of a deeper shade. By far the best batch of it that we have ever seen is nestling in a corner of the rockery at Kew, the foliage being of unusual strength and the flowers larger than ordinary. The double-flowered form is also in bloom, but it is not at all a success, for the bloom has a heavy and ungraceful appearance. N. Ajax Henry Irving has an orange-yellow corona, and very broad perianth segments. Golden Spur closely resembles Henry Irving in size, build, and colour of flower, but it is taller in habit and slightly more vigorous. N. P.-N. obvallaris, popularly known as the Tenby Daffodil, for naturalising in the grass has very few to equal it for freedom and earliness of flowering, as well as hardiness.

DAPHNE BLAGAYANA.—We owe this very pretty Daphne to the mountains of Eastern Europe, from whence it was brought in or about the year 1872. It is of dwarf and straggling habit, and the growths, like those of D. Cneorum, love to lie prostrate upon the stones or the soil where the plant is growing. It is very early this year in making its appearance, although the delicate looking pure white flowers, with their delicious perfume, are very welcome. The flowers are produced in dense terminal heads or clusters. The leaves are an inch and a quarter in length, ovate-elliptic in shape, and when healthy dark green in colour. A very nice specimen, growing in the shelter of a huge stone in the rockery at Kew is noteworthy, on account of the happy way in which it has established itself.

ADONIS AMURENSIS is a gem that should be in every collection. It has been in flower for some weeks past. The foliage of itself is sufficiently handsome to recommend the plant, for it bears a close resemblance to the fronds of Davallia canariensis. The flowers are 1½ ins. in diameter, deep yellow in colour, and borne singly on short peduncles at the ends of the growths.

ANEMONE HEPATICA is a very variable plant, and therein lies a great part of its charm, for there are forms with white, blue, pink, and light yellow flowers with many charming intermediate shades, particularly among the blues. From their position near the ground these Anemones are almost sure to become splashed with mud, and at the present time they look distinctly the worse for weather wear.

ANEMONE ANGULOSA is remarkable for the great size of the brilliant sky-blue flowers, which measure from 1½ to 2 inches in diameter. In case of the plants being very vigorous the latter size is occasionally exceeded. The star-like shape of the flowers is an additional attraction, as they open better than those of A. Hepatica. A. angulosa is assuredly the gem of the early flowering members of the genus. It is well suited for the rockery, and enjoys a deep, rich soil, so that when planting it the site should be specially prepared.

HACQUETIA EPIPACTIS is a charming little plant, of which the value is not properly recognised. The plant is very distinct, and conspicuous amongst other early flowering subjects by the uniform yellow hue. The stems are red in colour, and from three to four inches in height. The flowers are borne on very short pedicels in dense terminal umbels with an involucre of five or six obovate bracts rather lighter yellow in hue than the inflorescence they enclose. It requires a deep, rich soil, and must not be disturbed very frequently.

HELLEBORES.—Varieties of H. orientalis are very gay at present. One of the chief features of the rockery at Kew is a batch of a white-flowered variety. The plants have recently had a great part of the old dirty foliage removed, and look all the better for it. H. caucasicus, H. viridus, and H. colchicus guttatus are also flowering at Kew with great freedom at the present time.

PLANTS RECENTLY CERTIFICATED.

Certificates according to merit were granted to the undermentioned subjects by the Royal Horticultural Society on the 9th inst.

Orchid Committee.

CYMBIDIUM EBURNEUM.—The large, powerfully fragant, white flowers of this species are rendered more conspicuous by the large golden blotch or band along the centre of the lip. A large and well-grown plant bearing ten scapes, each having twin flowers, besides a few with solitary flowers, was exhibited by the Right Hon. Earl Brownlow (gardener, Mr. R. B. Lowe), Ashbridge, Great Berkhamstead, Herts. Besides the golden blotch, the lip had a few small purple spots. A First-class Certificate and a cultural commendation were awarded the plant.

DENDROBIUM AINSWORTHII INTERTEXTUM. *Nov. var.*—The flowers of this variety of a hybrid are of large size, with creamy white sepals and petals faintly flushed with purple. The lip is also creamy white, with a broad and massive crimson-purple blotch on the lip. The plant is of vigorous growth, and the variety will be an acquisition to the section to which it belongs. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

BULBOPHYLLUM ERICSSONI.—The flowers of this species are large, conspicuous, very singular and striking in appearance. They are borne in an umbel after the manner of a Cirrhopetalum, and the large dorsal sepals of the various blooms are pressed against one another, back to back, in a very curious manner. All the sepals are green, spotted with black. The petals are almost lost to sight owing to their small size, and the fact that they lie close against the edges of the lateral sepals. The lip is heart-shaped, recurved, and jointed to the foot of the column in such a way that it swings up and down whenever the flowers are shaken or vibrated in any way. It is creamy white, and marbled with dull purple. First-class Certificate. The Hon. Walter Rothschild (gardener, Mr. E. Hill), Tring Park, Tring.

EPIDENDRUM ENDRESSII.—The flowers of this dwarf species are small, but very pretty. The plant varies from 3 in. to 6 in. in height, bearing oblong, horizontal leaves ½ in. to 1 in. in length, and short terminal racemes of flowers. The latter are small and white, except the anther-cap and the lip, which are tinted with violet. Botanical Certificate.

Messrs. J. Veitch & Sons, Ltd., and Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

ODONTOGLOSSUM CRISPUM KEGELJANI. *Nov. var.*—The flowers of this handsome variety are of moderate size, hut round and beautifully shaped. The sepals and petals are broad, white and boldly spotted with brownish-purple. The lip has a large blotch in front of the crest with numerous small ones round the sides. Award of Merit. Messrs. Linden, L'Horticulture Internationale, Brussels.

ODONTOGLOSSUM CRISPUM AMI CHARLES, *Nov.var.*—As far as shape and size are concerned this might be the twin sister to the previous one, hut the markings are quite distinct. The segments are white, tinted with rose, and the sepals have a few, large, reddish-brown blotches. The petals on the contrary are freckled over with small markings. The lip has a lobed, chestnut-red blotch in front of the crest, and small spots round the sides. Award of Merit. Messrs. Linden, Brussels.

CYPRIPEDIUM HIRSUTO SALLIERI., *Nov. hyb.*—The compound name attached to this hybrid will hardly explain the parentage, for the seed bearer was C. hirsutissimum and the pollen bearer C. Sallieri hyeanum, the latter itself a hybrid. The upper sepal is pale greenish-yellow, with a broad white margin round the apex, and of good substance. The petals are yellowish at the base, and of a soft pink on the upper third of their length. In this latter respect we see the influence of the seed parent, whereas the other characters point more conclusively to the influence of the pollen bearer. The pale yellow lip is suffused with pale purple. Award of Merit. Sir Trevor Lawrence, Bart.

MASDEVALLIA POURBAIXII, *Nov. hyb.*—This was raised from M. Veitchii crossed with M. Shuttleworthii, and we are surprised at the great size of the flowers and the breadth of the lateral segments. They are deep orange, shaded with bronze, and having purple veins. A velvety plush of violet hairs show themselves here and there in good light. Altogether it is a handsome hybrid. Award of Merit. Sir Trevor Lawrence, Bart.

SARCOCHILUS HARTMANII.—The flowers of this species are small and white, beautifully spotted with brownish-crimson at the base. The lip is mostly of the latter colour. Botanical Certificate. Sir Trevor Lawrence, Bart.

LYCASTE SKINNERI PULCHERRIMA, *Nov. var.*—The flowers of this variety are of large size, good substance, and chiefly notable for the delicate pink hue of the sepals and petals, the latter being darker at the base. The plant was well grown and flowered. Award of Merit. Messrs. F. Sander & Co., St. Albans.

Floral Committee.

LOMARIA CILIATA GRANDIS.—The fronds of this handsome and useful decorative variety are so improved in size and general appearance as hardly to be recognisable at first sight. The fronds and pinnae are much longer and broader than in the type. Award of Merit. Mr. H. B. May, Dyson's Lane Nursery, Upper Edmonton.

CORYLOPSIS SPICATA.—Viewed in different stages of its growth this dwarf shrub resembles a glorified Hazel. The specific name does, indeed, imply that it is like that well known shrub. Flowers and bracts are yellow, the stamens red and projecting beyond the bracts. They are produced, in drooping spikes or catkins of great size, during March, and considerably in advance of the heart-shaped leaves. The shrub is usually planted against a wall in the open air, where it proves quite hardy. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

CHIONODOXA LUCILIAE ALBA.—The flowers of this chaste and beautiful variety are as large as those of the type and pure white. They are borne in racemes of two to four on a scape. It will make a beautiful companion for the type, or may he planted in beds by itself as a spring hedding plant. Award of Merit. Messrs Barr & Sons, King Street, Covent Garden.

PRIMULA OBCONICA ROSEA.—The free-flowering P. obconica is now giving evidence that it is capable of variation. The flowers of this variety are large, with hroad segments, now overlapping one another to some extent, and of a heautiful, rich rose colour. It is the most distinct and most highly coloured variety we have seen, and has been hrought to its present attractive form simply hy long continued selection. It is exceedingly pretty, floriferous, and will, no doubt, in skilful hands, give rise to something better. Award of Merit. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham.

COTONEASTER HORIZONTALIS.—Planted against a wall, on a rockery, or in the open, this makes a beautiful but singular growth. Against a wall it readily grows flat and upright; but when left to its own resources the stronger stems grow upright for a short way and then throw out numerous branches horizontally like a flat tahle. The leaves are ovate, dark green, and larger than those of C. microphylla. Red herries are also produced in abundance and keep on all winter if not devoured by hirds. First-class Certificate. Messrs Paul & Son, Cheshunt.

CYCLAMEN GRANDIFLORUM ALBUM.—The flowers of this type are of huge size and pure white. The segments are about 3 in. long and 1¼ in. to 1½ in. wide. Award of Merit for the strain. The St. George's Nursery Co., Hanwell.

THE FLOWER GARDEN.

THE storms of sleet and rain which have been so very general lately have given the spring flowers a rough time of it, and most of them have been sadly knocked about. The Daffodils, however, seem to be none the worse for the experience, and the many shades of yellow furnished hy their flowers are a grateful feature in the out-door garden. Where they have been planted in borders, or in beds, the flowers have naturally been damaged by being splashed with mud, but where they have been planted on grass they have been spared this.

DRAINS AND WATER COURSES.—These must be looked to and placed in thorough working order, as they are sure to have been blocked up to some extent by the winter rains. In the coming month we mayexpect to get sudden and heavydownpours of rain, and it is therefore necessary that arrangements for getting rid of this surface water should be complete. It matters little if walks are rolled if they are to be washed into gutters and ridges through lack of taking this simple precaution. The gutters which are cut in the grass at the sides of gravel walks need not be of sufficient width to make them look ugly, but whenever the path is on the slope they should be pretty close together. Instead of cutting big ones at long intervals, it is far better to make small ones and more of them.

WEEDS.—In order to put the gravel paths in condition for the summer an application of weed-killer should be made hefore long. This operation will be much more effectually performed during dry weather. Take care not to go too near the edges of the grass with the liquid, or harm will be done. Moreover, all utensils employed either for mixing or applying the weed-killer must he set apart, and marked in such a manner that they may not, by a mistake, be used for watering plants; indeed, too much precaution cannot he taken.

MOWING.—The grass has grown so rapidly that towards the end of the month the mowing machine will have to be set to work regularly. The knives of the machine, however must not be set down very low, for close cutting will lay bare the roots and injury will be done. It is far better to have to mow twice than to cut too hard once. In order to obtain a thick close sward the grass has to be humoured to some extent, and its after hehaviour much depends upon the treatment given during the months of spring.

THE LAYING OF TURF should be pushed on as rapidly as possihle, in order that it may receive the full benefit of the April rains, and thus be in a position to withstand the drought of summer.

MAGNOLIAS that have been covered with mats throughout the winter may now he finally uncovered, for any frost that may now visit us will not do them any damage. The coverings should be thoroughly dried before they are stored away for the season.

HOLLYHOCKS.—These old fashioned favourites have a stately and imposing character all their own, and the flower-garden would be all the poorer without them. A few beds filled entirely with them form a very effective feature, and they may also be used to good purpose in the herhaceous horder. A line of tall Hollyhocks along the back of a herbaceous border is a showy arrangement it is true, but it imparts an idea of stiffness and formality to a part of the garden from which these characteristics should be absent. The various suhjects in a herhaceous border are planted in lines for the sake of convenience it is true, but their varying sizes and habits speedily do away with the idea of straight lines. We think that Hollyhocks look decidedly the hest when planted in groups of five or seven plants. These groups may be dotted at irregular intervals in the background all along the length of the horder. The question of the suitahle arrangement of colours may or may not be considered, but if it is, then the colours of the plants next to the Hollyhocks have also to he reckoned with, or the arrangement will be spoilt.

The sites which these groups are to occupy should now be fixed upon, and prepared by digging in a heavy dressing of well rotted stable manure. This will have time to become well incorporated with the soil hefore the plants are fit for planting out, which will be about the second week in April. The plants obtained by grafting young shoots, thrown up by the old stools upon small pieces of the fleshy roots, at the beginning of February, will have been shifted from the small pots in which they were first placed into forty eights. They should be gradually hardened off now, so that they may be ready for planting out hy the time specified.

MULCHING ROSES.—The pruning of these now having been completed, and any coverings in the way of bracken or straw that may have been placed over them for the winter, removed, a good mulching of short stable manure should he given. Of course, in cases where Chionodoxas, Scillas, and Muscaris have been planted in the beds to occupy the space beneath the Roses, this will not he possible now, and the mulching will have to be deferred until later in the season, when the foliage of the bulbs has died down.—*A.S.G.*

HARDY FRUIT GARDEN.

PLANTING is now completed for the season. If it has been conducted on a large scale it will entail a great deal of subsequent work. First of all there is the dryness of summer to be thought about. As the roots of the young trees are at no great depth, drought would have serious effects were not steps taken to obviate it. The first of these steps may be taken at once by proceeding to give all newly planted trees a suhstantial mulching of short stable manure. Watering need not cause any anxiety just yet, for the ground is thoroughly saturated.

STAKING.—If the soil has been made fairly firm in planting dwarf pyramidal trees will not require staking, but all standard trees upon which the wind exercises so much more effect will need it. This must he seen to at once. In driving in the stake do not allow it to be too near the stem, and avoid injuring the principal roots if possible. Bands of hay must be inserted between the support, and the supported to prevent the abrasion of the latter.

PROTECTING APRICOTS AND PEACHES.—Continual watch must he kept upon frost as the hlossoms open, and if good crops are to he secured, protection must be given. Even a slight covering is better than nothing, and it is wonderful what a lot of frost can be kept out by the simple plan of inserting sprays of heather or evergreens between the branches of the fruit trees. If no other covering material is to hand we should strongly recommend the cultivator to resort to these measures. Blinds, of course, are expensive, although they are also very effective, since the requisite protection can he easily given without any of the all-important light being excluded. In fixing the blinds they must be placed in such a way that they can be easily lowered or raised as occasion may require. Where glass copings are attached to the wall the working of the blind is greatly expediated. All that is necessary then is to see that the roller is not allowed to bump against the tree whilst the hlind is being moved up or down. Light laths of wood placed immediately hehind the line of descent will make all things secure.

FIGS.—The pruning of these may be undertaken now at any time. If protection has been given throughout the winter this may be finally removed, as there is no longer any need for it. If the trees have been properly looked after last summer little pruning will be required save the thinning of the hranches. The idea should he to ohtain just sufficient bearing wood to cover the area allotted to the trees. Old hranches that are not needed for carrying the younger fruiting wood may then be cut clean out down to the bottom. In tying the ties should not be made tight, for the young wood swells considerably, and the ligatures would then cut into the bark.—*A. S. G.*

HINTS FOR AMATEURS.

Daphne Mezereum.—As this lovely little shrub has been flowering profusely for some time past, it may not be inappropriate to say yet another word as to its great value as a hardy early flowering plant that will grow in any ordinary garden soil. As sucb, it sbould be taken up by all amateurs who are on the lookout for something hardy, and yet handsome.

Having regard to the countries over which it is naturally distributed, it is not surprising that it stands our coldest winters with impunity and without protection. Bentham, in his "Illustrated Handbook of the British Flora," says that it is found "in wcods, chiefly in hilly districts, spread over nearly the whole of Europe and Russian Asia to tbe Arctic regions; in Britain, however, believed to be truly wild only in some of the south-western counties of England."

Apart from its doubtful nativity of our isle, there is no doubt tbat it has been cultivated to some degreed for a considerable time, since Parkinson speaks of it as the Flowering Spurge, and Gerard calls it the Dwarf Bay. Like many another old-fashioned plant, many names have been bestowed upon it from time to time by various cultivators who have fallen in love with it. In our own day it is popularly spoken of as the Mezereon, or Mezereon Daphne, the latter name exhibiting little change from the botanic appellation, except in the transposition of terms. Besides the appellations already mentioned, the names Spurge Olive, and Spurge Flax have likewise been applied to it, and several otbers common upon the continent could also be cited if occasion required.

Loudon also states in tbe "Trees and Shrubs of Great Britain" that "the whole shrub is poisonous to human beings, though the berries are favourite food for finches and other birds, more especially the robin." Certain it is that an acrid and poisonous principle is lodged in tbe bark, which is turned to good account medicinally. To this end, quantities of the bark are annually imported from Germany.

There are several ways of utilising the beauties of the plant. Isolated specimens in corners of the rock garden, for instance, look remarkably well; or they may be dotted here and there in tbe mixed shrubbery, where they help to enliven things in the early spring. For the same reason they do not come amiss in the mixed border, and we have, at various times, seen excellent specimens that have been grown in such a position. Bearing in mind tbe fact, however, that masses of one subject produce a much finer effect that small isolated specimens dotted here and tbere, readers will be prepared to admit that a bed filled with plants will be a most desirable feature in any garden. Such a bed may be so arranged by allowing plenty of room between the Daphnes, that when the latter are out of flower, something else may be introduced to fill up the gap and take up the burden when the Daphnes lay it down.

A very happy thought in this direction struck an amateur last year, for he had picked out Violas as the most suitable plant to associate with the little shrubs, and the effect was really excellent, for the bed was really a mass of bloom from the middle of February until the frost came.

Varieties.—Tbere are several varieties of the type that, with the latter, are well worth growing. Of these the white form is probably the most popular. It is fully as free a bloomer as tbe species, and the flowers are fully as large, and pure white. In D. Mezereum, moreover, the berries are red, but in tbe white variety they are yellow. D. M. autumnale is a very early blooming form that, weather permitting, commences to bloom in November. Naturally its great earliness is a point in its favour, althougb one that dces not always produce satisfactory results, since a mild autumn will coax it into bloom, only for a spell of winter to move the closure. In mild winters such as the past has been, in the south, at all events, the pink blossoms have been in evidence right from November.

Pot culture does not seem to have "caught on" to any extent, although as a conservatory plant there can be no two opinions as to its utility. The great thing is to avoid subjecting it to too much beat. It must not be forced in any way or the buds will fall. All it needs is to be sheltered from severe weather and the buds allowed to swell gradually.

In shifting or potting up tbe plants, October will be found to be the best month. It will not be wise to defer it for any later in tbe season, as growth starts soon after.

Veronica cupressoides.—In choosing plants to fill window boxes, the value of this pretty but rarely met with plant sbould not be lost sight of. It is very bardy, and grows freely in almost any position, but still maintains a very dwarf and compact babit. As the specific name denotes, it is very much like a Cupressus in growth; indeed, at first sight, were it not for the flowers, it looks exactly like a miniature Cypress. The flowers are violet in colour, borne in small racemes of from three to four flowers each, at the ends of the branches. This plant is sometimes met with under the name of V. salicornoides. It is a native of New Zealand.

Winter-flowering Pelargoniums.—It is not too late yet to put in cuttings to furnish plants for winter-flowering. These later cuttings will come in as a very good succession to the earlier ones put in about the middle of February. Four or five cuttings may be put in a 60-sized pot, which must be prepared by pressing the soil in it very firmly in order tbat the cuttings may be secure. Pots in which the soil is loose are a nuisance, as a very little touch pulls out the cutting. A gentle heat is necessary to insure a quick and a good strike.

Rooted Cuttings should be potted off singly into large 60's without delay. For soil a mixture of equal parts of loam and leaf soil with sand will do. A heavier and more substantial compost will be requisite presently. All the flowers and flower buds must be kept picked off, but any stopping that is necessary may be left for a while until tbe plants get over the check of shifting.

Tuberous Begonias for Bedding.—These have now been resting quite long enough, and should therefore be started into growth at once. For the first stage shallow boxes are tbe most handy receptacles, and any light soil will do. First of all put in a layer of rough material in the bottom of the box, and then a little finer soil upon which the tubers may be laid. As it will be necessary to give them another sbift between the starting stage and the point at wbich they are ready for bedding out, they may now be laid pretty closely together, and covered, not too deeply, with soil. Place the boxes with the tubers on a shelf in a warm greenhouse. Sprinkle them lightly witb tepid water twice a day, and they will not be long in making a start.

Ventilation.—Throughout the present month it is often a matter of great difficulty to keep the conditions of heat in the greenhouse anything like steady from day to day. The fluctuations of the weather are great. Perhaps one day the weatber will be bright and warm, and within twenty-four hours it may be quite wintry. In bright weather when tbe air is soft and warm, there is very little trouble in managing tbe house. Air may then be freely admitted without any fear. Even in this case the lights should not be opened to tbeir fullest extent at once. As soon as the temperature of the house begins to rise, a little air must be put on, and this may be increased at intervals as the heat of the sun becomes greater. It is on bright days when the wind is keen and cold tbat the great difficulty has to be met. It is then impossible to ventilate much without subjecting the plants to draughts. The ventilators on the sunny side of the house only should be opened, and it will be advisable to allow the house to get rather warmer than usual rather than run the risk of letting too much of tbe cold air in.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Hardy Adiantum.—Will you tell me if there is a Maidenhair Fern tbat is hardy and will grow in the open ground without protection? I am told there is, but have never seen it.—*O.K.*

The British Maidenbair, Adiantum Capillus-Veneris, is found in sheltered spots in the south-western counties of England, and in south Wales, but it is not really hardy away from these places, since it requires protection to enable it to pass tbrough the winter. The only truly hardy Adiantum is A. pedatum, a North American species, also found in Nortbern Hindostan. It may be planted in nooks in the rockery, where it will come up each spring regularly, dying down in autumn.

Roses and Peaches.—It is quite possible to grow both Roses and Peaches in one house, *L L.R.*, and to grow them well too. Of course there are disadvantages to be got over. Thus Roses are very liable to be attacked with mildew, which will then be almost sure to spread to the Peaches; but by studiously avoiding draughts, and taking care that the soil is not allowed to become sodden, this difficulty may be surmounted. If the bouse is a lean-to, the best method of dividing the space up between the two subjects is to devote the back wall to the Roses, and to plant the Peaches along the front. The latter may be trained up under the roof in the usual way, but should only be allowed to occupy three fourths of the roof. Thus if the roof is 12 ft. wide a margin of at least 3 ft. must be allowed next to the wall to admit light to the Roses. In a mixed house of this kind from which frost is just excluded during the winter months the Roses would be in bloom in April.

Sweet Peas.—*J. Arden*: Sow at once, or they will be too late. They would have been better had they been in three weeks ago.

A home-made Weed-killer.—Is there anything that I can use in small quantities to kill weeds? I cannot get the weed killers as advertised in the small doses that I require.—*C. Jones.*

An ounce of carbolic acid dissolved in a gallon of water will kill your weeds fast enough. Take care when applying it to keep it off grass or box edges, or there will be a wholesale killing. You can get the drug cheaply at any drug stores. The commoner brands will do, those used for medicinal purposes being rather expensive. Warm water is the best to mix the acid with.

Narcissus minimus.—Do not attempt to lift the bulbs, *Enquirer*, until the foliage has died down. You may water the plants if the soil appears to be dry.

On Watering Carnation in Winter.—At a meeting of a Gardeners' Mutual Improvement Society the other nigbt a paper on "Carnations" was read and discussed, the question was asked by an amateur Carnation grower whether the lecturer would recommend to syringe the pot Carnations overhead at this time of year. Whether this was asked to draw out the lecturer or seek information, I know not. I don't think any grower will quarrel with me if I express my belief that more Carnations are lost through the dull months by overwatering and dampness than by any other cause. I grow several hundreds of all sections, and many are not watered twice throughout the winter from November to February, especially those in frames. They may with perfect safety be allowed to become dust dry. If the foliage feels limp and flabby, then and only then should they be soaked. I winter some in houses and some in frames, and of course, those in houses required more attention than those in the frames; but to keep Carnations healthy keep them at this period as dry as possible with safety. If I thought it advisable to water my frame plants I should choose a fine sunny day, and well water them in the morning. Be sure that tbe ball is soaked, but keep the foilage—as Cromwell did his powder—dry.—*A. P.*

Disbudding Vines.—You may remove a few of the small weak shoots at the base of the spurs, which will not be wanted, *T. Cartwright*, but it would be a dangerous proceeding to leave only one shoot to a spur at this early stage. No matter how careful in tying-down you may be, you will be more fortunate than most if a mishap or two does not occur. If you disbud now to the fullest extent, any breakages presently mean so many blind spurs. You cannot exercise too much caution in this respect. One shoot to a spur, if the spurs are fairly close to each other is usually enough to fill the space, but where the spurs are far apart it is not so, and two shoots have to be trained in. In this respect you must exercise your own discretion.

Border Carnations.—I have carefully noted the remarks made by *A. P.* in last week's issue, but my layers with one or two exceptions were fairly well

rooted when they were lifted last autumn. They were potted up in small pots, and were not given any water all through the winter. I may say that those layers which had no roots have all died, and only those are alive now which were rooted when they were lifted. The plants have been placed in a cold frame, but have not been plunged. They have not been given any other protection from frost than that afforded by the frame.—*L. L A.*

Chrysanthemums.—I have a number of the leading varieties of Chrysanthemums, and I would like to grow them in the single-stem system. In the meantime they are standing in a cold frame, having been shifted into 4 in., pots a fortnight ago. Please say if I should stop varieties such as Edwin Molyneux, Duchess of York, and Madame Carnot. *Anxious.*

By growing on the single stem system we presume you mean the production of large flowers. In dealing with your plants you will find that many varieties have a trick of their own, and only experience will teach you what is best to be done. Late varieties, generally speaking, should be stopped about the end of March, early and mid-season sorts from the middle to the end of April, whilst some will do best if not stopped at all. Of this section is Edwin Molyneux. If this is rooted in January the first crown bud should be taken, and this will generally come in at the right time. Madame Carnot may be stopped once from the 15th to the 20th of April, and must not be stopped again. You will probably find Duchess of York succeed best if stopped at the end of March or the beginning of April, and the second crown bud taken.

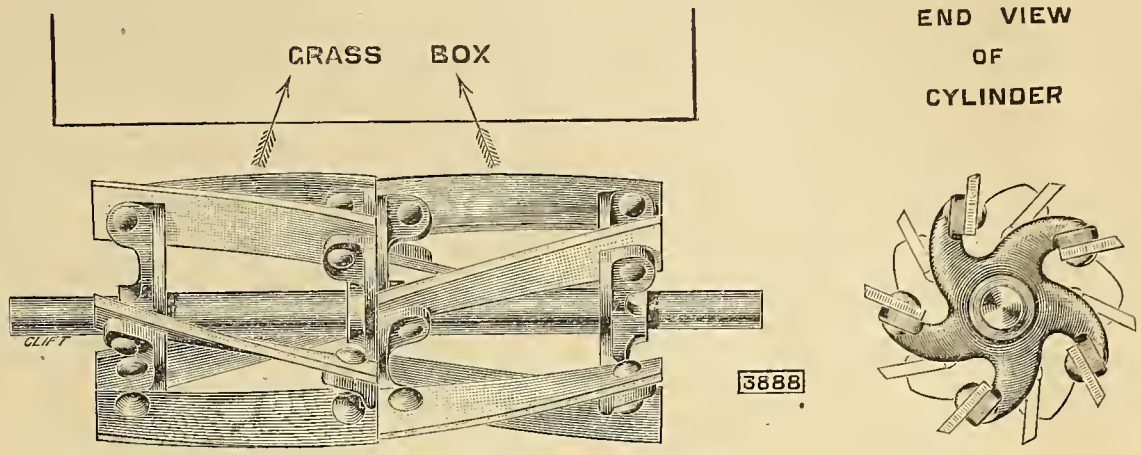
Mildew on Chrysanthemums.—The leaf of Chrysanthemum you enclosed, *Querist*, is spotted with mildew. It is a great pity when young plants are attacked by this pest so early in the season, as if care is not exercised in their subsequent treatment, all the lower leaves go. Dust the affected parts with flowers of sulphur, and keep the plants rather closer than hitherto. Repeat the dusting from time to time, as this will prevent the mildew from spreading.

RANSOMES' LAWN MOWERS.

THE season is now close at hand when the lawn mowers in every establishment will be again called into requisition. We take the opportunity, therefore, of calling attention to the Patent Gear and Chain Automatons, made by Messrs. Ransomes, Sims and Jefferies, Ltd., Orwell Works, Ipswich. Both the gear and the chain machines have several improvements over the old types. They differ from one another chiefly by the means of connecting the driving roller with the cutting barrel, a chain being used in one case, and gearing in the other.

The improvements may be understood by reference to the accompanying illustrations, which have been supplied us by Messrs. Ransomes, Sims, and Jefferies. The lower illustration represents a geared machine. One of the principal improvements is the double angle cutting barrel, as shown by the upper illustration. The knives were made in one length in the old machines; but by cutting them in half and making two sets of them, fitted at different angles, their action causes the grass to be thrown into the centre of the grass box, instead of towards one end as was the case when the spiral was all in one direction. The end view of the cylinder will also serve to show how the knives are fixed in a double set. A second improvement is the patent fore-carriage adjustment, by which the machine can be readily and quickly adjusted to cut the grass at any desired height. Another advantage is the single screw adjustment of the cutting barrel. The patent ribbed rollers make a fourth improvement, and all four constitute advantages which no other machine possesses.

These machines have been well tried in many gardens, including those of the Royal Horticultural Society and Royal Botanic Society. In a large number of cases the users of the machines lay great stress on the advantage of the double setting of the knives; but a greater number speak in decided tones about the value of the grooved, ribbed, or corrugated rollers, which prevent the machine from sliding downwards when mowing grass terraces and slopes, as shown in the illustration. "The ribbed rollers give a solidity and steadiness to the machine," says one; while another says, "I consider the grooved rollers a great improvement, particularly on hilly ground." A third writer says, "the ribbed driving rollers have been appreciated this year, particularly when the grass was very dry and slippery. The new adjustment of rollers also works well, saving a considerable amount of time." The men who do the mowing also prefer these improved machines to the old ones; and needless to say the workmanship and finish of these machines is in Messrs. Ransomes' best style, leaving nothing to be desired.



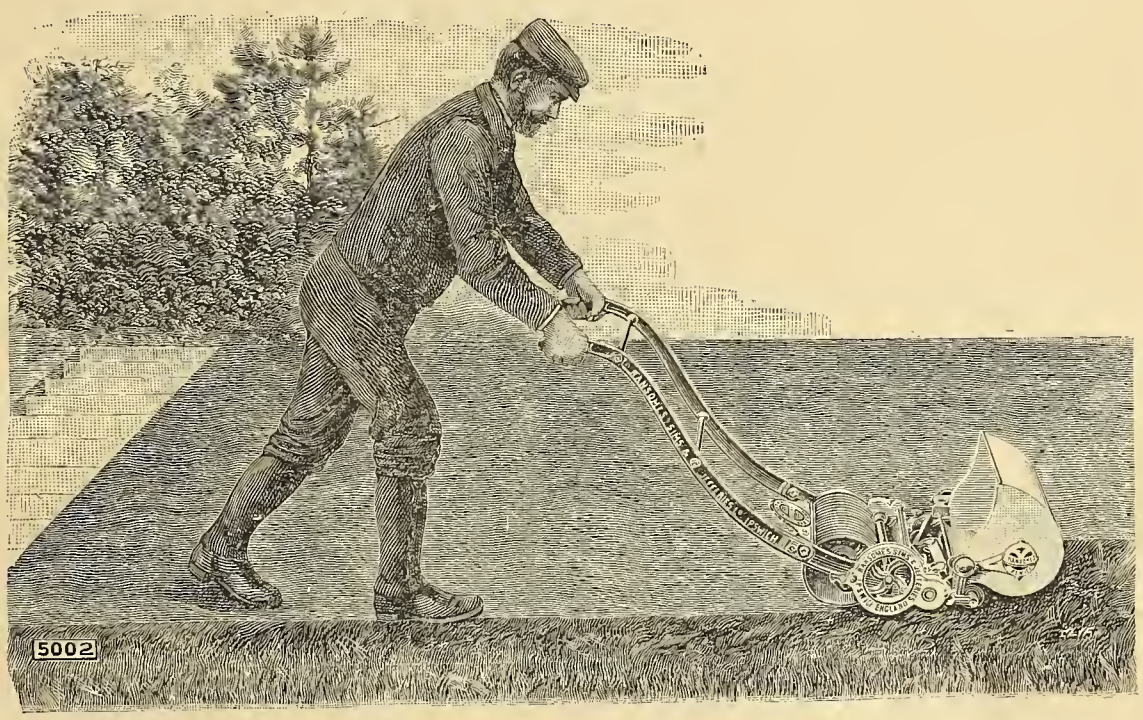
DOUBLE ANGLE CUTTING BARREL.

ARNEWOOD, GLASGOW.

AMONG the numerous mansions in the west-end of Glasgow, Arnewood, built about four years ago for Wm. Neilson, Esq., adds materially to the amenity of the district, and is as grand a town mansion as could be desired. It is, however, the plant houses that Mr. Neilson has erected, which interest us most. To begin with, a handsome conservatory is attached to the southern end of the building. A noticeable feature is that the floor level of the main portion of the conservatory is a few feet below the entrance corridor. This is an excellent arrangement, as tall flowering plants, such as 'Mums, are seen to the best advantage. Meantime, the house is gay with the usual spring-blooming plants. The story below the conservatory is used as a potting house. It well fitted up and lighted by electricity; no gas is used either in or out of the house here. The electric lighting is with Swan's incandescent lamp of from eight to two hundred candle power.

We leave the conservatory by a corridor that leads to the other houses, and note in passing that it is admirably adapted for wintering Dendrobes, and that it has been well taken advantage of for that purpose. Turning to the left we enter the Fern house, and here the Dendrobiums are arranged, making a capital display. D. nobile and D. wardianum are conspicuous. The old type of D. nobile is hard to beat. Some of the recent importations are, no doubt, richer in colour, particularly those of the D. n.nobilius type. The soft green of the groundwork of Ferns makes a most pleasing setting for this display. Cattleyas are also in favour here, and numerous healthy pieces of recent importation are suspended from the roof. C. labiata is, of course, past, but C. Trianaei and C. Mossiae are coming on.

We next entered the plant stove, and find it in two divisions so that the more tropical subjects can have the warmest section. Foliage plants are the main feature here, the flowering plants having free scope on the roof for shade. Adjoining is a low-roofed house used chiefly for growing table plants, and it is well stocked with Crotons and Palms for that purpose. A large span-roofed house has been more recently erected for Chrysanthemums, and last winter was filled with plants, all grown to produce large blooms; and as the result of careful management this object was satisfactorily attained. Mr. Cowie, the gardener, is enthusiastic in his work, and has accomplished much in a very short time. No doubt much of his success is due to the liberal support of his employer.—*Visitor.*



LAWN MOWER CUTTING ON SIDE OF A BANK.

MICROSCOPICAL GARDENING.

PEOFESSOR Marshall Ward held the attention of the Royal Horticultural Society on the occasion of the last Drill Hall meeting, by a lecture on the above subject. Sir Trevor Lawrence presided. At the outset the lecturer referred to the pictures which had come before his notice from time to time, and some of which were admirably executed, of forests of microscopical plants—forests of fungi they had been called. He wished to point out the very close analogy between the every day gardener who worked with ordinary decorative plants, and those who cultivated fungi. The gardener had to find out the particular soil and conditions required by his plants, and had to keep down weeds from choking them, but the grower of fungi had to apply precisely the same principles, only being microscopic in size his work was obviously conducted under greater difficulties.

It was known before the present century that each pool contained myriads of lower organisms, but up to the years 1850-60 no attempt was made to find out anything about these organisms. The history of the 25 years succeeding that period was made up of improvements upon the systems whereby microscopic plants could be obtained free from weeds. The names of de Barry, and Professor J. M. Berkeley were famous in this branch of research.

In dealing with the lower plants, as with the higher, it was necessary that the medium in which they were grown should be suitable. The spores had to be carefully selected and isolated, and the whole course of the plant traced from spore to spore. After many years of labour it was now possible to deal as confidently with organisms so minute that 25,000 of them placed end to end only extended for an inch, as with Acorns, Peas, or Beans. The spores were taken and shaken up in gelatine, which becomes viscid from the warmth of the hand. The mixture was then poured out thinly and evenly on glass slides, when the spores germinated in a day or two. One plant was selected, and its spores sown until the whole batch of plants resulting were alike. They could then be sure that they had no weeds. They enclosed these microscopic plants in a miniature greenhouse, the light and heat of which could be regulated at will.

After all this trouble had been taken the question arose, is the little organism an enemy or is it a friend?

Speaking of the various ways in which microscopic gardening was commonly practised, Professor Marshall Ward spoke of the pollenising of a flower as an instance. The pollen grains he likened to the spores, placed upon a prepared bed, the stigma. Thus bees were amongst the oldest of our microscopic gardeners. Brewing was an example of the oldest microscopic gardening conducted by man, a special medium being prepared for the yeast plants to grow in.

The value of the various bacteria to man was immense. For instance there were millions of tons of wood formed each year, which, but for various bacteria would remain in the soil. A thimbleful of surface soil in a garden would contain from 1,000 to 75,000,000 of organisms. These numbers would decrease the deeper you went down until at from 5 ft. to 6 ft. below the surface there were none at all. As an instance of this he spoke of a fact that came under his own notice, when in a piece of ground that had been very deeply trenched, the subsoil having been brought to the surface, the plants which were placed in it refused to grow, on account of the absence of the necessary bacteria; and it was only when a little surface garden soil was introduced that the plants grew. A discovery that had been made recently by a Russian, has thrown much light upon the movements of nitrogen from its free state into the plant, and back to the free state again.

The lecturer dealt at some length with injurious fungi such as the rust of wheat, and spoke of various methods of combating injurious organisms, making special mention of the application of hot water. He said that on a large scale men do not apply the methods proved to be successes in the laboratory, intelligently, hence the lack of success.

At the close of the lecture Professor Henslow offered a few remarks, dealing specially with the recent discovery as to the movements of nitrogen, and asking for details, to which Professor Marshall Ward responded.

The City of Toledo, U.S.A., has eight public parks, containing a total acreage of 691 and valued at $825,570.

Fertilisers in the Orchard.—The use of any manure upon cereals and annuals generally yields results the first year, but an American contemporary is of opinion that several years must elapse from the date of the application of any fertiliser to orchards before the full effects can be determined. In North Carolina and Georgia the success of the Peach growers is largely due to their knowledge of the needs of the soil. At the end of June the land is planted with Cow Peas, expressly grown for the purpose of supplying nitrogen to the soil. The latter is thus enriched with nitrogenous substance at a very small cost. Heavy dressings of acid phosphate and kainit, or instead, muriate of potash, are given annually. Consistent following up of this programme is attended by the best results.

GLOXINIAS.

Years ago these beautiful plants were seldom seen, being grown only in large gardens where stoves were at command for growing stove plants chiefly. They were mostly propagated by cuttings and leaves taken off close to the stem of the plant, and inserted in pots in peat and sand, and kept in a moist house or frame where they soon formed nice tubers for another season.

Then we used to grow some splendid plants in 32-sized pots in a compost of loam, peat, leaf mould, sand, and some well rotted cow manure properly dried, and rubbed through a fine sieve. Now they seem to have got into the hands of amateurs, and are so easily got from seed that they have become the flower of most people who have a greenhouse, or in many cases they may be termed intermediate house plants. Without doubt these plants are grown to the height of perfection by these gentlemen. The best plants of Gloxinias I ever saw were at Wood Green Show last season, grown by Mr. Marmont, an amateur in Whittington Road, Bowes Park. His best plant was a splendid white with blooms standing boldly out from amongst some splendid foliage of a dark velvety-green, with serrated edges. It was one of the finest specimen Gloxinias I ever saw. I may say the flowers numbered from 80 to 100, and were growing in an 8-in. pot. The next best plant was almost scarlet and beautifully bloomed Others were rather lighter in colour, one a very dark purple, and a blue, all well bloomed, and the blooms standing well up out of the strong foliage, which was as clean and fresh as though it had never been moved from the house where grown. I give great credit to the grower. The plants were grown from seed supplied by Messrs. Sutton, of Reading, and the tubers were two years old only. We seldom see plants so well managed.—*J. L., P.*

CLIMBING STEMS IN TROPICAL FORESTS.

One sometimes hears it argued that botanical works are uninteresting and very dry reading, and that one has to stumble over a number of jaw-breaking names and technical terms; also that writers express themselves in scientific language, and formal phrases hard to be understood. The following from "Kerner's Natural History of Plants," may, I think be taken as an exception, and strikes me as forming an exceedingly pretty wood picture. Concerning leaves, he says: "Often it happens that the name of a plant affects our imagination by its pleasing or harmonious sound. One associates with the name not merely the idea of the form of a certain plant, but more than this, its whole surroundings, framed in which it grows and flourishes. One conjures up a picture of a flowery meadow or scented wood with which the plant with pleasing name can only harmonise. It may be some far-back reminiscence is bound up with the pretty name, of which we may have read a vivid description in a book long ago."

"I am thinking here especially of the word "liane." When this beautiful word is sounded, a whole series of splendid pictures stand out in strong relief from the twilight of youthful recollections. I see a dense leafy canopy, lit by a stray sunbeam here and there, arching over the gigantic stems of the primeval forest, stems which rise up like the columns of a spacious hall. On the forest floor the scanty green of shade-loving Ferns covers the remains of fallen trees. Further on a confused brown mass of tangled roots renders progress over the still dark ground almost impossible. In contrast to these gloomy depths how brilliant is the picture in the glades and on the margin of the primeval forest! Plant forms in indescribable confusion piled up into the thickest of hedges rise higher and higher to the very crowns of the giant trees, so that it is impossible to obtain even a glimpse into the pillared hall of the interior of the forest. This is the true and proper home of the liane. Everything climbs, winds, and twines with everything else, and the eye in vain attempts to ascertain which stem, which foliage, which flowers and fruits belong to which. There the lianes weave and work green draperies and carpets in front of the stems of the forest border, there they appear as swaying garlands, or hanging down as ample curtains from the branches of the trees. In other places they stretch in luxuriant festoons from bough to bough, and from tree to tree, forming suspension bridges, even actual arcades with pointed and rounded arches. Isolated tree trunks are transformed into emerald pillars by the covering of woven lianes, or more frequently become the centres of green pyramids, over the summit of which the crown spreads out in verdant plumes. When the lianes have grown old with the trees on which they cling, and the older portion of their stems has long been stripped of foliage, they resemble ropes stretched between the ground and the tree summits, and often assume peculiar and characteristic forms. Sometimes drawn out tightly, sometimes limp and swaying, they rise up from the undergrowth of the forest ground, and become entangled and lost far above among the boughs. Many are twisted like the strands of a cable, others are curved like a corkscrew; and others again are flattened like ribbons, hollowed in pits, or shaped into elegant steps—the celebrated monkey ladders."

"The green garlands, bowers and festoons of lianes are adorned with the gayest flowers. Here a truss glows with flame-like brilliancy, there a large blue raceme sways in the sunshine, and here again is a dusky curtain studded with hundreds of bright starlike Passion Flowers. And when flowers flaunt themselves and fruits ripen, guests are not wanting. The gay assemblage of butterflies, and the joyous songsters of the wood regard the forest border interwoven with lianes as their favourite rendezvous."—*A. P.*

AYRSHIRE GARDENING.

It is pleasant to be able to adduce that gardening is not in such a state of retrogression in some of our *best* Scottish counties, as reported to be in many districts. In many cases we deplore reductions in gardening establishments by reason of the depression in the agricultural interest. Throughout Ayrshire there are many noble domains which have suffered by the depression as indicated, but it is well for horticulture that there are means—varied and ample to maintain the cause we love—apart from the sister art so important to the whole community.

At Ayr, when on a visit lately, during very stormy weather, I noted that it is evident that retrogression is unknown in the immediate vicinity of Ayr. Probably there is not more enthusiasm manifested and support given in the north towards the maintenance of gardening than in this locality which Burns stated was famed for "honest men and bonnie lasses." Suburban gardeners can be numbered by the score, all rendering their quota to the cultivation of fruits, vegetables and flowers. The latter especially are very popular. Let us take Sir William Arrol's (of Forth Bridge fame) new place as an example of refinement, where everything architectural and horticultural is rendered as complete as skill and opulence can make it. But shrub and tree growth are not likely to be very strong points at Seafield. The name indicates close proximity to the sea. The breezes from the Firth of Clyde are irresistible, and protection of the most elaborate description cannot stem the blast when the wind blows "as 'twad blaw its last." As an adjunct to the elegant new mansion there is one of the most beautiful conservatories I have ever seen. Here there is ample space for exercise and retirement, when weather is inclement. A beautiful floor all round the oblong structure of mosaic is quiet and tasteful, and does not detract from the beauty of gay flowers or fine foliage which are special objects all the season through. Huge Fuschias grown up as pillars, Palms towering up towards the dome, Cytisus as pyramids, in full flower, are interspersed with other plants, fine in foliage, and a great host of flowering plants covering the ground space. Bulbs such as Tulips, of many sorts, Daffodils, Hyacinths, Callas, Azaleas, Camellias, Cyclamens and Cinerarias were specially well grown with a great profusion of flowers on them. Primulas were perhaps the most attractive of the display. Long lines were placed by the kerb-stones of the path and were in first-rate form—Cannell's Victoria, a pale pink was producing the finest flowers for substance and size I have seen, and contrasted well with pink crimson and pure white varieties. A beautiful fountain sending up fine sprays, like mist. Chairs of handsome form, and means to light up the structure, indicate usefulness as well as ornament. Such a retreat beside a mansion reminds us of some of those elegant structures which the late Mr. Marnock devised to act as drawing-rooms and conservatories combined.

We passed on through other ranges of glass filled with admirably grown specimens of Cinerarias,

Pelargoniums, Calceolarias, Lapagerias (fine specimens grown from seed), Tea Roses, greenhouse plants in variety, and many fine foliaged species. There is a range of spacious houses for fruit—Grapes and Peaches especially. The Vines only planted two years were most promising, and the wood being strong, short jointed and firm like Oak, we expect to hear of them again. Making a casual inspection of rockeries, vegetable garden, &c., we hurried on to make the best of our time, feeling deeply indebted to Sir William's talented and courteous head gardener, Mr. John McArtney. We took time to visit the gardens of the president of the Gardeners' Horticultural Association where fine primulas, and other florists' flowers were much in evidence. The gardener is one of the leading Chrysanthemum growers at Ayr. From this we had another walk (through wind and rain) to visit the gardens of Walter Neilson, Esq., of Ewnfield, where flowers are also strongly to the front. Mr. Gordon, the gardener, is also an orchard house enthusiast. A fine lean-to house is being utilised for Cherries, Plums, Peaches, &c. Here we had to "Ca' canny," as the elements were against the visiting of the beauties of Ayr, to say nothing of an intended visit to Auchincruive, of hardy fruit fame, and Culzean Castle, where Mr. Davie Murray has made a great name as a fruit grower, as is well known by his incursions to the leading exhibition tables in Scotland, and his famous Ailsa Craig Onion, which has added lustre to his fame.—*M. Temple, Carron, N.B.*

EXHIBITING CHRYSANTHEMUM BLOOMS.

Gardeners get the credit of being men of good taste, but they do not show it much in their method of exhibiting Chrysanthemum blooms. Surely the time has come when they should be shown with their foliage intact. Enthusiasts will tell you that good blooms require no extraneous dressing to recommend them; so say I, but do not rob them of Nature's dressing—the foliage. Does it not look ridiculous, for instance, for Edwin Molyneux, Edith Tabor, and even Modesto, appearing on the show boards in the same condition as to clothing as our first parents were before the fall. The double Dahlia is also exhibited without foliage, and I have no doubt this accounts a good deal for the disfavour into which it has fallen.

We have a good deal to learn from Rose shows how to exhibit Chrysanthemum blooms. The Roses are exhibited with their foliage intact, and although the peduncles of many varieties are weak, they are supported in a very neat way by wire holders, which can only be noticed on close examination. The boxes are usually covered with moss of a much lighter shade of green than the foliage, which throws the deep green shade of the foliage into relief, making an admirable setting for the flowers. Seeing that the leaves of the Chrysanthemum are bigger than the leaves of the Rose, covering the boxes with moss would not be very necessary, as the large leaves would almost cover the boards, and take away the stiffness that the moss is supposed to do.

The boards, however, would need to be of a much lighter shade of green than the foliage, or they might be fawn colour, which would show the foliage still better, and not be obtrusive. The weakness and length of the peduncles of some of the varieties are often used as arguments against showing them with foliage. The weakness can be got over by using supports the same as are used in exhibiting the Rose, but larger. The length of the peduncles is a greater drawback; some of the varieties could not be shown with foliage without raising them to an ungainly height above the board. The peduncle has never been taken into consideration up to the present time in judging; but once let this system of exhibiting be adopted, and short, stout peduncles will be considered a merit, and long weak ones will soon disappear before the intelligence and perseverance of the raisers of new varieties.

If a bloom is shown in much the same way as it grows on the plant, it stands before the judge with all its advantages and defects revealed; a truer judgment can be given; there are no hidden defects that may be perpetuated, such as weak or too long peduncles, poor foliage, or loose flabby petals at the base of the bloom requiring support. I do not couple the non-dressing of blooms along with the showing of them with their own foliage as some do. If dressing only goes the length of assisting Nature, there is nothing to which objection may be taken. If some such method as I have indicated were adopted in exhibiting the Chrysanthemum, its improvement would be more rapid and real, and the improvements would at the same time be more in keeping with good taste.—*'Mum.*

NOTICES OF BOOKS.

Le Chrysantheme a la grande fleur by Anatole Cordonnier. Published by the author, Bailleul, (Nord) France.

When the first edition of this excellent treatise on Chrysanthemum cultivation appeared we gave a notice of it, and were not at all surprised to have enquiries as to whether there was any likelihood of there being an English translation, for the contents are not only useful, but conveyed to the reader in an interesting and literary style. A second edition has recently been published in an enlarged form with several new illustrations, and to those English growers who understand French the book will be of much service in more ways than one. It is very complete, well printed, freely illustrated, and turned out in good style, and the price, 2/-, is remarkably low. M. Anatole Cordonnier is one of the foremost cultivators of the popular flower in France, the energetic secretary of the northern French Chrysanthemum Society, and has of late years done much to spread the love of the Chrysanthemum abroad in his country. The selected lists of varieties which he gives shows that he is not animated by patriotic motives to exclude all but native productions, but on the contrary can appreciate at their proper value novelties from all sources, whether English, French, American, or otherwise.

As a large exhibitor at most of the Continental shows, the author is well able to judge what varieties are of practical utility to the Continental grower, for whom, of course, the book is mainly compiled, and much of the cultural matter is directed towards this method. The new chapters, however, that tend to increase the size of the second edition deal with open air cultivation, and the details of the work to be accomplished month by month in all departments of Chrysanthemum growing.

The list of selected varieties comprises a large number of standard kinds with short descriptions, and what is likely to be of some value to many growers, an indication of the bud to be taken for the best results. Taken as a whole we know of no other Continental work on the Chrysanthemum likely to compete seriously with M. Cordonnier's excellent work.

GARDENING MISCELLANY.

NARCISSUS INCOMPARABILIS SEMIPARTITUS

Some authorities consider this as a distinct species, and Haworth even gave it generic rank in naming it Queltia semipartita. The structure of the foliage and flowers shows that it comes very near N. incomparabilis, from which it differs chiefly by its shorter and more deeply-divided corona. There is now a double form of it in Holland, under the name of N. semipartitus plenus. It is not so massive and lumpy as the several double forms of N. incomparabilis in cultivation, judging from the coloured plate given in a recent number of *Tijdschrift voor Tuinbouw.* The segments are relatively few, irregularly disposed, and coloured with a mixture of various shades of sulphur and yellow, the latter colour being darkest towards the base of the segments.

RHUS GLABRA LACINIATA.

Among hardy deciduous shrubs with handsome foliage this is one of the best and most useful, and, withal is a most excellent town plant, and thoroughly hardy. Naturally it will grow from 4 ft. to 7 ft. in height and become branching. It may with great advantage be utilised in bedding arrangements in the same way as the Ailantus glandulosa is treated in the London parks; but its dwarfer habit of growth makes it available in positions where the Ailantus, owing to its larger growth, would be unsuitable. A group of three, or a single plant in a small bed, will form a most effective centre piece. If cut down annually it will throw up shoots 12 in. to 15 in. high, but only one growth should be allowed to a stool; and a succession of young plants should be kept up to replace any which may in time become too strong. Besides being used in bedding arrangements it has a most telling effect treated in the same fashion on banks at the back of rock work and near or among hardy Ferns.—*W. B. G.*

STATICE LATIFOLIA.

This is one of my earliest acquaintances among hardy herbaceous plants, and also one of the most useful and beautiful; yet how seldom met with. Wherever hardy plants are grown it should find a place. The dense heads of pale blue flowers are excellent material for use among cut flowers in the same fashion as the Gypsophila, and more lasting. A good plant of it on rock work with its broad shining foliage is at any time attractive, more especially during the late summer and autumn, when the tuft of foliage is crowned with its spreading inflorescences. When once planted it should remain undisturbed for a few years.—*W. B. G.*

CINERARIAS.

When going round the garden of Yoecliff House the other day, I was greatly struck with a splendid batch of Cinerarias. On inquiring from Mr. Daking, the head gardener, whose strain they were, I was informed that the seed came direct from Messrs. Jas. Carter & Co., High Holborn. The plants are growing in 5 in. pots, and they are carrying heads of bloom 18 in. across, the blooms being 2½ in. across. Mr. Daking is very proud of his Cinerarias, and well he might be. Messrs. Jas. Carter & Co., are to be congratulated on being the possessors of such a splendid strain.—*Thos. Cockerill, Wirksworth.*

PRIMULA PRINCESS MAY.

The above Primula is the very finest of recent introductions, and is one of the good things sent out by Messrs. J. Carter & Co. It is just the shade of colour that ladies like, being a delicate pink. The flowers are borne on strong stems, well above the foliage. Mr. Daking has some grand plants in full bloom at Yoecliff House.—*T. C.*

OBITUARY.

Robert Hogg, LL.D., F.L.S.

It is with deep regret that we announce the death of Dr. Hogg, which took place at his residence in London, about midnight on Sunday last. His well-known figure has been familiar to us since 1880, as he used to attend meetings in the gardens of the Royal Horticultural Society at Chiswick. We also had the honour of a personal acquaintance extending back for many years.

In "Men of the Time" it is stated that "Robert Hogg, LL.D., F.L.S., was born at Dunse, N.B., in 1818, and was educated at a private school in his native town." He was the son of Mr. Robert Hogg, Cheeklaw and Bogan Green, Berwickshire, the head of the old firm of Hogg & Wood, of Coldstream. After a curriculum at the Edinburgh University, like many another enterprising Scot, he steered his course to London, travelling by the mail coach in 1836. He was present at Her Majesty's coronation in 1837. On arrival he was in charge of Mr. Charles Lawson, who assisted in finding him a situation, and finally got him engaged to the nurseryman, John Ronalds, of Brentford, of fruit-growing fame. The young Northerner felt passing rich at a remuneration of 15s. a week. By diligence and perseverance he became an expert in the raising of trees and the cultivation of fruit.

About this period he first established friendly relations with the Continental botanists and horticulturists, as a result of his travels in France, Belgium, and Germany, and nursed this relationship during many subsequent years. In 1845 he became a partner by purchase in the firm of Gray & Adams, of the long-famed Brompton Nursery at Kensington. The business of Gray, Adams & Hogg, continued till the dissolution of the whole concern in 1851. This nursery was first established in 1681, and long after the whole district was occupied with nurseries and market gardens. The land became too valuable for gardens and soon became built over with noble mansions, forming part of the wealthy "West End" of London. Exhibition Road now occupies the site of the main thoroughfare of the Brompton Nursery.

The Doctor built his London home on the south side of the region of Belgravia.

There was no American competition in the matter of hardy fruit in those days, the supply coming chiefly from France and Holland. The young reformer, after investigating the matter, resolved to make the subject of fruit a special study, with what results many of our readers are aware. He wrote vigorous and effective articles on the national importance of hardy fruit, which were voiced in the Press, including the *Cottage Gardener*.

The Doctor had other hobbies, and early in his career he spent some time in the West of England where he gave a considerable amount of attention to florists' flowers, including the show Tulip and Dahlia. He wrote a treatise on the latter, and was so convinced of the perfection of flowers of forty years ago, that no amount of persuasion would make him admit that modern Dahlias were superior to those of his early manhood. Size they had, but at the sacrifice of refinement, was his opinion. He travelled great distances to see Tulips in bloom with the view of purchasing hulbs of which he gathered together a splendid collection, in the enjoyment of which his everyday life was sweetened and brightened. He won his first prize for Tulips, while in the West, under extraordinary circumstances. Noting the laxity in the regulations in the schedule of a Tulip show, he visited collections of Tulips so far advanced in growth that he could see the colour of the flowers, and choosing the best he bought them and had them transferred at once to his own ground where they flowered, giving him blooms with which he took the first prize. His right was disputed, but the case was decided in his favour. Though virtually a man of peace, it was not an easy matter getting over the Doctor, if he was convinced that right was on his side. Comparatively recently his old love for the Tulip blossomed out again, and he got together a second fine collection, of which we have seen exhibits at some of the R.H.S. meetings.

In 1851, as a result of assiduous devotion to his favourite study, he produced "British Pomology," in which 940 varieties of Apples are enumerated. It was translated into German, the reverse of what usually happens in the case of valuable books. This work was superseded by the "Fruit Manual," which has passed through five editions. A mass of MS. for a sixth edition was in an advanced state at the time of his death.

"The "Vegetable Kingdom and its Products," appeared in 1858, containing an enumeration of 7,000 genera, 4,000 synonyms, and representing about 100,000 species of plants. In collaboration with the late Mr. G. W. Johnson, he produced "Wild Flowers of Great Britain."

He was the originator of the British Pomological Society in 1854, whose president was the famous Sir Joseph Paxton. He was one of its secretaries and subsequently vice-president. Monthly meetings were held for five years, till the society was transformed into the Fruit and Vegetable Committee of the Royal Horticultural Society on May 7th, 1858, on the initiative of Dr. Hogg. He may therefore be regarded as the father of the senior committee of the R.H.S. This took place when the latter body became established at South Kensington, of bitter memory. The doctor vigorously opposed the great outlay of £50,000, incurred by the R.H.S., but was finally won over to the cause when he took the initiative above mentioned, and gave his strenuous support to make it a success. The Floral Committee was established June 24th, 1859.

His co-operation could always be secured when he felt convinced that the R. H. S. was pursuing a genuine horticultural policy, for which it was originally established; but he was an unflinching antagonist, when alien projects loomed on the horizon. In conjunction with other earnest men he was the means of preventing the loss of the Chiswick Gardens to the society, as the establishment now exists. On the remodeling of the society in 1860, Dr. Hogg was appointed secretary of the Fruit and Vegetable Committee, a post which he held for a few years, till succeeded by Major Mason. The late Mr. Thomas Moore, of Chelsea, was made secretary of the younger committee—the Floral—in 1860.

A council of South Kensingtonians gradually obtained power, and brought the ill-fated affairs of the R.H.S. to a crisis in 1875. The then president was compelled to resign, and a horticultural council, including Dr. Hogg, was elected. The chief nurserymen held a commemorative show gratuitously on the 21st July of that year, to memorialise the event; and their artistic and splendid groups gave a great impetus to "groups arranged for effect" at most exhibitions.

Dr. Hogg continued on the council till his resignation in 1889; he also remained a member of the Fruit and Vegetable Committee, and was thus closely connected with the society for a period of thirty-seven years. He provided the society with a magnificent collection of Pear trees which Mr. Barron trained so well in pyramidal form, and of which many yet remain as witnesses to the fact. The unique collection of Figs in the gardens at Chiswick was collected by Dr. Hogg during one of his excursions upon the Continent.

In 1848, the *Cottage Gardener* was established by Mr. G. W. Johnson at Winchester, but in August, 1860, it was removed to London, where Dr. Hogg joined Mr. Johnson as co-editor. The following year (1861), the title of the paper was changed to the *Journal of Horticulture*. Mr. Johnson will be known to our readers from the fact that he edited the first two editions of *The Gardeners' Dictionary*. He retired in 1881, and died in 1886. Soon after this gentleman's decease, Dr. Hogg purchased his share in the property, becoming sole proprietor.

In 1865 the latter was earnestly engaged with others in laying the foundation of the Great International Exhibition and Botanical Congress which was held in London the following year.

Harking back to 1869, it may be noted that Dr. Hogg was appointed Official Commissioner of the Royal Horticultural Society to attend the great International Exhibition held at St. Petersburg during May of that year, his co-delegate being Mr. Andrew Murray. Sir Joseph Hooker represented British Botany. The Emperor Alexander II. wished to confer the Order of St. Ann on Dr. Hooker and Dr. Hogg, but the British Government did not permit its subjects to receive foreign distinctions. His Majesty gave command for a malachite table and signet ring to be prepared and sent to Dr. Hogg.

After the death of Mr. Johnson, the Doctor took but a small share of the editorial work of the *Journal of Horticulture*, and practically none in recent years, confining himself to the business department. More than a year ago he relieved himself of all responsibility in favour of his son, Mr. R. Milligan Hogg, who became the proprietor, though this fact was not generally known. When Dr. Hogg's retirement became known, Dr. Masters, unknown to the former set about getting together a collection of portraits of his friends and associates to be presented in the form of an album, which, alas! was too late in being completed for presentation. When informed of what was in progress, he smiled in recognition of the graceful act of his friends. The memento will be cherished by his family.

During his heyday of vigour, Dr. Hogg was enjoyed for his heartiness, and the warm geniality of his friendship. He has all along been a friend of all true gardeners. Much time was spent in improving his Sussex estate, laying out gardens, planting fruit trees, hardy trees, shrubs and flowers. He was his own architect and landscape gardener, and in his time built himself four mansions of considerable size. During the past year he was more or less of an invalid, and was confined to bed for the last three weeks.

When last seen by Mr. J. Wright, his sub-editor for many years, he said, "Ah, Mr. Wright, if I should live to get out in the spring the sun and the flowers would do me good." After a pause and a glance, he said more firmly, "But you know I have had a good innings. I have much to be thankful for, and *am* thankful I assure you, and shall be whenever I may go to sleep." The end came without pain, and perfectly calm. He would have been seventy-nine next month. He has had a long, busy, useful, and honourable career, and his end seems a fitting embodiment of Richard Le Gallienne's lines, which appeared a few days before the Doctor's death :—

"Soft sleep, sweet sleep; a little soothing Psalm
Of slumber from Thy sanctuaries of calm.

. . . . . .

Of all Thy good, great Lord, deep sleep is best."

He was interred at the Necropolis Cemetery, Brookwood, Woking, at mid-day, on Thursday, the 18th inst.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Sweet Peas and Insects.—*T. H. Ansell*: Under natural conditions Sweet Peas rarely get crossed by insects. They are self-fertilising. Hive bees visit them very much, in order to collect pollen, but owing to the structure of the flowers and the shedding of the pollen from the anthers before the opening of the flowers, they are fertilised by their own pollen. Bees only assist this operation by pressing down the wings of the flower in order to collect pollen. It is the custom of seed growers to sow their Sweet Peas in lines at certain distances apart, but all on the same piece of ground, whatever its size, and whatever the number of varieties may be. Experience has taught them that it is quite safe to follow this practice. Private gardeners who grow a collection of named varieties, sow them in rows or half rows on the same ground. Moreover, you may plant the seeds of as many varieties as you like, alternatively in the same row, and if you label each and harvest the seeds carefully, you will find they come true to name. You must make a little allowance for sporting, as they vary a little in this way sometimes.

Treatment of Plant.—*H. I.*: The specimens you sent us were those of Sparmannia africana, a South African plant that thrives well in a cool greenhouse temperature. You are keeping it in too high a temperature. About 45° to 50° would be better than 55° to 60°, which you have been giving it. The flower you sent was scarcely half the size it should have been, and gave us the impression that you had been forcing it too hard. A cool greenhouse or conservatory, well ventilated on all favourable occasions, would suit it admirably The same treatment as is given to Heaths, Cytisus, Richardias, and Pelargoniums, would answer the purpose.

Indoor Creeper.—*J. Hole.*: The correct name of the plant you send us is Streptosolen Jamesonii. It was introduced from Columbia in 1847, so that we doubt very much whether it will prove hardy in any part of this country. The fact of its being naturally evergreen would render it more susceptible of injury from frost than if it were deciduous, that is, if it dropped its leaves in autumn. The species is allied to Browallia, a genus of annuals often grown in pots for conservatory decoration. It is treated as a greenhouse plant, and is propagated by cuttings in sand under a bell glass.

Tulip Bulbs rotting away.—*T. H. Ansell*: It would be pure guess-work to say definitely what caused the bulbs of any particular variety to rot away without having seen them in the early stages of decay. It may possibly have been due to the presence of bulb mites between the scales, or what is more probable to some fungus, such as that caused by Bacillus Hyacinthi, a bacterial disease of Tulip and Hyacinth bulbs. Very often two evils go together, but the fungus is generally, if not always the worse and more destructive enemy. If the fungus had made much progress upon the bulbs last summer, the chances are that they would fail to flower with anybody; but if the damage was not great, they would probably flower well the first season, at least, if they get good cultural treatment. Bulbs will also flower well even if there are some mites upon them if potted in good time and allowed to form roots before they are put in heat. If the bulbs you speak of are not too much decayed we would be pleased to examine them.

Strawberries for Forcing.—*Bulbs*: Runners potted up now would not be of much value for forcing this year, and they would be too large and too old for next year's work. Moreover, they would cost you a deal of labour in watering and repotting them during the coming summer. The best way is to get as many "long Tom" pots as you want. Put a crock in the bottom of each and fill up with good fibrous loam and a small quantity of sand to make it porous if too heavy. This need not be done till runners have formed on your plants; but when that has taken place, plunge a pot beside each runner and peg one of the young plants into it, or lay a stone upon the runner to keep the plantlet in place. The plunging will save watering to a considerable extent; but by giving a good watering now and again in dry weather, it will hasten the rooting process. After good roots have been made you may sever the young plants from the parents, lift the pots and stand them close together upon ashes in a sunny position About the end of August, these young plants should be put in 32-size pots, which will be large enough for forcing and fruiting purposes. The compost should consist chiefly of good fibrous loam, with, perhaps, a small quantity of well-rotted cow manure and sand. You can give the plants liquid manure after the fruit is set. Young plants are always used for forcing purposes with the best results.

Names of Plants—*A. G.*: 1, Dendrobium crassinode; 2, Cypripedium Sedeni; 3, Dendrobium primulinum; 4, Odontoglossum crispum andersonianum; 5, Cattleya Trianaei var.—*W. G.*: 1, Corydalis solida; 2, Narcissus Telamonius plenus; 3. Forsythia suspensa; 4, Erica carnea; 5, Berberis Darwinii; 6, Crocus vernus var.—*T. M.*: 1, Sparmannia africana; 2, Boronia heterophylla; 3, Adiantum formosum; 4, Coleonema album; 5, Begonia corallina; 6, Hepatica triloba rubra plena.

Azaleas and Peat Moss Litter.—*J. W.*: We have little doubt but that Azaleas could be grown and flowered fairly well in peat moss litter, for a time at least. But the question arises how long they would succed in this, and what should be done with them when the litter gets exhausted, or the plants require another shift. A lengthy experience with the material for this purpose would be necessary, and the experiments would have to be carefully noted from year to year by a careful cultivator, and the results made known publicly from time to time. You do not state what Rhododendrons you are required to grow in this material, but we should imagine you mean greenhouse varieties or species. In any case, what would apply to Azaleas would also apply to Rhododendrons. We should advise you to give very small shifts and to ram the peat moss litter down very firmly to make it less spongy and conform partly to the firmness of peat in which they are grown. We think peat would be safer material until experiment has sufficiently demonstrated the ultimate effect of the peat moss litter.

Manchester Concentrated Manure.—*J. W.*: The best way to deal with this manure is to scatter it equally over the surface and dig it in shallowly, not deeply as in trenching. It might even be scattered on the surface of dug ground, and merely pointed in with a fork. If used for pot plants you should, of course, mix it with the potting soil. It should prove suitable for a variety of vegetables, but in the case of Peas you would have to supplement the manure with kainit or wood ashes. According to the analysis issued with it, the manure is hardly rich enough in potash, but that might be supplied independently, if you cared to do so. It would suit Cabbages, Turnips, Onions, Leeks, &c.

Communications received.—W. Atlee Burpee & Co.—Geo. Griffin.—M.M'L.—Henry Eckford.—W. Daniels.—Laxton Bros.—A. E. S.—J. H.—G. J. Mac.—J. F. G.—W. Johnson.—Thames Bank.—Sander & Co.—Hugh Low & Co,—P. Monson.—F. Ames.—B. D.—J. M., C.—William Bosisto.—H. G. Cox, next week.—D. Houston.—J. Douglas.—Peter J.—Rob.—C. H. Jenkins.—T. T.—C. Smith.—Daniel B.

TRADE CATALOGUES RECEIVED.

THOS. S. WARE, Hale Farm Nurseries, Tottenham, London.—Illustrated Catalogue of Choice Hardy Perennials; also Catalogue of Hardy Florists' Flowers, Carnations, Picotees, Paeonies, New Roses, etc.

W. P. LAIRD & SINCLAIR, Dundee and Cupar, Fife.—Farm Seeds.

R. B. LAIRD & SONS, Edinburgh.—Florists' Flowers.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and complete Floral Guide of Plants for 1897.

MAX DEEGEN, Köstritz, Reuss-Thuringen, Germany.—Catalogue of Roses, Dahlias, Gladioli, etc.

LOUIS VIEWEG, Quedlinburg, Preussen—Seed and Plant Catalogue.

J. CHEAL & SONS, Lowfield Nurseries, Crawley, Sussex.—Spring Catalogue of Dahlias, Chrysanthemums, Bedding Plants, &c.

BARR & SONS, 12 and 13, King Street, Covent Garden, London.—Barr's Hardy Perennials and Alpines.

MESSENGER & Co., Loughborough and London.—Catalogue of Designs of Conservatories, Glasshouses generally, Heating Apparatus, &c.

MARK FAWCETT & Co., 50, Queen Anne's Gate, Westminster, S.W.—The Fawcett Patent Fireproof and Ventilating Floor.

HEAD GARDENER, Perly Cross Gardens, Teignmouth, South Devon.—Special List of Choice Chrysanthemum Novelties for 1897.

TOOGOOD & SONS, Southampton. — Toogood's Seeds for the Farm.

Asparagus Pea.—This would seem to be a new name recently applied to Lotus Tetragonolobus, otherwise known as Tetragonolobus purpureus. The pods are square as the specific name would imply, and winged on each of the four angles. The flowers are moderate in size even for a Lotus, but dark purple. Our contemporary, *American Gardening*, says it has probably never before been grown in America, but some packets were sent out for trial. The pods, when cooked like those of Scarlet Runners, make an excellent dish. We may say that the species is a native of South Europe, and has long been grown in this country, but probably never outside of botanic gardens. It might be worth while trying it as a new vegetable.

Orchids! Dendrobium Nobile, splendid varieties, blooms and prices sent. Also available seedlings raised from choice Nobile by Findlayanum. Godfrey Thorold Gardens, Bitterne Park, Southampton.

Montbretia, Schizostylis, 2/- 100; Auriculas, double Primroses, Hepaticas, 1/3; Polyanthuses Aquilegias (various), 9d. doz. Enniston, Kilnessan, Neath.

HERBACEOUS & ALPINE PLANTS, &c., for the best collections of these extant. all hardy grown and grand, see FORBES' New Catalogue, 1897, over 140 pages, giving colour, height, time of flowering, and a mass of other useful information. Free on application.—JOHN FORBES, Nurseryman, Hawick, Scotland.

NEW TOMATO — YOUNG'S ECLIPSE. Award of Merit at R.H.S. Tomato trials at Chiswick, very highly commended at Willesden Great Show, also Crystal Palace Fruit Show,—96. Seed, ½-packet, 9d.: per packet 1/6 and 2/6.
A. W. YOUNG & Co., The Nurseries, Stevenage, Herts.

BEGONIAS, YOUNG'S PRIZE STRAIN SEEDS, 6d. and 1s. per packet to colour or mixed. Double Mixed 1s. and 1s. 6d. packet. Bulbs Mixed, grand strains, 25 for 3s. 6d. free. A. W. YOUNG & Co., The Nurseries, Stevenage.

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All have been kept moved back. and will plant now with safety. 50 Dwarfs 21s., 26 Half-Standards, 21s., 12 Half-Standards, unnamed, 9s. 6d., 50 Dwarfs, unnamed, 12s. 6d. The following are carriage free:—12 Climbing 7s., 12 Best Dwarfs 7s., 6 Gloire de Dijons 4s. 6d., 6 Lovely Fairy Roses 4s., 6 Austria Briars 3s., 6 Mrs. Bosanquet 3s. 6d., 6 Moss Roses 3 6d., 6 Cabbage Roses 4s., 6 Old Fashioned Roses 3s. 6d Crimson Monthly 3s., 6 Pink Monthly 2s. 6d., 6 White Monthly 3s., 6 Quick Climbing 2s. 6d, 12 Sweet Briar 3s. All my selection for cash with order. Thousands of Testimonials. Catalogues Free. JAMES WALTERS, Rose Grower, Exeter.

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THIRTY-EIGHTH YEAR OF ADVERTISING.
The following Novelties and Specialties having all been grown in a very exposed situation high up on the Derbyshire hills, are very hardy, stocky, and healthy, very different to weak seedlings grown in warm favoured situations, which look nice, but very rarely succeed well. All Carriage Free for Cash with Order. Descriptive List free.

CHRYSANTHEMUMS (Special Culture), not a collection of old-fashioned sorts, but the cream only of the best English, French, American, and Japanese raisers. Good, well-rooted plants, 12 for 2/-, 25 for 3/6; true to name.

CARNATIONS, PICOTEES, and CLOVES of the finest—named hardy border varieties, many grand new sorts, strong layers wintered outside, 6 for 2/6, 12 for 4/-, 25 (in 12 varieties) for 7/6, unnamed varieties, 3/- per doz.

NEW HARDY JAPANESE PRIMULAS.—This class of hardy Primula, which has become so popular either for the outside border or the greenhouse since its introduction, has been greatly improved. The following collection is the production of Mr. Geggie, the celebrated raiser, whose collection has gained first prizes, gold medals, and first-class certificates at Crystal Palace and many other important societies. Six distinct varieties (named) for 2/6; 12 for 4/-; 25 in 12 varieties for 7/6.

CARNATIONS, PICOTEES, and CLOVES.—Will produce 80 per cent. of fine double flowers, in self, striped, and spotted varieties, including whites and yellows; all from the finest strains for the border. Twelve for 2/6; 25 for 4/6; 50 for 8/-.

PRIMULA CASHMERANA.—A really fine spring-flowering plant. Colour, bright mauve violet. Free bloomer. Should be in every garden. Three for 1/-; 6 for 2/6; 12 for 4/-.

PHLOXES (Perennials).—Special culture of early and late varieties, the cream only from Downie, Laird & Sons, Kelway, Ware, and other first growers. Six fine varieties for 2/-; 12 for 3/-; 25 for 5/6; true to name. Strong stools to bloom well.

VIOLAS, during the past few years, have come to the front as few flowers have ever done. They are wanted everywhere and very few plants produce so fine a display for so little trouble. I have a grand collection, including many new varieties. Twelve varieties, 1/6; 25 for 2/6: 50, in 25 varieties, for 4/6; true to name.

AURICULAS (Alpines).—A Splendid Collection, the result of many years' careful selection, strong plants to bloom well, 2/6 per dozen; 25 for 4/6.

SWEET WILLIAMS.—A very showy, free-flowering border plant. Most useful as cut flowers for hand bouquets, &c. Good strong plants. All have been transplanted and wintered outside. Twelve strong plants for 1/6: 25 for 2/6.

PYRETHRUMS (Double and Single).—A grand collection to name, selected from the best English and French raisers as a hardy, free-flowering, easily grown plant for all purposes. Three named varieties, 1/6; 6 for 2/6; 12 for 4/-: unnamed varieties, 3/- per dozen.

AURICULA (Alpina).—The real old Irish Dusty Miller; a most beautiful hardy, easily grown, sweetly-scented; free flowering, yellow variety. Six strong plants, 2/-; 12 for 3/-.

GAILLARDIAS (Perennial Hybrids).—A really grand collection of these most gorgeously marked hardy plants. Colours, scarlet, crimson, and gold. of different shades: blooms all summer. Good strong plants, 6 for 1/6; 12 for 2/6.

HOLLYHOCKS.—Warranted all fine double flowers, Chater's and Ware's select strain; strong year-old plants to bloom this summer. Six varieties, 2/-; 12 for 3/-.

POLYANTHUS and PRIMROSE (Hybrids).—Splendid mixed colours; finest strain grown. 12 for 1/6; 25 for 2/6; 50 for 4/6.

ASTERS (Michaelmas Daisies).—Unrivalled hardy autumn flowering border plants, for cut flowers, &c. A grand collection of the latest improved colours, as pure white, pink, bright mauve, &c., six distinct sorts, 1/6; 12 for 2/6.

CANTERBURY BELLS.—Grand new colours and new forms, double and single, Hose in Hose, Cup and Saucer, and other varieties, 12 plants to bloom well, 1/6; 25 for 2/6.

GERANIUMS.—Greenhouse varieties. Double and single, by Pearson, and other first-class raisers. Good, well-rooted plants, out of pots, 3/- per doz.; true to name.

DELPHINIUMS.—A splendid lot, raised from 12 varieties of Kelway's, Double and Single, including all shades of Blue, from the very palest to the darkest. Good plants to bloom well, 6 for 2/-: 12 for 3/-.

IRIS GERMANICA.—Rivals of the famed Orchid, flowers of peculiar formation, and most exquisitely marked with many bright and distinct colours. Quite hardy. Three named varieties, 1/6; 6 for 2/6; 12 for 4/6.

GEUMS.—The new Double Scarlet. A splendid hardy, free-blooming plant, fine for cutting, 12 for 1/6; 25 for 2/6.

AQUILEGIAS.—A grand collection, including many new colours and new forms. Twelve best mixed varieties for 2/-.

PENTSTEMONS.—A splendid collection to name: a very showy and useful bedding plant, 3/- per doz.; 25 for 5/6.

PINK (Fimbriata alba major).—Large white fimbriated flowers. A very free bloomer. Should be in every garden. Good plants, 2/- per doz.; 6 for 1/3.

CAMPANULA PERSICIFOLIA.—Single White, Double White, Single Blue, and Double Blue. All quite hardy, and unrivalled for border decoration, cut flowers, wreaths, &c. One of each for 1/6; 2 of each for 2/6.

DORONICUMS (Golden stars or hardy Marguerites).—Three first-class sorts. Harper Crewe, Clusii, and Plantagineum Excelsum. One of each for 1/6; 2 of each for 2/6.

TOMATO PLANTS.—Two first-class varieties, Challenger and Conference; good plants; 1/6 per doz.

ARMERIA (Thrift).—Pink and White flowers, plant dwarf and cushion like, very useful for Rockeries and edging to borders, quite hardy, 2/- per doz.; 25 for 3/6.

CHRYSANTHEMUM (Hardy Marguerite).—Large pure White flowers, dwarf and very free bloomer, most useful for border decoration and cut flower work; 6 for 2/-; 12 for 3/6.

LYCHNIS DIOICA RUBRA.—Double Crimson flowers, a useful neat plant. This has been greatly admired by all who have seen it. Three for 1/6; 6 for 2/6.

12 BEAUTIFULLY Spotted or pure White FOXGLOVES for 1/6; 25 for 2/6.

12 HARDY Perennial BORDER PLANTS, named, distinct, and useful for decoration and cutting purposes, 2/-.

PYRETHRUM ULIGINOSUM.—Large, pure white flowers. A very fine plant for decoration in the autumn, when flowers are scarce. Good strong plants, 6 for 2/-; 12 for 3/6.

POTENTILLAS.—A distinct and interesting class of hardy border or rock plants, producing an abundance of flowers of a splendid velvety texture, which are very attractive and ornamental, and for cut flowers they are grand. Three for 1/6; 6 for 2/6.

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VINES & VINE CULTURE.—The best book on Grapes. By Archibald F. Barron, late Superintendent of the Royal Horticultural Society's Garden, Chiswick, and Secretary of the Fruit Committee.—A New and Cheaper Edition, Revised and Enlarged. Demy 8vo, Handsomely Bound in Cloth. *Price, 5s.; post free, 5s. 3d.*

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FIXTURES FOR 1897.

March.

23.—R.H.S., Committees and Lecture.
27.—R.B.S. Meeting.
30, 31.—Truro, Daffodil and Spring Flower Show.
31.—R.B.S. Spring Show.

April.

1.—Linnean Society.
1.—R.H.S. of Ireland Spring Show.
6, 7.—Brighton and Sussex Show.
7.—Shropshire Horticultural Society's Show.
8, 9.—Royal Caledonian Society's Show.
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
15.—Linnean Society.
24.—R.B.S. Meeting,
27.—R.H.S. Committees and Lectnre.

May.

6.—Linnean Society.
7.—R.B.S. Lecture.
8.—R.B.S. Meeting.
11.—R.H.S. Committees and Lecture.
14.—R.B.S. Lecture.
19.—R.B.S. Summer Show.
21.—R.B.S. Lecture.
22.—R.B.S. Meeting.
24.—Linnean Society's Anniversary.
24 to 28.—Bath and West and Southern Counties Show at Southampton.
26.—Gardener's Royal Benevolent Institution, Annual Dinner.
26, 27, 28.—R.H.S. Temple Show.
28.—R.B.S. Lecture.

June.

3.—Linnean Society.
4.—R.B.S. Lecture.
11.—R B.S. Lecture.
12.—R.B.S. Meeting.
15.—R.H.S. Committees and Lecture.
16, 17, 18.—York Floral Fête.
17.—Linnean Society.
18.—R.B.S. Lecture.
23.—National Rose Society's Show at Portsmouth.
23 to 28.—R.A.S. Show at Manchester.
25.—R.B.S. Lecture.
26.—R.B.S. Meeting.
29.—R.H.S. Committees and Lecture.
29.—Royal Oxfordshire Horticultural Society's Commemoration Show.

July.

1.—R H.S. of Ireland Summer Show.
2.—N. Rose Society Show at Crystal Palace.
7, 8.—County Boro. of Hanley Fête.
8, 9, 10.—Newcastle Show
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
13, 14, 15—Wolverhampton Floral Fête.
15.—N. Rose Society's Show at Norwich.
24.—R.B.S. Meeting.
27.—R.H.S. Committees and Lecture.
28.—Beckenham Show.
28, 29.—Chester Fête.
28, 29.—Carnation and Picotee Society's Show at Birmingham.
31 and Aug. 2.—R.H.S. of Southampton Society's Show.

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COVENT GARDEN MARKET.

March 17th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Apples.....per bnshel	2 6	4 0	Grapes, per lb	2 0	3 0
Black Currants ½ sieve			Pine-apples.		
Red " ½ sieve			—St. Michael's each	2 6	6 0
Cherries half sieve...			Plums per ½ sieve.....		
Nova Scotia Apples per barrel			Strawberries, per lb.		
Cob Nuts per 100 lbs.			Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
ArtichokesGlobe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus, per bundle	5 0	7 0	Horse Radish, bundle	2 0	4 0
Beans, French, per pound	1 3	1 6	Lettnces ...per dozen	1 3	
Beet..... per dozen	2 0	3 0	Mushrooms, p. basket	1 0	
Brussel Sprouts, per half sieve	1 6	1 9	Onions.....per bunch	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunch	0 3	
Carrots ... per bunch	0 3		Radishes... per dozen	1 6	
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket	1 0	1 3
Celery.....per bundle	1 0		Smallsalading, punnet	0 4	
Cucumbers per doz.	1 6	3 0	Spinach per bushel	2 0	2 3
Endive, French, doz.	1 6		Tomatos..... per lb.	0 3	0 4
			Turnips .....per bun.	3 0	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0	Orchids, doz. blooms	1 6	12 0
Asparagus Fern, bun.	2 6	3 0	Pelargoniums, 12 bun.	6 0	9 0
Azalea, doz. sprays...	0 6	0 9	Pyrethrum doz. bun.	2 0	4 9
Bouvardias, per bun.	0 6	0 9	Roses (Indoor), doz.	1 0	1 6
Carnations doz. blms.	1 6	3 0	" Tea, white, doz.	1 0	2 0
Eucharis ...per doz	3 0	6 0	" Niels	4 0	6 0
Freezia per doz. bunches	2 0	3 0	" Safrano	1 0	2 0
Gardenias ...per doz.	4 0	6 0	" (English),		
Geranium, scarlet, doz. bunches	6 0	9 0	Red Roses, doz.....4	0	6 0
Hyacinths (Roman) doz. sprays	0 6	1 0	Pink Roses, doz.	3 0	5 0
Lilac, White (French) per bnch.	3 0	4 0	Smilax, per bunch ...	5 0	6 0
Lilium longiflorum per doz.	3 0	6 0	Tuberoses, doz. blooms ...	1 0	1 6
Lily of the Valley doz. sprays	0 6	1 0	Primula, double, doz sprays	0 6	0 9
Marguerites, 12 bun.	2 0	4 0	Violets (French) per doz. bunches.	1 0	1 6
Maidenhair Fern, 12 bs.	4 0	8 0	Violets (English) per doz. bunches.	1 0	1 6
Mimosa, per bnch. ...	1 0	1 6	Violets (Parma) per bnch.	2 0	3 6
			Violets Czar, large, per bnch.	2 0	2 0

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
Azaleas, each	2 0	3 6	Erica, per doz.	9 0	12 0
Arbor Vitae (golden) per doz.	6 0	12 0	Ferns, invar., per doz.	4 0	12 0
Aspidistra, doz.....	18 0	36 0	Ferns, small, per 100	4 0	6 0
" specimen	3 0	5 0	Ficus elastica, each	1 0	5 0
Cineerarias, per doz....	8 0	10 0	Foliage Plants, var., each	1 0	5 0
Cyclamen, per doz....	9 0	15 0	Genista, per doz.	8 0	12 0
Dracaena, various, per doz.	12 0	30 0	Hyacinths, per doz. ...9	0	12 0
Dracaena viridis, doz.	9 0	18 0	Lycopodiums, doz.	3 0	4 0
Euonymus, var. doz.	6 0	18 0	Marguerite Daisy doz.9	0	12 0
Evergreens, invar. doz	6 0	24 0	Myrtles, doz.	6 0	9 0
Erica Hyemalis, per doz.	9 0	15 0	Palms in variety, each	1 0	15 0
			Palms, Specimen ...21	0	63 0
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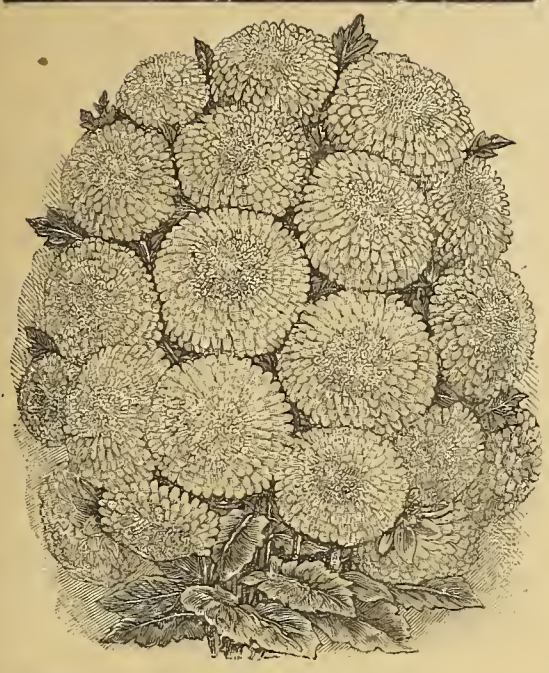

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MARCH 27th, 1897.

FEATURES OF SPRING SHOWS.—Taking it altogether we have had a good season for early spring flowers, though many declaim loudly on the sunless aspect of our skies. Hardy flowers have not suffered in any way, though plants under glass may be lacking somewhat in substance and colour. The spring shows that have already taken place in various parts of the country are declared to have been successful, and particularly in the case of certain classes of plants which vary from district to district. Orchids were the feature of the Manchester spring show held on the 16th and 17th inst., where they were stated to have excelled those of any previous show held at this season of the year, whether for quantity or quality. The honours of the day fell to the lot of E. Ashworth, Esqr., of Harefield Hall, Wilmslow, in the shape of a Gold Medal. Other well known exhibitors of Orchids were also very successful. At Aigburth, not far off, the spring show turned largely upon Dutch bulbs and the various seasonable occupants of the conservatory and greenhouse, such as Cinerarias, Cyclamen, Deutzias, Primulas, Azaleas, Freesias, Cytisus, Violets, and Lily of the

Valley. A very successful spring show at Exeter took very similar lines to that at Aigburth; but in either case, the display was very varied. The interest of a spring show at Bristol was divided between flowers and industrial exhibits, the flowers being such as are common at this season of the year.

The spring show presenting, perhaps, the greatest amount of novelty was that held at Truro, Cornwall, the first of its kind which has been organised. The ostensible object of the show was to further the interest of the Daffodils and other Narcissi. Now, there is nothing of novelty in a Daffodil show, but that, coupled with its earliness and the fact that the flowers, or a large proportion of them, had been grown in the open air, gives cause for wonder that the idea of holding a spring show in that part of the country either never occurred before, or was not acted upon. The success of the show on the 16th and 17th inst., elicited many expressions of the hope that it would become an annual event. Truro may be regarded as the centre of a great industry in early spring flowers, and which seems capable under favourable circumstances of becoming vastly extended Cornwall and the neighbouring Scilly Isles jut so far into the Atlantic that their climate is seldom otherwise than mild. Notwithstanding these favourable conditions, it is somewhat significant that the first prize lot and leading competitive exhibit of Daffodils should have come from Ireland. It is only another instance of the fact that many of the bulbs imported from foreign sources might well be grown within the compass of the British Isles. The most important feature of the Daffodils down Land's End way is their earliness. The premier bloom in the show was Narcissus Weardale Perfection, well known but scarce and expensive; while the finest novelty was Silver Spur, with white perianth and pale sulphur trumpet.

Independently of the Daffodils, the Rhododendrons, Camellias and hardy flowering shrubs were also striking features of the show. Hardy spring flowers of many kinds were also plentiful; but the Rhododendrons were markedly interesting from the fact that they had mostly been grown and flowered in the open air. Cornwall has for many years past been famous for its Rhododendrons, including Himalayan species which will thrive only in exceptionally favoured parts of the south and west of England, or in Ireland. We occasionally see collections of them in other parts of the country, but they do not as a rule attain the same vigorous development and size as the Cornish specimens. These things require to be brought more prominently before the public by the holding of shows. Japanese Bamboos and various rare subjects testified likewise to the exceptionally favourable character of the climate of Cornwall. In addition to his non-competitive exhibit of Daffodils, T. Dorrien-Smith, Esqr., of Trescoe Abbey, the lord proprietor of the Scilly Isles, had another surprise for the show in the shape of Acacia dealbata grown and flowered in the open air, thus showing that Covent Garden need not be dependent upon the south of France for its supply of this decorative tree. A humorous incident of the exhibition was that several of the exhibitors would persist in furnishing thirteen to the dozen according to their market custom, and had therefore to be disqualified for not adhering strictly to the requirements of the schedule. A little experience of this kind soon serves to put exhibitors on their guard, though mistakes will occur.

A Cheshire Acre consists of 10,240 sq. yds. It might be worth while buying land at this figure and selling it in imperial acres of 4,840 sq. yds.

Mr. James Whitton, superintendent of the public parks at Glasgow, has recovered from a rather serious illness by which he was laid up recently. We are pleased to state that he has resumed his duties with his customary energy.

Mr. D. Dewar of the Glasgow Botanic Garden, we are pleased to learn, has so far recovered from the illness under which he has laboured since the week before Christmas, that he was released from hospital about a fortnight ago or slightly over. We understand that he intends to come south for a time to recruit, probably at Bournemouth.

A Superb Specimen of Dendrobium nobile 3 ft. in height, 5 ft. in diameter, and bearing no less than 1,134 blooms, is to be seen at the gardens of Hollin Hall, Moorhead, Shipley, the residence of Mrs. Knowles. This plant was awarded a Certificate of Merit by the Bradford Paxton Society last year, and is said to be in even better condition this season. Anyway, it does credit to the gardener, Mr. William Moorby.

Aberdeen Chrysanthemum Society.—A meeting of the committee of this newly-formed society was held in the secretary's office, 8, Hadden Street, on Thursday last, when Mr. William Reid, secretary and treasurer, intimated a very favourable report on the amount of special prizes and donations already promised. The schedule of prizes was finally arranged, is to be printed and sent out immediately, but as several more special prizes are expected, it was agreed to have an extra list of these sent out early in June. The show is to be held in the Art Gallery, on the 26th and 27th November, when it is expected there will be a large turn out. The interest created in the district since last year's show is such that every grower has been going in for the newer varieties.—*A. G.*

Lectures on horticulture in Somerset.—Mr. John Crook, The Gardens, Forde Abbey, Chard, has delivered a course of six lectures at various places in Somerset, during the winter months. These lectures were especially intended for amateurs and allotment holders, and were generally well attended. At Merriott, there were close on fifty of an audience. The fee for admission to these lectures was one penny, not a very prohibitive sum, but giving some evidence that those paying it desired to get the worth of their money. The first lecture dealt with the culture, heading-down, grafting, and other matters of fruit trees. The second lecture dealt with bush fruits, and Strawberries, Carrots, Parsnips, &c., took another evening; Potatos, Peas, and Beans, another; trenching and manuring, Celery and Tomatos, the fifth; and the sixth dealt with Roses, flowers for small gardens, and instructions concerning seeds.

Messrs. Messenger and Company's Glasshouse Designs.—A large and well got up catalogue of designs for glasshouses, and hot water apparatus, has recently been issued by Messrs. Messenger & Company, of Loughborough, Leicestershire. It is something more than a catalogue, inasmuch as it is abundantly illustrated throughout with designs of conservatories and various other glasshouses, which have been erected by them, or which they are prepared to execute. Some fine buildings have been erected by them in various parts of the country, and others show how the company has erected buildings conformable to the space at command, or to other buildings, including dwelling houses. Much information is also given with regard to the structure of various buildings suitable for conservatories, ranges of houses, Peach covers, amateurs' and nurserymen's houses, Orchid houses, pits, frames and plant protectors of various descriptions. The most approved methods of ventilation also receive due attention, the principles upon which they work being illustrated. Iron staging of various forms, ornamental in character and suitable for conservatories, are described and illustrated. Brackets for hothouses, ornamental and useful fittings, and iron grating of very ornate designs receive due attention. Last, but not least, various kinds of boilers and their fittings are abundantly illustrated with woodcuts, that speak for themselves when seen, and require little explanation.

Geography Gone Astray.—A well-known Continental firm, the other week, addressed another equally well-known at Edinburgh, England.

Gardeners' Royal Benevolent Institution.—Mr. H. Morgan Veitch has forwarded to the secretary of this institution a cheque for £60 2s. 2d., the net proceeds from the recent performance of the Comedy-Opera, "Dorothy," in aid of the "Victorian Era Fund."

Portraits of Linnaeus.—At the meeting of the Linnean Society on the 4th inst., W. Carruthers, Esq., F.R.S, exhibited a series of portraits of Linnaeus, the father of botany. He had been travelling in Sweden and Holland, and was not only fortunate in seeing the original paintings, but in getting photographs of them, so that he was able to exhibit exact copies. He interested his audience by giving a history of each, illustrating his remarks by means of lantern slides. Laying aside supposed portraits, he had been successful in proving the authenticity and existence of eight that had certainly been painted or drawn from life and frequently copied by different engravers.

Last week's gale at Cheshunt.—The tremendous gale which raged about the beginning of the month would appear to have been renewed in all its fury last week, and was felt severely in the neighbourhood of Cheshunt, Hertfordshire. Three new glasshouses in the course of erection were blown down about 10 p.m. on Wednesday, the 17th inst. The gale was renewed at intervals on Thursday, and a few minutes before 1 p.m., about 50 yards of a brick wall surrounding the gardens at Heaton House, Cheshunt, were blown down bodily. The gardens have for some years past been carried on as a nursery by Mr. T. Bones, who had a splendid collection of border Carnations in the border under the wall. These were buried and destroyed, the loss being all the greater seeing that the plants had been layered last summer, and only a few of them had been lifted to form the new plantation elsewhere. The wall itself was covered with Peach trees in full bearing condition, and these were snapped across at the base, and involved in the general destruction. The wall will speedily be rebuilt, but the loss of the Peach trees and Carnations is irreparable.

Woolton Mutual Improvement Society.—The concluding meeting of this session was held at the Mechanics' Institute on the 18th inst., the Rev. George Beaumont presiding. Arrangements were made for a social evening, which took the form of an exhibition of plants and flowers which proved a feature very creditable to the society. The president, Holbrook Gaskell, Esq., J.P. (gardener, Mr. R. Todd), contributed a grand bank of Orchids interspersed with Adiantums. The collection numbered twenty distinct sorts, including Dendrobium wardianum, D. nobile, D. n. nobilius (fine), D. Ainsworthii (grand plant), D. A. roseum, D. leechianum, D. crassinode, and D. moniliforme. Cypripediums included C. villosum with about two dozen flowers, C. willianum and Woolton Wood seedling. Others were Calanthe Williamsii, Laelia harpophylla, Coelogyne cristata (densely flowered), C. c. Trentham var., C. c. lemoniana, and C. c. alba, Sophronitis grandiflora, Odontoglossum Roezlii album, and O. R. rubrum. Col. Walker, (gardener, Mr. J. Glover), The Grange, Gateacre, made a large display of miscellaneous flowering and foliage plants. T. S. Timmis, Esq., J.P. (gardener, Mr. B. Cromwell), Clevely, Allerton, had a good bank of stove and greenhouse plants. Mrs. Cope (gardener, Mr. J. Carling), Doe Park, Woolton, sent good decorative Palms. F. H. Gossage, Esq, J.P. (gardener, Mr J. Jellicoe), Camp Hill, Woolton, had a pleasing exhibit of spring flowers with a background of Palms. Col. Shirley, gardener, Mr. G. Eaton, Allerton, sent cut flowers in variety. T. Hughes, Esq. (gardener, J. McColl), Allerton, staged a good strain of Cinerarias and Hyacinths with fine massive spikes. Mr. Thomas White contributed cut Azaleas in a large number of varieties. For each of these exhibits a Certificate of Merit was accorded with an extra to Mr. Todd for hybrid Dendrobiums. The rooms were filled to their utmost capacity with an appreciative audience. The balance £3 is to be devoted to the "Victorian Era Fund." Mr. R. G. Waterman, the secretary, was chiefly responsible for the satisfactory arrangements.

The Horse Chestnut is reputed to live for 600 years, but surely exceptional trees only attain this patriarchal age.

The White Lily has always been regarded as the emblem of purity. The word Lily comes from the Celtic *li* meaning whiteness.

"Sweet Violets, a penny a bunch," has been a common street cry in the leading thoroughfares of London for some time past, and beautiful Violets they are. Foreign ones from the south of France and the north of Italy are generally cheaper than home-grown varieties, the latter being fresher.

A Stag amongst Daffodils.—A stag being hunted by the West Surrey staghounds had an exciting and tiresome run from Epsom to Surbiton on the 13th inst., and finally took refuge in a nursery amongst Daffodil and other bulbous plants, doing them no little damage. The animal was in a very exhausted condition before it was finally secured.

Victims of the Gale.—The recent gale has caused sad havoc amongst many old trees in different parts of the country. One of the finest Cedars in the kingdom was blown down at Castle Hill, the seat of the Earl of Fortescue. It was a giant in size, and was stated to be upwards of two centuries old. Devonport Park has likewise suffered, one of the monarchs of the wood having succumbed.

Carnation and Picotee Union.—I understood that Mr. Medhurst has decided to give up the work of the Carnation and Picotee Union, and is asking the members to transfer their membership to the Midland Carnation Society, but I am not aware that it is in response to the wishes of the members or of the executive of the Union. To many who desire to co-operate in continuing the work of the society here the determination and explanation given appears too summary. I have been consulted by several prominent members as to the re-formation of the society here, and I consider that such, if properly constituted in a centre like Oxford would meet with a success fully equal to that of other large towns. Should sufficient support be forthcoming to warrant an exhibition being held a local committee (*pro. tem.*) will be at once formed. I shall be glad if those interested will favour me with their views on the above matter, and state whether they will subscribe to a prize fund for the current year.

THE LATE DR. HOGG.

When the committees of the Royal Horticultural Society had assembled at the tables on Tuesday last, the Rev. W. Wilks arose at the table of the Fruit and Vegetable Committee of which the late Dr. Hogg was a member, and spoke as follows:—

We have all of us, I am sure, come here to-day with very contradictory feelings. We one and all want to get up and bear testimony to the great loss which this Committee has sustained since last we met; and yet we one and all shrink from doing so from a feeling (which I share with everyone of you) that there is not one among us capable of doing justice to the theme. In one sense, then, I shrink from the subject as from a task too hard for me to perform—a burden I am unequal to bear; whilst, in another sense, I feel that the duty which the Chairman has deputed to me is the greatest honour he could confer upon me.

Gentlemen, we have lost one whom all who knew him at all intimately loved sincerely; whom all at this table reverenced; whom every English gardener honoured; whom all pomologists in every country of the world looked up to and respected as the chief authority on fruit—our dear friend and coadjutor Dr. Hogg—the founder of this Committee—has been taken from us.

But what a splendid work, and what a grand example he has left behind! Seldom has it been given to a man to reduce to such (comparatively speaking) perfect order such an absolute chaos as he found British fruit description and nomenclature. The greatness of his work in this respect is not yet fully realised.

A Scotchman by birth, and like so many Scotchmen, of untiring energy and dogged perseverance. A man of transparent honesty of purpose and of blunt outspoken truthfulness. He hated hypocrisy and sham, whilst his heart was simply overflowing with kindness and gentleness and sympathy.

He was not like any other man. He had a very marked individuality; a sort of solidity and terseness of expression, both in word and manner, which was reflected in the picturesque ruggedness of his outward form, reminding one not a little of the massive, open, wind-swept, heather-clad hills of his own Scots land. No one who ever saw him could possibly forget him, or mistake him for any other; and no one who really knew him but now feels he has one staunch and true friend the less.

Gentlemen, we cannot but mourn for Dr. Hogg; but even whilst we mourn let us not forget to thank God truly for the man, and for sparing him to us for almost fourscore years.

I beg to propose the following resolution:—

"The Fruit Committee of the Royal Horticultural Society desire to record upon their minutes the profound estimation in which they hold the life and work of the late Dr. Hogg. The committee recognise with gratitude that Dr. Hogg's life was one of unceasing benefit to the best interests, not only of British pomology, but also of the pomology of the whole world. Wherever fruit is grown for the benefit of mankind, there for generations yet unborn will the name of Dr. Hogg be known and honoured. The Committee can find no words to express the greatness of the loss which they in common with all English speaking fruit growers have sustained by the death of one whom all who knew him held so dear; they are forced to content themselves with placing upon record their deep sense of the inestimable privilege they have enjoyed in being associated on this Committee for so many years with so kindly and eminent a man."

The members uncovered during Mr. Wilks' speech, and the resolution was accepted in mournful silence.

Mr. William Marshal, the chairman, addressed the members of the Floral Committee at some length concerning the long continued services which the late Dr. Hogg had rendered the society, and the loss which it had sustained by his death.

ORCHID NOTES & GLEANINGS.

By The Editor.

Dendrobium aggregatum majus.—There has been in flower at Falkland Park one of the finest specimens of this Dendrobe we have ever seen. The plant when imported had evidently been stripped from the trunk of a tree, judging by the hollow circular mass of the plant. This was tied firmly round with wire, and the centre then firmly filled in with rough peat and sphagnum, the shape being somewhat in the form of a cone when completed, and about 18 in. high. A wire was fixed to it for suspension, and it was hung up near the glass in the East India house. While growing the plant received plenty of water, and was freely syringed overhead. The result came somewhat as a surprise, the plant being covered with flowers. There were about fifty spikes or loose racemes of golden-yellow flowers, which have an orange-yellow blotch at the base of the pubescent lip. This species as a rule is not much grown, but when seen in the condition which this plant was, it is well worthy of a place in any collection.

Cattleya Trianaei delicata hardyana.—The plants that are placed under the variety delicata are very varied in colouring, and we believe some of the extreme forms have been named C. Trianaei alba, though incorrectly so. The sub-variety under notice is characterised by its delicacy of colouring, the sepals and large, finely crisped petals being white, faintly washed with a delicate blush tint. The tube of the lip is a shade darker, and the lamina is of a delicate, rosy-pink hue that is simply charming to anyone who can appreciate delicacy of colouring. The customary yellow blotch in the throat agrees with the rest of the flower in being of a pale lemon hue, and also greatly reduced in size. The original plant, to which the name of C. Trianaei delicata hardyana or Hardy's var. was applied, is stated to have died. The plant from which the above description was taken came out of a more recent importation, and flowered in the collection of Mr. J. Seeger, Bandon Hill, Croydon.

A MODEL AMERICAN PLANT EMPORIUM.

Mr. Henry A. Dreer's Nursery is situated at Riverton, New Jersey, a few miles out from the Quaker City, viz., Philadelphia, and is easily reached by rail. The extraordinary development of the plant trade in America is probably nowhere better exemplified than at this wonderful nursery. I had the pleasure of accompanying Mr. Henry Dreer to this place, and was agreeably surprised and astonished to find such a gigantic establishment, so well stocked with grand, saleable, clean, and healthy plants of those most often quired for decorative work and cut flower trade. Five acres of glass devoted to the culture of plants and flowers are a big thing.

The last addition to this grand place is eight houses, each 150 ft. long, by 28 wide. These are not separated, but arranged side by side, without dividing walls, the whole being enclosed on three sides by glass and galvanized iron, connected at one end by a corridor, 250ft., by 28ft. This gigantic house, or block of houses, is devoted to Palm growing. All the cultivated and best varieties for decorative work, from tiny seedlings to gigantic specimens, 15 ft. to 20 ft. high, are grown here, and Kentias reign supreme. The following quantities were in stock at the time of my visit:—85,000 Kentia belmoreana; 35,000 K. forsteriana; 70,000 Latania borbonica; 60,000 Areca lutescens; 15,000 Cocos weddeliana; and 5,000 Livistona rotundifolia, besides many others such as Phœnix tenuis, P. dactylifera, P. rupicola, and P. canariensis, of which there is an immense stock. I was struck with the robust growth, the deep green, luxuriant foliage, and the cleanliness of the same, for not an insect of any description was visible.

Other houses were devoted to the growing of Begonias, Coleus, Cannas, and various Dracaenas, of which there an is immense stock of all the leading sorts. As it was some few weeks before Easter, flowering plants were being prepared for that festive time, the same being eagerly sought after by all classes. Thousands of Azalea indica, also Cytisus racemosus, Hydrangeas, and the popular Easter Lily, viz., Lilium Harrisii, and other flowering plants here are being well timed to satisfy the demand at the proper time. I was astonished to find many thousands of Citrus japonica, well-set with fruit, exceedingly well done. They were dwarf, and compact, with fine foliage; and having from 12 to 18 fruits each they were models of high-class culture.

Mr. Dreer has recently added to the many attractions of out door gardening, a new Lily lake, which is the largest and most complete thing of its kind possibly, to be seen anywhere. All the well-known species and varieties in cultivation, and many hybrids, are grown here by the thousand. These Water Lilies do remarkably well here; in the summer they grow and flower in a most astonishing manner. To an Englishman it is a surprising novelty, and most attractive.

Many thousand of bedding plants are put out also in his grounds. The trade in these is enormous; thousands upon thousands are raised on the place, and easily disposed of. Mr. Dreer's nurseries are open to the public daily, and are visited by crowds of people during the season, who are astonished at the display he prepares for their enjoyment and edification.—*Alfred Outram, F.R.H.S.*

HARDY PLANTS IN FLOWER.

Narcissi just now are making a wondrously fine display, and long stretches of Messrs. Barr & Sons' grounds at Long Ditton are sheeted o'er with gold and present a most imposing spectacle. N. Golden Spur is certainly one of the very best of the large trumpet Daffodils, whilst the Tenby Daffodil, N. Princeps, and N. Henry Irving are both rendering a good account of themselves. N. cernuus with its silvery-white perianth and trumpet is a most desirable form. N. Colleen Bawn is of the same colour and build except that the perianth segments are longer than the corona. Of the Medio-coronati section Sir Watkin is the most conspicuous member at the present. The large rich yellow cup tinted with orange is the great feature, and the perianth segments are also large and full.

N. capax plenus is certainly one of the handsomest of the double varieties. The leaves are long and grass-like, and the flowers which are borne on scapes from 8 in. to 10 in. in height are pale lemon-yellow in colour, and the segments being revolute impart a particularly striking stellate appearance.

something like a Cactus Dahlia. This Narcissus is popularly called "Queen Anne's Double Daffodil."

N. MOSCHATUS OF HAWORTH is the cheapest of the white varieties and is the most suitable for naturalising. It is dwarf in habit, but somewhat variable as to the size of the flower.

N LEEDSII GRAND DUCHESS is as yet the only representative of the Leedsii section in bloom in the open. The narrow white perianth segments are those of N. Leedsii, but the cup is very spreading and stained with orange-yellow. This is a very distinct and beautiful early flowering form.

CHIONODOXA TMOLUSII, the latest of all the Chionodoxas is now in fine condition. It has rather larger flowers than C. Luciliae, the eye is larger and a purer white, and the blue of the upper parts of the segments is several shades deeper.

CHIONODOXA GIGANTEA ALBA.—The whole of the colour has not yet been eliminated from this fine Chionodoxa, although the flowers are so nearly white as to need no apology on our part for calling them so. A batch of plants in the rockery at Long Ditton exhibits some flowers that have only the faintest tinge of colour. The flowers are borne one or two, one usually, on a scape, and are fully as large as those of the type.

TULIPA KAUFMANNIANA has not only its earliness to recommend it, but likewise a great deal of grace and beauty. As it is growing with Messrs Barr & Sons the flowers are creamy-yellow in hue with a yellow base on which, towards its upper limit, are several splashes of deep carmine. Externally the flower is tinted deeply with carmine, which deepens towards the base of the segments. The individual segments are oblong and obtuse, and about 3 in. in length. The peduncle is from 4 in. to 6 in. in length. Although rather expensive, it would be well-worth the money to those who are on the look out for early-flowering Tulips.

DUC VAN THOL TULIPS are chiefly employed for pot culture, but their earliness stands them in good stead for planting out of doors where the scarlet vermillion and yellow forms are starring the ground. Their dwarf habit is somewhat against them, since it renders them liable to be splashed and dirtied by rain.

ERYTHRONIUM GRANDIFLORUM (yellow var.).—This is certainly one of the handsomest of the Erythroniums, and one that when it becomes known will undoubtedly be grown extensively. The leaves are green, lanceolate in shape, acute, and from 4 in. to 5 in. in length. The scapes are from 4 in. to 5 in. in height, and usually two flowered. The flowers are about 2 in. in diameter, although the narrow and abruptly reflexing segments make them appear to be smaller. They are rich yellow in hue, a faint green stripe being apparent in the centre of each segment externally, towards the base. A fine batch of plants is flowering with Messrs. Barr in a protected ground.

ERYTHRONIUM GIGANTEUM ROSEUM.—The leaves here are broadly ovate short, and prettily mottled. The scape is about 3 in. long and bears a single flower which, as the name signifies, is rosy-pink in colour with a white base to each of the segments. The flowers are about 1½ in. in diameter.

ERYTHRONIUM CITRINUM has ovate lanceolate leaves, from 4 in. to 5 in. in length and prettily mottled. The scape is about 6 in. in height, and two flowered. The blooms are 1½ in. in diameter usually, and exhibit a light citron-yellow hue. The segments are very narrow. This is a pretty form, and worth growing for the sake of variety, although it is not nearly so showy as the yellow E. grandiflorum.

E. DENS-CANIS and its varieties must not be forgotten. Naturalised in grass they prove a conspicuous success, and in such a position the flowers seem to be thrown higher above the foliage than they are when the plants are growing in prepared soil. They should be planted in moist and partially shaded places.

IRIS CAUCASICUS MAJOR where it has been slightly protected during the winter months is now in flower. It appears to be a good deal stronger than the type. The stem is about 10 in. in height and bears from three to four flowers enclosed singly in bracts. The falls are comparatively undeveloped, being small, spathulate in shape, and of a pale lilac hue. The standards are of the same colour as the falls, but large and with strongly reflexing tips. A bright yellow blotch is apparent at the tip in the centre of each.

FRITILLARIA AUREA.—This is certainly the most showy of all the Fritillarias open at the present time. The large bell-shaped, bright, yellow flowers with their faint markings are very handsome. The great disadvantage is that it is so low in stature that the bells will persist in lying down upon, or close to, the soil. When grown in pots, however, this defect is remedied, as is amply exemplified at the present time by some plants in the Alpine house at Kew.

FRITILLARIA NOBILIS (*improved*).—The flowers here are about 1 in. in length by the same in width, thus coming very close to F. aurea. The habits of the two plants are also similar. The flowers of F. nobilis, however, are pink-white internally, heavily tesselated with deep purple-crimson. Externally the latter colour is uniform. On a sunless day the flower looks somewhat dull in hue, but once let the sun shine on it and the rich purple-crimson shows up to the greatest advantage. The leaves are linear-lanceolate in shape, acuminate, twisted, glaucous, and of very succulent texture. Grown in pots it would probably come a little taller, and the flowers would then display their charms more satisfactorily.

All the above Erythroniums and Fritillarias are in excellent condition in Messrs. Barr & Sons' nursery at Long Ditton.

DUTCH BULBS AT HIGH BARNET.

MESSRS. CUTBUSH & SON'S establishment at High Barnet has been especially gay during the past week with a display of Hyacinths and Tulips that it would be difficult to beat as evidences of sound and successful culture. This show has been thrown open to the public for several days from 6.30 a.m. to 6 p.m. free of charge, although a unique money box in the shape of a watering-can affixed to the sides of one of the houses gently solicited free-will offerings to the Gardeners' Royal Benevolent Institution. The past winter has proved a somewhat curious one for bulbs grown under glass, for owing to its mildness considerable difficulty has been experienced in keeping the flowers back until this time, and we were assured that all the plants that we saw had been grown absolutely without fire-heat at all. This was in great contrast to the previous winter, when the bulbs moved slowly even with the application of fire heat. The great discrepancy in the experiences of two consecutive seasons only goes to show that it needs a wide awake cultivator to surmount the difficulties.

HYACINTHS.

Upwards of fifty varieties are grown at Barnet for purposes of exhibition. These are representative of the different shades of colour, although with a single exception they were all singles. This exception consisted of a new arrival from the Continent named Isabella. It is of dwarf sturdy habit and throws a long, deep, and broad spike. The flowers are large and massive, very double, and with rather abruptly reflexing segments. In colour they are white with a slight suffusion of pink.

Of the singles, one of the most notable varieties is La Belle, which has only been grown in quantities this year for the first time. It bears massive spikes of great depth. For the sake of curiosity we measured one and found that from the top of the spike to the lowest bell it went over 10 in. Lord Derby is a first-class light blue with a very large spike, but the latter always seems to come flat-topped. King Cole is certainly well named. It throws a dense spike of nearly black flowers which have more than usually narrow segments. Snowball is a very fine white of dwarf habit and sturdy foliage. The spike is of medium size, but the flowers are very massive, their segments being abruptly reflexed. Adelaide Restoni was the best yellow on view. Marquis of Lorne, yellow, suffused with rose, is also very charming. Princess Mary of Cambridge is, as may be imagined, a true Cambridge blue, a popular colour with many at this season.

Other well-known varieties which were in first-class condition were King of the Blues, blue; Sultan, deep blue; Von Schiller, deep rose; Lord Macaulay, bright red; Moreno, flesh-pink; Etna, rose; and Grandeur à Merveille, flesh-pink.

The whole of the plants were accommodated in 7-in. pots, and as the surface of the soil was all covered with bright green moss, they presented a very attractive feature arranged in banks of flowering colour all round the side stages of a roomy house. The Messrs. Cutbush have grown Hyacinths for exhibition since 1859, and comparing photographs of the specimens turned out then with those of to-day there does not seem to have been any advancement made in the size and depth of the spike except in the yellow section. Cultivation however, must have improved greatly, since in the fifties the bulbs grown for exhibition were usually seven years old, whereas now they are only from four to five years old.

TULIPS.

In another house we saw one of the finest lots of pot Tulips that it has ever been our lot to witness. Sturdy foliage of unusual size was surmounted by large and brilliantly-coloured flowers, the depth of cup and width and substance of the segments leaving nothing to be desired. The arrangement, too, merited a note of praise since the plants were placed together in batches of one sort, the effect being a most happy one. Three bulbs were grown in a 7-in. pot.

A number of varieties is grown, fairly representative of the range of colours. The gorgeous scarlet and gold of Keizer Kroon was as evident here as it will be presently in the open ground, Chrysolora is deep yellow, and very dwarf. Canary Bird exhibits a two shades lighter yellow than Chrysolora, and is also rather taller. Vermillion Brilliant is aptly named, for the bright vermillion-scarlet of the flowers cannot well be overlooked. The deep crimson, and white forms of Joost Van Vondel were likewise much in evidence. White Pottebakker is unsurpassed as a pure white, although now and again it illustrates the vagaries of its kin by turning out a segment or two bright green instead of white. Ophir d'Or is deep yellow, striped with scarlet—a very showy form. Thomas Moore is a rather lanky grower. The flowers are terra cotta in hue, enlivened by the yellow margin, Cottage Maid is dwarf, but the pink and white flowers are by no means unattractive.

The above formed the backbone of a collection through which from first to last not one inferior plant was to be seen, but which demonstrated most unmistakeably how high a degree of cultural skill had been exercised in its behalf.

VEGETABLE CALENDAR.

IN the course of the next week or two, some of the principal crops of the year should be sown. Among the more important are the main crops of Brussels Sprouts, Broccoli (Walcheren), and other kinds for succession, Borecole, Savoys for early autumn and winter supplies. Succession beds of Cauliflowers, Lettuce, Cabbages, and Leeks. An open unshaded position should be selected for the seed beds, and the soil should be in good heart. Sow thinly and give ample room in the seed beds. It is a great mistake to sow an ounce of seed on a few square feet of ground where a quarter of an ounce would be ample and give much better plants.

CARROTS.—Another sowing of early Horn may be made in a warm position. The main crop of Nantes and the better forms of Intermediate should also be got in during the first favourable opportunity. The ground for this crop requires special preparation in getting it thoroughly worked and pulverised. Good dressings of burnt refuse will be a great advantage, in producing an early development and clean roots.

TURNIPS.—A good breadth may now be made of Early Milan and Snowball, as most of the roots from this sowing will, if well thinned, attain a good size before running to seed. The beds should be in a position convenient for giving them a good watering, should dry weather occur while the plants are in the earlier stages of growth.

ASPARAGUS.—A good stock of one and two-year-old plants should be kept in every garden and this necessitates growing annually. An open position should be selected for sowing in drills 18 in. apart. The seed should be carefully sorted, selecting the strongest seeds only, and these should not be sown in heaps as is usually done, but carefully dropped in the rows at least an inch apart. By taking this slight extra care when sowing, stronger plants will be secured in one year, than in two by thick sowing.

DWARF BEANS.—Successions of these may now be made in any cold frames where a sunny position is available, as by keeping them close, sufficient heat will be obtained to secure a healthy germination. A few hundred large 60-sized pots should be filled with some light sandy compost, and a single bean pressed into the centre, placing them in any position where a temperature of 60° can be maintained. These, if

carefully attended and gradually hardened off, will give excellent plants for turning out in warm positions outside early in May. The best and hardiest for this work is Canadian Wonder.

TOMATOS.—No delay should take place now in sowing the main crop for walls and outside planting generally. Sufficient heat must be applied to get a quick germination; but after this occurs the seedlings should be brought on as cool as is consistent with keeping them in health Place them always near the light, and do not allow them to become drawn in the seed boxes, nor suffer for want of fresh potting in the earliest stages of growth.—*J. R.*

THE PLANT HOUSES.

The Stove.

IT is now quite time that the blinds were affixed to the houses, for the sun is now so powerful that scorching will ensue unless shading is given. Inequalities in the roof which would prevent blinds from working must be lightly painted over with summer cloud shading. The sides of the house must also be treated in the same way. In fixing the blinds it will be as well to give all the pulley wheels a drop of oil in order that they may work smoothly and easily. We are just upon the verge of a very catchy month when the blinds may have to be lowered and raised several times a day, so it will be advisable to get things in working order now and thus save both time and temper presently.

BOUGAINVILLEAS.—Old plants which have been spurred back like Vines usually make a lot of shoots for which there is no room. These must be thinned out gradually, until finally only sufficient to cover the roof nicely is left. The shoots that are to remain must be brought down gradually to the wires in the same way as those on a Vine; indeed they re-require to be treated in a similar fashion all through.

STEPHANOTIS.—The shoots are making great headway now, and will require to be gone over frequently for tying, for if they once get tangled it becomes a matter of great difficulty to deal with them afterwards. Keep the syringe well to work morning and afternoon amongst them, so as to prevent green fly from gaining a foothold.

FERNS IN BASKETS.—It often happens that basket Ferns are allowed to remain year after year in the same position without having anything done to them. The present is a good time to remedy this mistake. It may be a matter of some difficulty to transfer the plants to other baskets, and in such a case they should be allowed to remain in them, only removing as much of the old soil as possible. This may be done by means of a pointed stick, and the syringe may subsequently be called into play. The holes must then be carefully filled up with fibrous loam and peat with sand. A few tufts of sphagnum moss may also be worked in here and there. If the plants have been much disturbed it will be advisable to take them into a close pit for a week or two to recover themselves of the check. After this assistance they will be in a much better position for standing the more trying atmosphere of the large stove.

ADIANTUMS FOR CUTTING.—In most establishments a stock of plants from which to obtain fronds for cutting is a necessity. If these plants are to be placed in the stove they must have a corner all to themselves, where the water from the syringe may be kept off them. If any part of the house has been permanently shaded this will be the best place to put the Ferns. Whilst the plants are throwing up their young fronds clear water will be all that is necessary, but when they have become fairly advanced liquid cow manure may be given twice a week. This should be given weak at first, but the strength may be slightly increased as time goes on until it is of a fair strength.

NYMPHAEAS.—The warmer weather has caused these to make great progress of late, and the young leaves are pushing away strongly. Keep a smart look out for green fly which is very likely to attack the plants at this stage. The best method of getting rid of it is to sponge the affected leaves with tobacco water.

GARDENIAS may still be propagated by cuttings. Take off the tops of some of the old plants that have finished flowering and insert them in small pots filled with light sandy soil. Plunge them in a nice bottom heat and an atmospheric temperature of not less than 70° Fahr. Keep them fairly close for a few weeks and syringe regularly, when they will soon make roots. Old plants which are planted out in borders will usually furnish plenty of suitable stuff for cuttings, and the cutting back that they get as a consequence will help to keep them in shape.

ACALYPHA MUSAICA.—Bearing in mind the usefulness of this Acalypha as a table plant it will be well to get up a good stock of it. The present time is very suitable. Take the offshoots from the older plants to serve as cuttings. The tops may as well follow, since the old plants are apt to become too leggy for service. In a brisk bottom heat the cuttings will soon root, and if potted on will make handy little stuff by the end of July. A musaica is certainly the most useful member of the genus, but A. wilkesiana, A. marginata, and A. obovata, may also be grown if there is room for them.—*A.S.G.*

THE ORCHID HOUSES.

EAST INDIA HOUSE.—Amongst Orchids that require the heat and moisture of this division, the foremost place must be accorded to the Phalaenopsis, and under favourable conditions they are easily grown. But what are favourable conditions? In my opinion it is a stove or house that is always naturally moist; and one that does not require damping down every five minutes to keep it sufficiently humid.

Phalaenopsis are found growing on bare rocks, and if you examine the leaves of imported plants their condition bears out the collectors' statement; for they are as tough as leather. Yet, being as they are, without any pseudobulbs to support them, it stands to reason there must be an immense quantity of rainfall during the growing season, which, with us is from March to October. Whilst it is wise as far as possible to take Nature as our guide in the culture of plants, it would not do to follow her too closely in respect to the culture of Orchids; for under glass their character becomes changed to a certain extent. Thus, although they may be grown in exposed positions with very little shade in their native habitats, under cultivation it is next to impossible to grow them successfully if exposed to the sun other than a few hours early in the morning and very late in the evening during the summer months, because under glass the leaves become very succulent and susceptible to injury by becoming scorched if too much exposed.

As the flowering season is now over and the plants are starting into growth, they should at once receive attention; for although the sphagnum moss appears to be in good condition it will hardly carry them through another season. Besides, a little fresh material has a wonderful effect on all plant life.

It is a good plan to pick out all the old moss and as many of the crocks as possible, without damaging the roots, and then wash the roots as thoroughly as possible by the aid of the syringe and a can of tepid water, allowing them to stand and get somewhat dry before putting in fresh crocks, and finishing off with live sphagnum moss. When done give a gentle sprinkle with the syringe and keep shaded heavily and close for a few days if the weather is bright until they get a fresh start.

The temperature may range from 70° to 80° during the day and from about 65° to 70° at night according to the weather.

CATTLEYA HOUSE.—Odontoglossum citrosmum which is just commencing to grow, should receive special attention as regards moisture at the root, and how it is afforded, or the flowering will not be satisfactory. After a long season of rest a thorough soaking causes the young growths, which are barely an inch high to damp off, or to come away without the spikes which should now be developing; therefore careful treatment as regards moisture must be the order.—*C.*

Gleanings from the World of Science.

The Tiger Beetle (Cicindela campestris).—Amongst insects which may be reckoned truly friends of the gardener, not the least important are the Tiger Beetles, of which Cicindela campestris is the common species. A very detailed account of its life history, together with illustrations, is given in the March number of *Knowledge*. The beetle is about half an inch long, with wing-cases of a beautiful green, ornamented with five yellow spots. The head is golden green, tinted with crimson, as are the antennae, legs and wing-cases. The name Tiger Beetle is given on account of its powerful and sharply toothed jaws, from its ferocious nature towards other insects for which it lies in wait, and springs upon them like a tiger. When it reaches the perfect or beetle form it lives but a week or two, the male dying soon after mating, and the female after depositing her eggs singly in small burrows in sandy ground which the species frequents. The creature has very long legs, and large membranous wings under the wing-cases; both the latter sets of organs are spread out horizontally when flying, which it executes at remarkable speed at will. When catching its prey it runs or flies with great rapidity according to necessity.

The larva of the Tiger Beetle is a singular looking creature with a long body, an immense head and chin. The fifth abdominal segment bears two curious-looking tubercles, surmounted by small and stout spines. These are of service to the creature when lying at the mouth of its burrow in wait for prey. The spines are pushed into the sand when the larva is in the act of catching some other insect, and give the creature an immense leverage, thereby preventing at from being dragged from its burrow. The big head of the larva fills the mouth of the opening of the burrow, so that an unwary insect fails to detect any burrow or enemy until suddenly pounced upon. The jaws of the larva are curved, resembling a bull's horns, and close above its head, instead of beneath it, as in most or all other insects. A fly can be seen it some distance from the hole, but when from ½in. to ⅝in. from the mouth of the burrow, the larva of the beetle would pounce upon it with lightening speed and disappear with it down the hole. The Tiger Beetle is, therefore, a friend of the cultivator by destroying his enemies.

Duration of life.—The larva of the Tiger Beetle is certainly by far the longest-lived form of the insect. It lives for 2½ years, during which it catches various kinds of insects upon which it preys. When full fed it turns over on its back and after it has rested about 7 days, the larval skin slits on the back of its head and is quietly slipped off, as the creature passes into pupa state. This skin is practically thrown off as an old garment, but the owner gets the credit of sometimes being so economically inclined as to devour the "old clo." After reaching the perfect state, it passes a third winter in its burrow, before rising to the surface to enjoy its brief life in the winged state.

THE following subjects were shown at the Scientific Committee meeting of the Royal Horticultural Society, on the 9th inst.:—

Beetles with Grapes.—Mr. McLachlan had received some small beetles found about the roots of Vines, about a quarter of an inch long, with a blunt thorax and rather sluggish in manner. They proved to be Trox sabulosus, and were introduced in the crushed bones used for manure. Not being vegetable feeders they do no harm to the Vines. The best trap would be a dried rabbit skin with the inner side downwards.

Larvae of Daddy Longlegs.—He also received a sample of propagating soil in which Iceland Poppies were grown, abounding with the caterpillars of this fly. Bisulphide of carbon, cyanide of potassium (½ to 1 per cent. solution in water), or to remove the soil and burn it, were methods recommended in such cases.

Apple Root with Adventitious Buds.—Dr. H. Müller exhibited a specimen, thickly covered in places with innumerable buds, usually known as "Burr Knott." The original cause is obscure, but Dr. Masters observed that such roots are often cut up and used for propagating.

Hyacinths, &c., with Root Failure.—A collection of bulbous plants were received from Mr. W. C. Atkinson, of Aigburth, Liverpool, in which the roots had been very imperfectly developed, but then arrested and decayed. Mr. Douglas undertook to investigate the case, Dr. Masters observing that the bulbs might not have been properly ripened before lifting.

Drift Wood from Arctic Seas.—Dr. M. T. Masters exhibited specimens of wood obtained by Dr. Nansen. They had travelled from Siberia to Franz Joseph Land, and consisted of the Siberian Pinus Cembra (dwarf form), Willow, Elm, &c.

HINTS FOR AMATEURS.

Tying down Vines.—This is an operation which many amateurs are afraid to tackle, not without reason be it said, for there is need of not a little skill and patience to bring it to a successful issue. Consequently many amateur cultivators of Grapes call in professional aid at this juncture. Although this is the safest way, however, and although we do not wish in any way to make it more difficult for that very useful invention—the jobbing gardener—to obtain an honest living, still there is no reason why even a very amateurish amateur should not be able to do all that is necessary, providing he goes to work cautiously, and, as it were, feels his way along.

The great mistake made by most people is that of letting the shoots get very long and strong before any restraint is put upon them. Naturally enough these shoots grow bolt upright, and are often injured by contact with the glass before steps are taken to bring them down to their proper level. A house that has been let go in this way is troublesome enough to professional hands, much more to those of an amateur. Bearing in mind the fact that the pressure downwards upon the growths should be gradually exercised, the importance of taking the growths in time will be fully realised. As soon therefore as they are five or six inches in length they should be gently held down to the wires by a light strand of raffia. The latter, where it is affixed to the wires should be tied in a running knot, so that the tension may be increased or decreased according to requirements, and without the necessity of using a fresh piece of raffia each time.

In large establishments tying-down is an operation that is usually seen to in the mornings, before breakfast, when the heat of the house is not quite so trying as it is later on. If the young growths are tied down very tightly at the first the heat of the sun afterwards will cause them to snap out at the base. Accordingly in regulating the application of the pressure it is not always safe to assume that because a shoot does not break out at first it is secure. Amateur cultivators, who take a turn in their gardens and houses in the morning before going to business, may well take a mental note of this, and proceed with due caution.

When properly brought down the young branch may run parallel with the wires, and at right angles to the main stem. This is not a question of the first importance, and will not affect the fruiting qualities of the Vines, since not a few growers train the young growths so that they describe an angle of about 45° with the main stem, being of opinion that they cover the roof area better and more equally when treated thus. This is a question which we may well leave to the operator's own discretion.

Boronia megastigma.—A seasonable note upon this charming plant may not be inopportune, taking into consideration how very high up in the list of greenhouse plants it comes. Some people affect to dislike the scents of Hyacinths, Lilies of the Valley, etc., in closed rooms, saying that they are so strong as to be disagreeable. Possibly the same disadvantage may be attached to Boronia megastigma in some persons' estimation, and yet it would be hard to find a plant possessed of a more agreeable and grateful perfume. The flowers themselves are not very showy. They are purple-maroon in colour externally, and yellow internally, and are produced in the axils of the leaves all along the ripened growths of the previous year. The great secret in successfully flowering the plants is to ripen them off thoroughly in the latter part of the summer by free exposure in the open. By ripening, we do not mean drying off—far from it, for such a method of treatment would be fatal to Boronias, which like other fine-rooted subjects must never be allowed to get dry. We mean that maturing of the wood which is generally indicated by the turning colour, with a corresponding degree of firmness. Just now the plants will be taking a great deal of water, and may need looking over twice a day if the day be bright and dry.

Shading the Glasshouses.—The time has now come when it will be very necessary that the glasshouses should be shaded. Plants in flower have, of course, been shielded from the sun ever since the beginning of the month, and it is the ordinary collections of stove and greenhouse plants, including Ferns, that we refer to now. The latter are apt to get very yellow if exposed too much to bright sun. Shade may be given in too ways, *i.e.*, by blinds, which may be raised or lowered at will, and as occasion requires, and permanent or fixed shading.

Blinds are rather expensive, but there is no denying the fact that they constitute the handiest means of giving the protection necessary, and at the same time they are infinitely better for the plants. If, therefore, the roof is even enough to permit them to work easily, we should strongly recommend their use.

Summer Cloud Shading and other specifics of a similar kind are applied to the glass by means of a brush, and form good permanent shading. The disadvantage of shading in this way is that it cannot be taken off very easily during dull weather, and in the case of a protracted spell of weather such as that which characterised the greater part of March, this is a matter of some consideration. For angles in the roof this is often the only way of excluding the sun. In the event of stormy weather ensuing the glass will require to be painted over two or three times during the season.

Seed Sowing.—The time is now at hand when the seeds of various annuals for blooming in the flower garden may be sown in the open air, or in pots and pans in cold frames. It is to be hoped, however, that we shall be favoured with a little dry weather for at the time of writing the ground is little better than a swamp, and in anything but a suitable condition for seed sowing.

In choosing a position for a seed bed, see that it is situated in a favourable position, and is sheltered from cold winds, but not overhung by trees. A border facing south is a capital place, for as it catches so much of the heat of the sun, germination will be be rapid. Choose a dry day, and after forking over the proposed site for the bed, level the surface down, and break it up finely. Sow the seed thinly, as this will admit of the plants reaching a good size before they are transplanted, and will also do away with weaklings, which are usually the result of overcrowding.

Pricking out Seedlings.—Where Stocks, Asters, Golden Feather, and other bedding plants were sown under glass in heat at the beginning of the month, there will now be a rush of work in pricking out. The latter is a somewhat tedious, although not a difficult operation. To perform it properly it needs time, and patience—particularly the latter, when the seedlings are small. Perhaps Golden Feather is as hard a subject as any to operate on, for the seed usually germinates very readily, and the plants have then to be handled when quite small. There are several points in "pricking off" seedlings that have to be carefully attended to. The first is not to injure the young roots when separating them, the one from the other. Only a small cluster of plants must be taken in hand at one time. Shake the soil away by degrees, and take each plant individually, and pick it out from the others, disentangling its roots as you proceed. Then lay the seedlings out upon a flat surface from whence they can be easily picked up and transferred to their new quarters.

The second point follows naturally upon the first, viz, to avoid having too many plants out of the soil at once, for as will readily be perceived the delicate rootlets would suffer from such exposure.

The third point is one of the utmost importance, not to "hang" the seedlings. "Hanging" is the phrase used by gardeners to express the way in which inexperienced workmen make a big hole utterly out of proportion to the size of the plant that is to go into it, the poor plant being lodged at the top of the hole, and the soil pressed round it, blissfully oblivious of the fact that the roots have beneath them a void, in which they are hanging. Such roots are thus to all intents and purposes out of the soil, and soon perish, thereby greatly endangering the life of the plant to which they belong. Seedlings that are "hung" rarely live, and never do well.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Mignonette.—Please tell me how to obtain specimen bush plants of Mignonette for flowering next winter and early spring. Also what variety would be best. —*Daniel B.*

You may sow in 32-in. pots any time next month. Place the pots in a cold frame. When the plants make their appearance, gradually thin down to one plant to a pot, leaving a strong one as nearly in the middle as possible. During the summer keep all the flowers pinched out as fast as they appear, and at the end of August pot on into 8-in. pots using a compost of two parts of loam, one of leaf soil, and one of dried horse droppings with sand. Stake the plants out and grow on in a gentle heat, pinching all the flowers out until within a month of the special time they are required.

Peat Moss Litter for Mushrooms.—We cannot buoy you up with any hopes that you will be successful in attempting to grow Mushrooms in a medium largely composed of this, *T. T.* You may try certainly, but it is probable that you will fail. Other people have tried and failed, and indeed we know of no single instance where the experiment has proved successful. Plenty of good horse droppings well turned and sweetened before using is the kind of stuff to use.

Gloxinias.—I sowed a little Gloxinia seed at the end of January and placed it in heat. The young plants have been potted off into thumb pots and are growing away well. Will they flower this year, and if so what sized pot should I give them as a last shift?—*Subscriber.*

The plants should commence to flower about the end of July. If of fair strength a small 48-sized pot will be amply large enough for them. We do not believe in over-potting.

Back Wall of a Stove.—If the corner is rather dark in your stove, *C. Smith*, possibly Ficus repens would be as good as anything. You may plant it as soon as you like, the sooner the better. Keep the wall well syringed twice a day.

Forcing Lily of the Valley.—I lifted a few clumps of Lily of the Valley out of the garden last autumn and forced them. Are they of any further use? They did not flower at all freely.—*C. H. Jenkins.*

We should have thought that the wastefulness of lifting Lily of the Valley in this manner had been demonstrated sufficiently to prevent anyone from doing it again. The next time you want to force Lily of the Valley buy a few of the Berlin crowns (they are made in Germany it is true, but that does not matter) and you will find that they will give you more flowers with less trouble. The clumps you have forced will be of very good use. You may plant them out if you like in an odd corner. Many will die, but some may live.

Asplenium bulbiferum.—*Amateur* wishes to know whether the little growths on the fronds of Asplenium bulbiferum will grow, and form independent plants.

All that has to be done to attain this end is to peg the fronds down on a panful of prepared soil into which they will root, or the most advanced of the bulbils may be taken off and their bases slightly covered with soil.

Fuchsias.—You have been shading the Fuchsias too closely, *Rob*, or the shoots would not be so long and straggling as you say they are. Possibly you have been keeping them too warm as well, but upon this point you say nothing. Your best plan will be to pinch back fairly hard. Do not coddle, and do not shade too heavily.

Ericas.—*Peter J.* is wanting details as to the propagation of Ericas. We are afraid he may not obtain the success in dealing with this charming class of plants that his courage deserves. Ericas are increased by cuttings composed of the points of the young shoots thrown up after the old plants have been cut back. These cuttings may usually be obtained in quantities towards the latter end of the summer. Insert them in sandy soil, cover them with a bell glass and place them in a cold frame. As a rule, however, it is only professional growers who have a great deal of resource and skill that obtain a full measure of success in this direction.

Top-dressing Cucumbers.—You are quite right, *F. Ames*, the appearance of the roots at the sides of

the mound of soil is proof that the Cucumbers want a top-dressing. Let this consist of good loam, but let it be warmed thoroughly through before it is applied. It may be made fairly firm, but there is no need to ram it so hard as you would do in the case of Melons.

Acorus Calamus.—This is very suitable for planting by the side of the pond as you propose, *W. M., Reading.* Once a clump of it is established you may easily propagate it by division, spring being the best time, just as the young leaves are making a start to grow. The flowers are small and inconspicuous, but the whole plant is very fragrant, and is a favourite on that account. Once established it will grow like a weed, and is perfectly hardy.

CHRYSANTHEMUM GLORIOSUM AS A TRAINED PLANT.

THE photograph of this specimen may perhaps help some of your readers, to know what a perfect specimen ought to be, that is, if training of a plant is considered. To grow a plant with 50 to 100 or 150 blooms, you must tie it into some shape or form. The variety mentioned had eighty blooms upon it, and was 5 ft. through; the plant when photograped was two years old. The first year it was grown as a cut bloom plant, with three blooms upon it. It was cut down and produced four breaks all above the soil, so that the plant had a clear stem. It was potted on twice, and stopped three times. In the growing season, the outside growths were trained out, and at the final tying a stick was put to each bloom, the tallest in the centre, the others according to the height, and so on. The plant, therefore, had a natural appearance, with as little bending or tying down as possible. There is a vast difference between a trained and a bush plant.—*Grower.*

CHRYSANTHEMUM GLORIOSUM.

A Lancashire acre is much larger than an imperial acre, and runs to 7,840 yards.

TABLE DECORATIONS.

THIS was the subject of an interesting paper read by Mr. Powell, of Park Place Gardens, Henley-on-Thames, before the members of the Reading Gardeners' Mutual Improvement Association, on Monday the 15th inst., in the Club Room, British Workman. Mr. C. B. Stevens, the President presided over a large gathering of members. Mr. Powell in introducing his subject, said that there were so many ways of making displays with flowers that it would be impossible to touch on all, therefore he would direct their attention to what could be done in private establishments only. When it is taken into consideration the number of people that at the present time indulge very largely in floral arrangements on their dinner tables, it seems that gardeners as a rule do not give that thought and attention to the subject it deserves, and therefore on many occasions the employer calls in the florist to do that which could be done equally as well by the garden staff. Proceeding to deal with arrangements on festive occasions, etc., the speaker said it was impossible to lay down any hard and fast rule how these should be done, as it could be studied from so many different points. In fact the arranging of flowers, whether for table decoration or otherwise, was an art that could be only learnt by continual practice, and the closer that nature was copied the greater the success, especially in the blending of colours. Care should be taken in selecting the colour to have that most liked by the employer, and then have it so placed that it would be seen immediately the room was entered; first impressions are always the best.

It should not be thought that the choicest flowers are necessary, for it is the simplest that make the best effect, besides being half the trouble to produce. What could be lighter or more effective than an arrangement of wild flowers? Of course there are times when the gardener has an order to do the dinner table with a particular flower or colour, then he must suit himself to circumstances. This is the time for him to exhibit his skill in carrying out the wishes of his employer. The first thing to be considered in starting a dinner table is the object for which it is wanted, then the flowers that would be most suitable, and lastly, how to work all in harmony to give the desired effect when finished.

In choosing flowers and foliage it is desirable to take the season of year into consideration, and let the display be in harmony with nature as far as possible. In spring there are the Daffodils, Tulips, Roman Hyacinths, Lily of the Valley, Freesias, etc. In the summer the decorations should look cool and inviting, especially as there is a large variety of flowers to choose from, such as Pinks, Yellow Sultan, Coreopsis, Cornflowers, Iceland and Shirley Poppies, Sweet Peas, Carnations, etc. Then in the autumn there is the lovely tinted foliage, which certainly gives the most charming effects; adding to this the large numbers of Chrysanthemums, there is an endless supply to work from. Lastly comes winter with Christmas decorations. The chief colour should be scarlet or any bright colour which looks warm and comfortable when all outside surroundings are dull and cold.

In giving a list of the plants and flowers most suitable, the lecturer pointed out that consideration would have to be given to the style adopted, and therefore it would be best to denote them under one of the following headings:—Section 1, decorating with plants in pots; section 2, decorating with cut flowers in vases; section 3, decorating with short stalked flowers worked in a design on the cloth, or what is more generally known as "tracing." In the first division there are Palms, Cocos, Arecas, Geonomas, Kentias, Dracaenas, Crotons, Coleus, Ferns, Selaginellas, Pandanus, Grevillea robusta, Eulalias, Lily of the Valley, Azalea, etc. Section 2, applies more to the summer time, when there is such a host of flowers to cut from out of doors. Mention was made of different arrangements of flowers at this season of the year. Trailing pieces of Clematis montana in flower always look well; so do Sweet Brier Roses. Sweet Sultan set up with brown

foliage such as the purple Plum, with the garden Asparagus, makes a good effect at night; but wild flowers and grasses are the most effective, although a trouble to set up. Sunflowers with Coreopsis coronata make a splendid show. A very interesting table in hot weather is a water scene made by placing a looking glass flat on the table as representing the water, with two or three leaves and flowers of the white Water Lily, using different water plants and grass in the vases, the centre piece being a wire frame over the glass in the form of a bridge covered with wild Clematis. No class of flower is more pleasing and useful than the great variety of Sweet Peas in all their delicate shades of colour, "Ovid" and "Princess Beatrice" being without a doubt the best for this class of work. These and La France Roses make a beautiful combination. The chief study should be to make the display as homely as possible, and different from those seen at public dinners, in shops, etc.

Section 3, is generally carried out in winter when flowers are scarce, and the least few laid on the cloth look very pretty. Suitable for this work are the scarlet and crimson Pelargoniums (Henry Jacoby especially), small Pompon Chrysanthemums, Snowdrops, Salvias, Primulas, Azaleas, Scarlet Berries, etc. In these displays straight lines should be avoided. To illustrate this section Mr. Powell had made two designs, each about 4 ft. by 3 ft. for the inspection of the members, the first setting forth the record reign of H. M. the Queen. A crown was formed of scarlet Pelargoniums on a white ground with the letters V.R. underneath, the years 1837 and 1897 being done in blue flowers. The other design was the Prince of Wales Plumes made up with Deutzia (white), on a scarlet cloth. This form of decoration was quite new to many of the members, and excited great admiration. A very interesting discussion took place in which Messrs. Neve, Turton, Stanton, Martin, Woolford, Lees, Dearlove, Tunbridge, Chamberlain and Fry took part. Many questions were asked and ably answered by the lecturer. A hearty vote of thanks brought an exceedingly pleasant meeting to a close.

ENGLISH ORCHARDS.*

Condition and Prospects.

It would, I am fully persuaded, be not less gratifying to you than agreeable to myself were I in a position to speak this evening in terms of warm praise of the present condition of English orchards, and in a spirit of hopefulness with regard to their possibilities. It would also be extremely pleasant if I could, with strict regard to truth, describe them as having no superiors in any part of the world, and as so rapidly increasing in productiveness as to justify the hope that the time is within a measurable distance when they will yield supplies sufficient to meet the large and increasing demand for fresh fruit. Still further, I should be glad to speak of them as so judiciously planned and skilfully managed that they might serve as models for the guidance of colonial and foreign fruit growers. It would not be less pleasant to dwell upon the glorious pictures the orchards present in spring when the trees are enwreathed with their snow-white or delicately-tinted blossoms; and in autumn when the supple branches are bending beneath their precious burden of fruit, and also to refer to the profit their crops give their owners, and the satisfaction the fruit affords those who have to depend upon the markets for their supplies. Unhappily, most of these pleasures are for the present denied me. Instead of giving expression to feelings of satisfaction with what has been accomplished by owners of orchards, it is my duty to place before you facts, which to those not fully conversant with the subject, might well appear incredible in the light of the remarkable advance that has been made in all branches of industrial activity during the past half-century. I have, indeed, to bring before you a state of things in relation to the orchards of England, so grave as to deserve the most careful consideration of all who are interested, however indirectly, in the prosperity of the owners and tillers of the land; and I earnestly hope, as one result of this meeting, that attention will be aroused to the necessity of a drastic reform in orchard management.

The question of fruit culture is one that has for many years received a large share of my attention, and I have endeavoured to keep it constantly to the front, not only in discussing its various aspects in the pages of the *Gardeners' Magazine*, for whose policy and management I am responsible, but, as far as my somewhat exacting professional duties will permit, by work in other directions. Ten years ago I initiated a series of conferences at the Crystal Palace, which were held in conjunction with the autumn exhibitions of fruit, and at the gathering in the autumn of 1890 I submitted a report on the condition of fruit culture in Ireland, this report being founded on investigations that I had made by myself, and at my own cost, in the course of the previous summer. The success of these conferences stimulated the Royal Horticultural Society, the Fruiterers' Company, and several of the principal provincial horticultural associations into activity, and as the result of the combined efforts the area under fruit has been increased during the decade by 18,923 acres, and considerable improvements have been effected in methods of procedure so far as they relate to market-garden plantations. With the exception of the first-mentioned society the several associations appear to have grown "weary of well doing" in the advancement of profitable fruit culture, and have returned to their old methods, and the Royal Horticultural Society has shrunk from grappling with the somewhat difficult question of the orchards.

We are therefore now in the position of having a continuously increasing demand for fruit in all our populous centres, with tens of thousands of acres of the finest land in England occupied by fruit trees in so dilapidated and wretched a condition that they cannot possibly pay even the rent of the ground, without one of the several hundreds of societies that ostensibly exist for the advancement of horticulture and agriculture being engaged in making a systematic endeavour to improve their condition. I regret also that, with some notable and praiseworthy exceptions, Technical Education Committees are not less oblivious of their responsibilities in this matter than are the societies immediately concerned with the affairs of the farm and garden. In proof of this I have only to point to the fact that in counties where the orchards are in a terribly neglected state large sums of money are annually expended in teaching painting on china, music, dancing, and similar accomplishments, while not a penny, so far as I have been able to ascertain, has been spent on the education of the occupiers of orchards in their management and the utilisation of their products. I would submit that the chief object of societies that profess to foster horticulture and agriculture, and of education committees in counties, should be to diffuse information upon matters having direct relation to the work of those engaged in the cultivation of the land, for not until the cultivator is well informed upon the principles and practice of his art, can he hope to obtain a full return for his labours.

Unfortunately these public bodies do not, as a rule, hold the same views with regard to their duties as myself, and considering it to be utterly futile to expect them to take the initiative in the adoption of some means by which an improvement could be effected in the orchards, I carefully considered what could be accomplished by private effort. As the doctor must diagnose a disease before he can properly prescribe for his patient, it appeared to me that one of the first steps towards an amelioration of the condition of our orchards would be to direct attention to the state of neglect and decay into which they have fallen, by means of absolutely exact reports founded upon careful investigations. It was accordingly decided to investigate them on behalf of the *Gardeners' Magazine* and publish the results of the investigations. The task was one not to be lightly entered upon, and I confess that it gave me much anxiety. To be of value the investigations had necessarily to be made in a thorough manner by an expert possessed of keen powers of observation and also well versed in every phase of fruit culture, and full investigations carried out on these lines over the whole of England could hardly fail to prove very costly. Happily the proprietors of the journal readily consented to the heavy expenditure being made, and I was fortunate in engaging as Special Commissioner an expert possessing in an eminent degree the qualities essential to the proper performance of the duties. The investigations extended over nearly two years, and as the result of these inquiries I have been able to publish full reports upon twenty-four typical English counties.

(*To be continued.*)

*Text of a lecture given by Mr. George Gordon before the Society of Arts on Wednesday, the 3rd inst.

MESSRS. LAINGS' CLIVIAS.

The large house in which the Clivias are located in the Stanstead Park Nursery of Messrs. John Laing & Sons, Forest Hill, is now gay with an ever-increasing quantity of this showy and useful spring-flowering subject. Some of the best varieties are crossed every year, so that novelties of value are always turning up amongst the seedlings, and being added to the general collection. The vigour of all the finer varieties is remarkable as compared with the old Clivia introduced from South Africa. The stems or neck of the crown of leaves is as stout as a strong wrist, and the great breadth, leathery character, and dark green hue of the leaves as seen at Forest Hill, make the plants highly ornamental all the year round, whether in flower or not. There are some large plants of the older varieties which have a massive and telling effect when their huge trusses are in bloom.

From amongst the large number of varieties we singled out a few of the best for comment. The flowers of Mrs. Joseph Broome are large, widely expanded, and of a soft orange. Those of Elegantissima are of an intense orange, with a white throat, and of great length. The widely expanded rich orange flowers of Mrs. Davidson are produced on stout but dwarf scapes. The noted Lady Wolverton with its remarkably wide flowers is late compared with the above; and the same might be said of Harry Laing, so that the two serve to keep up a succession. The Right Hon. Joseph Chamberlain produces immense trusses of moderate-sized flowers of an intense orange. Orange Gem has long flowers of an intense orange-scarlet, the colour being continued to the base on the outer face. The rich orange flowers of Duchess of York are distinctly tinted with violet or purple towards the edges. The dark orange flowers of Fascination are funnel-shaped, and notable for their length. Duke of York contains a greater amount of white extending farther up the segments than any other variety we noticed.

A plant of Patrick Davidson carried three huge trusses with very numerous flowers of a warm orange more or less tinted with rose. On the contrary, those of Fairy Queen are of a soft orange tinted with rose. There are several which are particularly noted for their intensity of colour, and amongst them Vesuvius holds a high position; it is also very dwarf. A few Continental varieties, with a high reputation, find a place here, but Messrs. Laing need fear no foreign competition. One of the sorts is certainly very dark, but the segments are quite as narrow as those of the wild plant. Madame Charles Vermiere is exceedingly vigorous and very promising, but as yet, the flowers are unexpanded.

The huge rich orange flowers of Mrs. John Laing are produced in immense trusses, and though a variety of some years standing will yet hold a place for many years to come. Magnet is another dark flower that still merits a place in this fine collection. Lord Rosebery is very vigorous, producing immense trusses of dark orange flowers, tinted with purple at the edges. The orange-crimson of Comet entitles it a place amongst the darkest, for the shade deepens as the flower gets older. Much the same might be said of Glow, which assumes a dark mahogany-orange hue; it is also a strong grower.

The lighter colours are not neglected for they have a charm of their own when the flowers are large, and particularly in association with the dark sorts. The lighter and darker colours do, indeed, show one another off to advantage by contrast. One of the earliest to turn up was Sulphurea, and though several seedlings have been raised from it, none of them surpasses the parent in its own particular soft yellow hue. Bronze Beauty bears huge trusses of soft orange flowers, somewhat tinted with bronze. Her Majesty has large orange flowers tinted with a shade of rose at the edges. Empress Eugenie comes into the same category, for the flowers are of a soft pinkish-orange. It is one of the lightest-coloured sorts, delicate and pleasing. The pinkish-orange of Sunrise is a shade or two darker. The Princess of Wales is very free, producing huge trusses of soft orange flowers. Serviceable as are these pale varieties, a white one yet remains a desideratum. Nevertheless the amount of clear white in some of them still encourages the hope that a pure white Clivia may yet be a realisation.

A showy group of new varieties is now very attractive by reason of their dwarf and sturdy habit together with the wide range of variation in the

colour of the flowers. Sanguinea takes high rank amongst dark kinds, if, indeed, it is not the richest and darkest in the collection. The flowers are of an intense, glowing, orange-crimson, the colour being continued almost to the base. The plant is dwarf in habit with beautifully arching leaves. W. P. Leach is decidedly a showy variety with widely expanded flowers, broad segments, of good substance and rich orange. The plant is likewise dwarf in habit. The large, open flowers of Queen Victoria are of a soft orange, stained with pink and white at the base. Duke of Connaught, on the contrary, is of a glowing orange-scarlet, and the lower half of the flower is yellow on both surfaces, and thereby distinctive. Some varieties have distinctly variegated flowers; and one is tinted with rose. Firefly and Novelty are notable for the richness of their orange flowers. The bright orange flowers of Princess Frederick are very widely expanded or even revolute. Duke of Teck is very dwarf, and the orange-crimson flowers have a yellow throat.

DAFFODIL SHOW AT TRURO.

THE Daffodil spring show at Truro, Cornwall, may be pronounced to be grand a success. Entries in the amateur classes appeared in splendid form, and much is due to the exertion and zeal of the secretary, the Hon. J. Boscawen and his able assistant, Mr. Blenkinsop. Tables were arranged longitudinally down the Town Hall, concert room, and around the hall, each table being well filled.

In the side room Messrs. Barr & Sons, of Long Ditton Nursery, London, sent a magnificent representative collection in such varieties as Sir Watkin, Barrii Conspicuus, Gloria Mundi, Emperor, Horsfieldi, Empress, and many of the Leedsii varieties. Mention must be made of a beautiful new Bicolor Daffodil of the form of Grandis, but much larger, said to be earlier, and robust and vigorous. This variety has not yet received a name, but bulbs may be supplied on application to the firm. From T. S. Ware, Hale Farm Nurseries, Tottenham, London, came a similar collection, in which Anemones, Primulas, and many interesting bulbous plants were conspicuous. Messrs. James & Son, of Slough, sent boxes of cut blooms of their magnificent strain of Cinerarias.

The successful winners of Barr's prizes were Miss F. Currey, of Lismore, Ireland, who was first with a most comprehensive collection of some forty to fifty varieties in the three leading sections, evidencing splendid culture; Lady M. Boscawen second; and W. Cole, Esq., Pendarves, third.

For ten and five distinct single Daffodils, trumpet varieties, J. C. Williams, Esq., Caerhays Castle, was an excellent first in both cases; W. N. Carne, Esq., and J. Rashleigh, Esq., Truro, were second. In the smaller classes Lady M. Boscawen, J. C. Williams, Esq, W. N. Carne, Esq, and C. F. Dawson, were the successful competitors.

Rev. G. H. Engleheart brought from his Andover Garden a very early seedling named Silver Spur, the result of crossing Golden Spur and Cernuus. It retains the character of each parent, and is intermediate in size between the two.

Rhododendrons, Camellias, Hyacinths, Tulips, Primroses, Anemones, and other spring flowers were in strong evidence and contributed largely to the effect and attraction of the show, which was continued over Tuesday and Wednesday, the 16th and 17th inst. There were between fifty and sixty entries of Daffodils alone, so that it was truly a Daffodil show. The first prize collection, coming from Ireland, bears witness to the suitability of the climate of the sister Isle for Daffodils. The Rev. G. H. Engleheart, who acted as judge, had a difficult task to perform owing to the uniform quality of the exhibits.

GARDENING MISCELLANY.

BOMAREA CARDERI.

THIS Bomarea is now in flower in the cool end of the succulent house at Kew. The Bomareas are easy of cultivation, and as climbers for the roof are very effective. When in flower they usually receive a good deal of admiration. B. Carderi is one of the handsomest members of the genus. The flowers are borne in pendulous umbellate cymes, each of the latter containing upwards of twenty flowers. Individually the blooms are 1½ in. in length, bell-shaped, and in colour deep orange, spotted on the inside with dark maroon. It is a native of New Grenada.

SOWING PEAS.

No greater error can be made than to sow these so thick as they often are. In many cases the crops would be better were only half of the seed used. This especially applies to the large marrow types, which have such big leaves and stems. I have found it a good method to drop them in the same way as Beans. Another error is to draw the drill with the corner of a hoe as is generally done. For years I have made it a rule that all our drills were made 8 in. or 10 in. wide. By so doing every Pea has a good space; and we sow no more seed than we did by the old method, with the best results.—*J.C.,Chard.*

CYRTOCERAS MULTIFLORUM.

THIS is the name most familar to us of one of the most beautiful of flowering plants, allied to the Hoyas, a native of Manilla, and introduced, I believe, in 1838. I have grown and flowered it among a miscellaneous collection of stove plants, in a mixture of loam and peat, with a good sprinkling of sand and charcoal to keep the soil open, avoiding too firm potting. This really beautiful flowering plant has sometimes been called C. reflexum and Hoya coriacea. I have never seen a large plant, and although I flowered it annually, it never made more than a moderate growth. I call attention to it because I have not met with it for some time. It seems to be one of those good old things which get lost sight of.—*W. B. G.*

BORONIA MEGASTIGMA.

Messrs. Cutbush & Son, have established a great reputation for skilful handling of hard wooded plants, and their nurseries at Barnet just now contain a further proof, if one were needed, of their success in dealing with a beautiful but ofttimes fractious race of plants. The proof in question is a magnificent batch of Boronia megastigma in 48-pots. The earliest plants are in full flower, and the others will soon be, but all are in robust health, clean-grown, and shapely. The usefulness of this Boronia is not, we are of opinion, recognised to the extent it deserves.

SOCIETIES.

DEVON AND EXETER.

THE spring show promoted by the Devon and Exeter Gardeners' Association was held at the Royal Public Rooms, Exeter, on the 17th inst. It was by far the best that has yet been held by the society. The entries were more numerous, and the quality highly satisfactory. The plants from the conservatories of W. Brock, Esq., Parker's Well, occupying a central table, were a feature of the show. A massive and well-flowered Azalea stood 6 ft. high from the rim of the pot. Cinerarias, Hyacinths, Daffodils, Clivias, Freesias, Cyclamen, Amaryllis, and other plants, were features of the show.

The Silver Challenge Cup, presented by Mrs. Thornton West (to be held for one year) to the winner of the greatest number of points at the show, was secured by Mr. W. Rowland, gardener to W. Brock, Esq. He also gained the president's prize for a collection of flowering plants. In this case Mr. F. Prothero, gardener to Mark Farrant, Esq., was second; and Mr. G. Rogers, gardener to Mr. Randall Johnston, was third. Prizes were offered by Messrs. R. Veitch & Sons, Exeter, for Hyacinths, trumpet Daffodils and Polyanthus Narcissi in pots, and here Mr. J. T. Baker, gardener to T. B. Rowe, Esq., was first, followed by Mr. W. Rowland and Mr. F. Prothero in the order named. Mr. J. T. Baker had the best six Hyacinths in pots; and Mr. F. Prothero the best three. Mr. W. P. Parkhouse, of the Great Western Railway, showed the best six in the amateurs' class. Messrs. R. Veitch & Son had the best Hyacinths grown in Jadoo Fibre. Mr. E. H. Osman showed the best Hyacinths in glasses. Dutch bulbs were considered scarcely up to the high water mark of some previous years.

Mr. J. T. Baker also took leading prizes for six Tulips, trumpet Daffodils, Daffodils with three bulbs in a pot, Polyanthus Narcissi, Lily of the Valley, Genista, and Deutzias. Mr. W. Rowland took the lead for three varieties of Tulips, trumpet Daffodils, a bouquet of Daffodils, Primulas, Chinese Primulas, and for one each of Azalea, Rose, and Orchid. Mr. G. Rogers was also a frequent winner, taking first prizes for Tulips, Freesias, tree Carnations, Primula obconica, Cyclamen, Mignonette, Cinerarias, and Richardias. Miss Kenshole had the best basket of Daffodils. Mr. T. Tucker, Rewe, took the lead for zonal Pelargoniums, and Violets.

The president of the association. E. A. Saunders, Esq. (gardener, Mr. Weeks), of Stoke House, took a prominent place amongst non-competitive exhibitors, with his Indian Azaleas, Clivias, Freesias, Cyclamen, Cinerarias, Cytisus, and Dutch bulbs. Lord Poltimore exhibited very fine Amaryllis, Daffodils, &c Mrs. Thornton West had a very effective display of foliage plants, Easter Lilies, Deutzias, Dutch bulbs, and many other spring flowering subjects. Mr. W. J. Godfrey, F.R.H.S., Exmouth, staged a fine collection of well-bloomed zonal Pelargoniums, tree Carnations and Ferns. Messrs. R. Veitch & Sons, Exeter, occupied the whole of the top of the room in front of the orchestra platform. They had Daffodils in great variety, Hyacinths and greenhouse plants generally. Very interesting was their collection of new Violets, having large flowers and long stems, including Sulphurea, the newest addition, having yellow flowers. The Jadoo Company, Limited, was well-represented by a great variety of plants all grown in Jadoo Fibre, and showing exceptional vigour.

PRESTON AND FULWOOD HORTICULTURAL.

THIS society held its 19th spring flower show in the Public Hall, Preston, on the 17th and 18th inst. The opening ceremony was performed by the president, His Worship the Mayor of Preston, Alderman H. Davies, supported by several members of the Town Council, and other gentlemen and ladies. The arrangement of the plants was similar to that of former years, the bulbs and smaller plants being on tables in the centre of the hall, and the large specimens and groups being arranged under the galleries round the hall. The Azaleas, which were very fine, were arranged along the front of the orchestra, and on the platform was a row of Palms, which formed an excellent back ground. Suspended from the front of the galleries were five baskets, about a yard in diameter, filled with plants for competition, Mr Starkie, of Lancaster Road, Preston, having supplied the baskets gratis to any intending competitor. The winner of the first prize was J. B. Dixon, Esq., Ribblesdale House, Preston.

The arrangement of the groups was an advance on other years, the sloping bank of packed plants having disappeared in favour of the style carried out by Mr. Cypher, and others. Mr. Charnley, of Howick House, Preston, who was first in the amateur class, introduced a lot of Virgin Cork, forming arches covered with plants over a couple of miniature lakes (mirrors) with swans on them, the whole having the appearance of a grotto, excepting the swans, which do not usually disport themselves in the vicinity of grottoes. However, the innovation seemed to please the public immensely.

The Orchids were better than usual since the Howick collection was dispersed, Mr. Brindle, gardener to E. Sowerbutts, Esq., Ashton-on-Ribble, taking the first prize. As single specimen he exhibited a Dendrobium thyrsiflorum with 43 spikes or racemes, and in his collection he had Odontoglossum Pescatorei in a 6-in. pot with 140 flowers. Mr. Wood, gardener to W. Charnley, Esq., had the most entries, 50 in all, being first for Azaleas, exotic Ferns, miscellaneous plants, Amaryllis, single and double Primulas, five table plants, not over 2 ft., and cut Roses. In all, he secured 20 first, 20 second, and 7 third prizes.

J. B. Dixon was the next heaviest exhibitor, though not next in point of entries. Mr. Dixon, it should be stated, is his own gardener, and with 41 entries he was awarded 20 first prizes in the various classes for bulbs, for three Azalea indica, a collection of hardy ones, Deutzias, Lily of the Valley, Spiraeas, and fine foliage plants. He also secured 10 second, and 9 third prizes.

Mr. Lamb, gardener to R. Smith, Esq., Dilworth House, Longridge, with 44 entries, got first for Cyclamens, Cinerarias, double Hyacinths, and some of the other smaller classes of bulbs. He had 7 first, 12 second, and 20 third prizes. Mr. P. Rigby, gardener to J. Smith, Esq., Whittingham House, had 20 entries, and received 9 first, 6 second, and 4 third prizes, being first for Dielytras, Musk, a collection of vegetables and culinary Apples. Mr. W. Gillet, gardener to M. B. Copland, Esq., Farington Lodge, Leyland, entered in 15 classes, and was awarded first for two bouquets, and Mignonette. Mr. Parkinson, gardener to J. Whitaker, Wellington House, Leyland, with 7 entries, was awarded six prizes, one a first for dessert Apples. Other exhibitors were Messrs. J. Butter, Blackburn; E. Estham, Whittingham; J. F. Williamson, Fleetwood; W. Morris, Preston (amateurs); and Mr. J. Newsham, gardener to C. M. Brown, Esq., Ribbleton.

The trade was represented by Mrs. Payne, Fulwood; Mr. Troughton, Walton-le-Dale; Messrs. Morley & Co., Preston; Mr. C. Walker, Leyland, and the Cowan Company, Liverpool, the latter exhibiting a select collection of about 200 plants of Orchids, the largest plant being Dendrobium fimbriatum oculatum, with thirty racemes, one growth having six. Other conspicuous plants were Coelogyne cristata alba, Odontoglossum andersonianum, Cypripedium Le Druixæ (a cross between between C. calossum, and C. harrisianum). This collection with C. Dauthieri (yellow), Cattleyas Laelias and Oncidiums was awarded a special prize. The quality of all the exhibits was considered above the average and the competition keen in some of the classes.

AIGBURTH HORTICULTURAL.

The seventh spring show of this society was held on Saturday, 20th inst., in the parish room, and must be accounted the best yet held under the auspices of the society. Not only were the entries increased, but the individual exhibits showed a decided improvement.

For twelve distinct Hyacinths, W. J. Davey, Esq. (gardener, Mr. G. Leadbeater) was first. For six distinct varieties W. B. Bowring, Esq. (gardener, Mr. T. Ankers) led the way. The prizes in these two classes were given by Messrs. Ant. Roozen & Son. For six pots of Hyacinths, three bulbs in a pot, W. J. Davey, Esq., took the lead with fine spikes and bells. The prizes were given by Mr. G. Rose, Liverpool.

For six pots of Narcissus in eight-inch pots, Mrs. Duncan (gardener, Mr. F. Keightley) took the premier reward. For six pots of single Tulips, W. J. Davey, Esq., won the first prize, offered by Messrs. Dickson & Robinson, Manchester. W. B. Bowring, Esq., took the lead for six pots of double Tulips. For three pots of Amaryllis, G. W. Moss, Esq. (gardener, Mr. T. Johnson) secured the first prize offered by Messrs. R. P. Ker & Sons.

For one stove plant in bloom, W. H. Houston Esq., M.P. (gardener, Mr. Heaton) took the lead with Dendrobium nobile. For one greenhouse plant in bloom, C. Langton, Esq. (gardener, Mr. R. Fawkes) was first with Rhododendron Gibsonii. For two Orchids, E. Pryor, Esq. (gardener, Mr. E. Taylor) led the way with Coelogyne cristata and Dendrobium wardianum. For one Orchid the same exhibitor had Cymbidium lowianum with twelve spikes. For one Fern, C. Langton, Esq., took the lead with a good plant of Goniophlebium subauriculatum. The same exhibitor had the best Azalea in a heavily flowered Duc de Nassau. E. Pryor, Esq., had the best three Azaleas in eight inch pots. He also showed the best hardy Rhododendron. C. Langton, Esq. had the best greenhouse Rhododendron in a grand plant of Smithii aureum. For three forced hardy plants, A. L. Jones, Esq. (gardener, Mr. A. Randall) was first with fine plants. Mr. Duncan had the best two Palms; and J. Davey, Esq., had the best single specimen in a fine plant of Kentia forsteriana. W. B. Bowring, Esq., was first for Cyclamen and a hardy Azalea. For four pots of Lily of the Valley, W. C. Atkinson, Esq. (gardener, Mr. J. Madeley) was first. J. Davey, Esq., had the best Spiraeas. For six tree Carnations, A. L. Jones, Esq., took the first prize given by Mr. C. Young, West Derby.

The judges were Messrs. B. Cromwell and J. J. Craven. The arrangements were ably carried out by the committee and Mr. R. Fawkes, the secretary.

ROYAL HORTICULTURAL.

The Drill Hall was again well-filled with a very varied description of flowers, on the 23rd inst. Orchids, Hyacinths, Daffodils, Tulips, Cyclamen, Hippeastrum, Roses, and various hardy spring flowers.

Messrs. J. Veitch & Sons, Ltd., Chelsea, put up a large and showy group of Orchids, characterised by a profuse display of bloom. Hybrid Dendrobiums were very conspicuous, and amongst the new sorts included D. Wiganiae splendidissimum and D. Euryclea, Cattleyas, Epidendrums, Oncidiums, Angraecums, Brassias, Phalaenopsis, Odontoglossums, Cymbidiums, Cypripediums, Trichopilia, and many others went to make up a showy as well as interesting display. (Silver Flora Medal),

A group of Orchids was exhibited by J. Bradshaw, Esq. (gardener, Mr. H. Whiffen), The Grange, Southgate. Odontoglossums were very prominent here, including well-flowered specimens of O. ruckerianum, O. triumphans, O. crispum, O. luteo-purpureum, and others. Dendrobiums, Cattleyas, and Lycastes were also well grown, the flowers in some cases being of great size. (Silver Banksian Medal.)

Thos. Gabriel, Esq. (gardener, Mr. H. Gurgett), Streatham, staged a group of splendidly flowered Dendrobium wardianum and D. devonianum, which were much admired. (Silver Banksian Medal.)

Welhore Ellis, Esq. (gardener, Mr. W. S. Barrell), Hazelbourne, Dorking, also exhibited a group of Orchids, including fine pieces of Dendrobium Hildebrandtii, Odontoglossum Coradinei, O. crispum, guttatum, &c. (Silver Banksian Medal).

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, was accorded a cultural commendation for Laelia rubescens, bearing six spikes of bloom. He also had fine pieces of Miltonia bleuana, Angraecum Ellisii, Dendrobium Morganiae, and the singular Catasetum barbatum spinosum.

A small group of well-grown, well-flowered, and fine varieties of Odontoglossums, was exhibited by De Barri Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks. O. ruckerianum Juno, O. Coradinei Rosefield var., O. andersonianum, and O. crispum were really very handsome and valuable. (Silver Banksian Medal.)

A very showy group of Orchids was exhibited by Messrs. F. Sander & Co, St. Albans. Cattleyas, Odontoglossums and Cattleyas were very noticeable, particularly Odontoglossum crispum Cooksonii Sander's var., and a spike of Cypripedium rothschildianum bearing four large flowers (Silver Banksian Medal).

Messrs. Linden, L'Horticulture Internationale, Brussels set up a group of varieties of Odontoglossum crispum and its allies in many fine varieties, including O. Wilckeanum sarcodes, O. crispum Luciani, and many others (Silver Banksian Medal).

A Silver-Gilt Flora Medal was awarded to Norman C. Cookson, Esq. (gardener, Mr. W. Murray), Oakwood, Wylam-on-Tyne, for a magnificent piece of Phaius Cooksonii bearing thirteen grand racemes of bloom.

A Silver Flora Medal was accorded to Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, for some magnificent varieties of Odontoglossum, including O. leeanum, O. luteo-purpureum vuylstekeanum, O. Coradinei, etc. The Odontoglossum ruckerianum exhibited by W. Thompson, Esq. (gardener, Mr. W. Stevens), Walton Grange, Stone, Staffs., was one of the best of its kind.

Purnell Purnell, Esq., Woodlands, Streatham Hill, received a Bronze Banksian Medal for a small but comprehensive group of Alpines, Primulas chiefly.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., received a Silver Banksian Medal for a very showy and well arranged group of miscellaneous flowering and foliage plants. A finely flowered specimen of Dendrobium nobile was a great attraction here; also a glass case containing some very fine specimens of Bertolonia marmorata.

Hardy flowers in great quantity were contributed by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. The salient feature of the group was a collection of Narcissi in pots which contained most of the leading varieties suitable for this culture. Adonis vernalis, Anemones, Primulas, and Saxifragas in variety were all in excellent form (Silver Banksian Medal). Near the door Messrs. Wm. Paul & Son, Waltham Cross, had a number of pot Camellias and Roses in full bloom. Of the former, such varieties as Beauty of Waltham and The Duchess were exceedingly well shown (Silver Banksian Medal).

On the opposite side of the entrance to Messrs. Paul & Son's exhibit appeared pot plants of Rose Crimson Rambler and Clematis contributed by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton (Silver Flora Medal).

Messrs. Barr & Son, King Street, Covent Garden, came out strongly with a grand collection of cut blooms of Narcissi that furnished a fine glow of colour. Anemone Pulsatilla and a few bunches of Muscaris were also included (Silver Banksian Medal).

An extensive exhibit of forced material was made by Mr. Kelf, gardener to Mrs. Abbott, South Villa, Regent's Park, N.W. It consisted of a mixed collection of Tulips, a few trumpet Narcissi, an excellent lot of Polyanthus Narcissi, some good Hyacinths, and Lily of the Valley. The Tulips, too, were in excellent order. (Silver Flora Medal.)

Messrs. John Laing & Sons, Forest Hill, S.E., were responsible for a very showy group of miscellaneous flowering and foliage plants set up with their usual taste. Some grand trusses of Clivias were very conspicuous here, and the foliage plants including Crotons, and Dracaenas in variety, were all clean and well-grown. The graceful Acacia riceana is also well deserving of mention. (Silver Flora Medal).

Forced flowers, comprising Tulips, trumpet and Polyanthus Narcissi, were well-shown by Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham Common. Various foliage plants were employed to lighten the somewhat heavy appearance of the bank of flowers. (Silver Banksian Medal.)

Messrs. W. Cutbush & Son, Highgate, N., had an extensive and varied display of Tulips and Hyacinths, a high order of merit being sustained throughout. Of Tulips such varietes as Joost Van Vondel, and its white form, yellow Prince, Rose Gris de Lin, Keizer's Kroon, Pottebakker White, and Ophir d'Or, were splendidly represented. The Hyacinths were a noble lot, and for size of spike, vividness of colouring, and freshness, would take a lot of beating. Upwards of 50 varieties were on view, and all of them in fine condition. From the same firm came an exhibit of forced flowering trees, including Cerasus Avium fl. pl., Wistaria sinensis, Cytisus Laburnum, and Magnolia Alexandrina. A Silver-gilt Flora Medal was deservedly awarded for this great effort.

Tulips were also shown by Messrs. R. and G. Guilbert, Southgate. Messrs. Paul & Son, the Old Nurseries, Cheshunt, exhibited well grown specimens of a number of the showiest early spring flowers, Primulas, Anemones, and Saxifragas being in strong force (Silver Banksian Medal). A basket of spring flowers was also contributed by Messrs. W. Gordon & Sons, Murrayfield, Edinburgh.

Winter flowering Begonias were splendidly shown by Messrs. H. Canneil & Sons, Swanley, Kent, and this exhibit was certainly one of the most noteworthy in the whole of the hall. B. nitida alba, B. Verschaffelti, B. ordoratissima, B. Paul Bruant, B. Saturna, and B. hybrida floribunda were some of the best forms, but the whole of the plants were splendidly grown and attractively staged (Silver Banksian Medal).

Aigburth Amaryllis grown by Messrs. Robert P. Ker & Sons, Aigburth Nursery, Liverpool, made a superb display. The plants were dwarf and the flower scapes in proportion, but the size of the flowers was immense, and well upheld the credit of the northern growers (Silver Gilt Flora Medal).

The Church Road Nursery Co., Hanwell, were again to the fore with a display of Cyclamen, a space measuring about 30 ft. by 4 ft. being filled with them. A Silver Flora Medal was awarded.

Cut Roses in magnificent form were forthcoming from Mr. George Mount, Canterbury. Catherine Mermet, Ethel Brownlow, Fisher Holmes, Cleopatra, The Bride, and Marechal Niel were some of the best varieties on view.

A large stand of cut blooms and sprays of Rose Fortunes Yellow, an Apricot-hued semi-double variety; also cut blooms of Camellia reticulata were sent by Mr. Fyfe, Lockinge Gardens, Wantage. A Bronze Banksian Medal was voted. (Silver Flora Medal).

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, sent some well-flowered blue Primroses; also a few plants of Richardia elliottiana. Messrs. R. Wallace & Co.,

Kilnfield Gardens, Colchester, had a few Erythroniums and Tulipa kaufmanniana.

A Silver Banksian Medal was awarded to the Rev. G. H. Engleheart, Appleshaw, Andover, for a collection of cut blooms of hybrid and seedling Narcissi, which contained many fine forms.

The competition for the Veitch prizes for the best flavoured Apple and Pear showed a great falling off as may well be expected from the advanced state of the season. Fifteen dishes of Apples were submitted, the first prize going to Mr. Powell, gardener to Col. Bryner, M.P., Islington House, Dorchester, with Allen's Everlasting. Mr. J. Day, gardener to C. J. Massly, Esq., Galloway House, Garlieston, took second place with Adam's Pearmain. Pears were only represented by two dishes, and were poor and lacking in flavour. Mr. W. H. Divers, Grantham, was awarded the second prize with Marie Louise.

QUESTIONS AND ANSWERS

**** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Smell of Hyacinths injurious.—*Enquirer*: There may be, and doubtless are, some people to whom the odour of Hyacinths may be disagreeable if not injurious. Instances have been recorded from time to time of some one being injured by the powerful odour of some flower or other if present in too great numbers. There are, of course, people of weak constitution, who are greatly inconvenienced by the odour of one kind of flower, but not troubled at all by the scent of something else. It is similar in this respect to poisoning by Primula obconica. There can be little real danger to health in the case of Hyacinths. It is often a case of mere imagination and recalls the lady who fainted at the visit of a friend carrying a Rose, the smell of which she imagined was injurious to her. It turned out that the Rose was merely an artificial one.

Propagation of Forsythia suspensa.—*W. G.*: There are several ways of effecting this, amongst which that of taking cuttings in the autumn and dibbling them firmly and thickly into pots of light, sandy soil and placing them in a cool house or pit from which the frost is excluded. The rooting process could be hastened in spring by putting the cuttings into heat. They strike almost as freely, however, as Willows, and after this has taken place you should give them plenty of ventilation. The shrub may also be propagated by layers and by taking off rooted suckers. The tips of drooping shoots often come in contact with the soil, and root into it of their own accord. All these may be removed from the parent plant in spring and planted in lines to grow to a useful size for forcing.

Tomato all the Year Round.—*T. Ward*: By careful management you might secure a supply of fruit all the year round by means of this variety; but that would also apply to several other free-setting sorts. You would have to sow late in order to keep the plants growing and fruiting as far into the winter as possible. The fruits, if removed from the plants before they are dead ripe, and placed in a moderately high, or even a cool temperature, but with a perfectly dry atmosphere, they would keep in a usable condition for many weeks. An endeavour should also be made to get a batch of plants into a fruiting condition as early in the year as possible, with the view of making the seasons join.

Names of Plants.—*J. M.*: 1, Tetratheca ericoides; 2, Eriostemon scaber; 3, Eupatorium weinmannianum; 4, Azalea mollis var.; 5, Acacia platyptera. —*A. H.*: 1, Pelargonium tomentosum; 2, Sempervivum tortuosum variegatum; 3, Lonicera Cavendishii; 4, Selaginella apus; 5, Senecio Kaempferi aureo-maculata, often termed Farfugium grande.—*J. C. S.*: 1, Corydalis solida; 2, Sisymbrium Sophia. —*H. J.*: 1, Odontoglossum nebulosum; 2, Dendrobium findlayanum; 3, Dendrobium crassinode; 4, Oncidium maculatum; 5, Odontoglossum odoratum. —*T. Norrie*: 1, Scilla sibirica; 2, Puschkinia scilloides; 3, Draba aizoides; 4, Primula rosea; 5, Forsythia viridissima; 9, Pulmonaria augustifolia.

Communications Received. — 'Mum.—A. P.—Visitor.—Toogood & Sons.—David Stuart.—J. C. Chard.—T. H.—A. Herd.—W. M.—L. D.—Fob.—T. Machin.—A. L W. Rushton.—Tenterden.—Tenderfoot.—Subscriber.—C. B.

TRADE CATALOGUES RECEIVED.

VILMORIN-ANDRIEUX ET CIE, 4, Quai de la Mégisserie, Paris.—Catalogue of Seeds of Hardy Trees and Shrubs, and Seeds of Plants for the Orangery and Greenhouse.

Montbretia, Schizostylis, 2/- 100; Auriculas, double Primroses, Hepaticas, 1/3; Polyantbuses Aquilegias (various), 9d. doz. Enniston, Kilnessan, Neath.

Carnations, finest named varieties, for border or exhibition, similar sorts to those I successfully exhibited at the National Carnation Shows last season, good rooted layers, 4/- doz. Germania (the best yellow), Mr. Muir (the best white), 6 of each 4/-, 3 of each 2/3. Wm. Kenyon, Shipperbottom, Walmersley, Bury, Lancashire.

Potatos grown purposely for seed; lists of fourteen early and late varieties free, also hand-picked eating Potatos or Carrots 2/- cwt. Lill, Martindales, Lincoln.

Good hardy Perennials, 25 roots in 12 sorts, Yellow Day Lily, Scarlet Lychnis, Yellow Anemone, Yellow Doronicum, Red Centaurea, Iceland Poppy, Welsh Yellow Poppy, West Larkspur, White Campanula, Aster, Rudbeckia, Crucianella; the lot, 1/6 free. Rector, Hardingham, Attleboro'.

Golden Trumpet climbing Honeysuckle, bears most delicious flowers all the summer, red berries all the winter. Six large flowering plants 1/- free. Yellow Broom, strong-rooted trees, 1/- doz. free. A. Symonds, 65, East Street, Horncastle.

HERBACEOUS & ALPINE PLANTS, &c., for the best collections of these extant. all hardy grown and grand, see FORBES' New Catalogue, 1897, over 140 pages, giving colour, height, time of flowering, and a mass of other useful information. Free on application.—JOHN FORBES, Nurseryman, Hawick, Scotland.

NEW TOMATO — YOUNG'S ECLIPSE. Award of Merit at R.H.S. Tomato trials at Chiswick, very highly commended at Willesden Great Show also Crystal Palace Fruit Show,—96. Seed, ½-packet, 9d.: per packet 1/6 and 2/6.
A. W. YOUNG & Co., The Nurseries, Stevenage, Herts.

BEGONIAS, YOUNG'S PRIZE STRAIN SEEDS, 6d. and 1s. per packet to colour or mixed. Double Mixed 1s. and 1s. 6d. packet. Bulbs Mixed, grand strains, 25 for 3s. 6d. free. A. W. YOUNG & Co., The Nurseries, Stevenage.

GARDEN NETTING.—Tanned, Rotless, and Waterproof, for protecting buds and bloom from frost and birds, and seed in the ground. No gardener should be without it. 100 by 1 yd. wide, 3/-; 100 by 2 yds. wide, 6/-; 300 by 1 yd., 9/-. Any widths and lengths made. Carriage paid on orders over 5/- value. Lists free.—A. POTTER, Net Works, Wolverhampton.

SLY'S IMPROVED PATENT TRUSS
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Recommended by Sir Benjamin Ward Richardson.
Forty-four Prize Medals, Diplomas, and Royal Appointments awarded.
Write for particulars and Prices.
SLY BROS., OXFORD.

FERNS AND FERN CULTURE. By J. Birkenhead, F.R.H.S.—How to grow Ferns, with selections for stove, warm, cool, and cold greenhouses; for baskets, walls, wardian cases, dwelling-houses, &c. Price, 1s., by post, 1s. 3d.—PUBLISHER, 1, Clement's Inn, Strand London, W.C.

SHEPPERSON'S NOVELTIES & SPECIALITIES.
THIRTY-EIGHTH YEAR OF ADVERTISING.
The following Novelties and Specialties having all been grown in a very exposed situation high up on the Derbyshire hills, are very hardy, stocky, and healthy, very different to weak seedlings grown in warm favoured situations, which look nice, but very rarely succeed well. All Carriage Free for Cash with Order. Descriptive List free.

CHRYSANTHEMUMS (Special Culture), not a collection of old-fashioned sorts, but the cream only of the best English, French, American, and Japanese raisers. Good, well-rooted plants, 12 for 2/-, 25 for 3/6; true to name.

CARNATIONS, PICOTEES, and CLOVES of the finest—named hardy border varieties, many grand new sorts, strong layers wintered outside, 6 for 2/6, 12 for 4/-, 25 (in 12 varieties) for 7/6, unnamed varieties, 3/- per doz.

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FIXTURES FOR 1897.

March.

27.—R.B.S. Meeting.
31.—R.B.S. Spring Show.

April.

1.—Linnean Society.
1.—R.H.S. of Ireland Spring Show.
6, 7.—Brighton and Sussex Show.
7.—Shropshire Horticultural Society's Show.
7, 8.—Royal Caledonian Society's Show.
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
15.—Linnean Society.
24.—R.B.S. Meeting,
27.—R.H.S. Committees and Lectnre.

May.

6.—Linnean Society.
7.—R.B.S. Lecture.
8.—R.B.S. Meeting.
12.—R.H.S. Committees and Lecture.
14.—R.B.S. Lecture.
19.—R.B.S. Summer Show.
21.—R.B.S. Lecture.
22.—R.B.S. Meeting.
24.—Linnean Society's Anniversary.
24 to 28.—Bath and West and Southern Counties Show at Southampton.
26.—Gardener's Royal Benevolent Institution, Annual Dinner.
26, 27, 28.—R.H.S. Temple Show.
28.—R.B.S. Lecture.

June.

3.—Linnean Society.
4.—R.B.S. Lecture.
11.—R B.S. Lecture.
12.—R.B.S. Meetiog.
15.—R.H.S. Committees and Lecture.
16, 17, 18.—York Floral Fête.
17.—Linnean Society.
18.—R.B.S. Lecture.
23.—National Rose Society's Show at Portsmouth.
23 to 28.—R.A.S. Show at Manchester.
25.—R.B.S. Lecture.
26.—R.B.S. Meeting.
29.—R.H S. Committees and Lecture.
29.—Royal Oxfordshire Horticultural Society's Commemoration Show.

July.

1.—R H.S. of Ireland Summer Show.
2.—N. Rose Society Show at Crystal Palace.
7, 8.—County Boro. of Hanley Fête.
8, 9, 10—Newcastle Show
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
13, 14, 15—Wolverhampton Floral Fête.
15.—N. Rose Society's Show at Norwich.
24.—R.B.S. Meeting.
27.—R.H.S. Committees and Lecture.
28—Beckenham Show.
28, 29.—Chester Fête.
28, 29.—Carnation and Picotee Society's Show at Birmingham.
31 and Aug. 2.—R.H.S. of Southampton Society's Show.

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March 24th, 1897.

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	s. d.	s. d.
Apples..... per bnshel	2 6	4 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100lbs.		
Grapes, per lb	2 6	3 6
Pine-apples.—St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	6 0	12 0
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	3 0	6 0
Beans, French, per pound	1 0	1 3
Beet..... per dozen	1 0	2 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	3 0	6 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips .....per bun.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 6	0 9
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 6	3 0
Eucharis ...per doz	3 0	4 0
Freezia per doz. bunches	2 0	3 0
Gardenias ...per doz.	3 0	4 0
Geranium, scarlet, doz. bunches	4 0	6 0
Hyacinths (Roman) doz. sprays	0 6	1 0
Lilac, White (French) per bnch.	3 0	4 0
Lilium longiflorum per doz.	2 0	4 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Mimosa, per bnch. ...	1 0	1 6
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 9
Roses (Indoor), doz.	1 0	1 6
" Tea, white, doz.	1 0	2 0
" Niels	2 0	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	4 0	6 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	3 6	6 0
Tuberoses, doz. blooms ...	1 0	1 6
Primula, double, doz sprays	0 6	0 9
Violets (French) per doz. bnches.	1 0	1 6
Violets (English) per doz. bnches.	0 9	1 0
Violets (Parma) per bnch.	2 0	3 6
Violets Czar, large, per bnch.	2 0	2 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Azaleas, each	2 0	3 6
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Cineraria, per doz....	8 0	10 0
Cyclamen, per doz....	9 0	15 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica Hyemalis, per doz.	9 0	15 0
Erica, per doz.	9 0	12 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	10 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums. doz.	3 0	4 0
Marguerite Daisy doz.	9 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Solanums, per doz.	9 0	12 0
Spirea.....per doz. ...	8 0	10 0
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"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 3rd, 1897.

POTATO CULTURE AND DISEASE PREVENTION*.—The Wilts County Council have been carrying on original researches in the cultivation of Potatos and other crops, both in field and garden since 1892. Hand cultivation of Potatos, demonstrations in manuring, close and wide planting, varying weights of seed used, deep cultivation by hand labour, change of seed, and effects of sulphate of copper on soil and produce, are some of the phases of the subject, and will serve to give an idea of the nature and scope of the work that is annually being conducted at Warminster, Wilts. Since 1893, the demonstrations have been superintended by Mr. E. H. Smith, the science master of the district. The demonstrations in manuring seem to have been carried on in imitation of the experiments conducted at Rothamsted by Sir John Lawes and Sir Henry Guilbert. Thirty perches of land have been continuously cropped with Potatos for the last five years, and the wonder is that such enormous crops continue to be produced. The fact remains, however, that good cultivation is given, and the ground heavily manured.

Very interesting are the details concerning a set of trials with farmyard manure, complete chemical manure, and no manure respectively. Seventeen perches of land were treated with farmyard manure at the rate of 4 cwt. per perch, annually for five years, and the fertility of the land has apparently been maintained, we say apparently, because the comparisons are extremely odd, not to say unfair. A different variety of Potato was used each year—namely, Beauty of Hebron, Reading Giant,

* Potato Culture and Disease Prevention. Report on Demonstrations in Warminster, 1892-96. Also Report on the Calne Horticultural Demonstrations. Eyre & Spottiswoode Her Majesty's Printers), Government and General Publishers, London—East Harding Street, Fetter Lane, E.C., 1897.

Blue Giant, Sirius and Imperator. Now these are all large Potatos, but of unequal cropping qualities, and therefore incompatible as a fair comparison by which the relative fertility of the land can be tested. It would surely be germane to the subject to grow the same variety on the same land for a succession of years, so that the rise or decline of fertility could be seen by a glance at the table. We make no pretensions at knowing the whole aim and object of these experiments carried on by the Wilts County Council; but we do think that one variety of Potato planted on the same piece of ground and fertilised by the same kind of manure for five or more years would afford several useful hints. It would show the state of fertility of the soil from year to year. Fluctuations would almost certainly occur, but might be traced to their cause. For instance, wet and dry seasons must have a different effect on the crop. Strangely enough the two heaviest crops recorded in this set of trials occurred in droughty seasons. Reading Giant in 1893 yielded at the rate of 20 tons 16 cwt. per acre, and Imperator in 1896 gave exactly the same return. In 1892, the first year of the trials, Beauty of Hebron yielded at the rate of 13 tons 13 cwt. per acre. This might mean that the ground was but moderately fertile at that time; but we note that the smallest return was given by Sirius in 1895—namely, 13 tons 1¼ cwt. per acre. We have no hesitation in putting the difference down in the first place to the cropping powers of the respective varieties. The average of the whole seventeen perches for five years was at the rate of 17 tons 10 cwt. per acre. The trials with complete chemical manure during the same years gave equally varying results; but Reading Giant in 1893 yielded at the rate of 21 tons 16 cwt. per acre. The average for the five years of the seventeen perches was at the rate of 16 tons 17¾ cwt. Where no manure at all was used the yield of each variety except Sirius, was distinctly less. Curiously enough the land produced as heavy a crop of the latter variety without manure as it did with farmyard manure; with complete chemical manure it produced a heavier crop by 1 ton 13¾ cwt. Clearly we have much to learn concerning the capabilities and behaviour of Potatos under different conditions.

In another series of trials we note that the yield of nine perches fertilised with complete chemical manure at the rate of 8 cwt. per acre gave an average return on five years of 14 tons 4¾ cwt. Twelve cwt. of the manure only raised the crop to 14 tons 9 cwt.; and 16 cwt. under the same conditions only gave 15 tons 1¾ cwt. of Potatos. The unmanured plots at the same time gave an average of 10 tons 17 cwt., thus clearly proving the value of the manure. As to whether heavy manuring as opposed to a moderate amount is deserving of extended use, will have to be determined by placing the extra cost in the balance against it. It may be interesting to observe that there is little difference between the weight of crops produced from whole and cut tubers, provided the sets used are of equal size or weight. Four ounce sets produce much stronger growth than two or one-ounce sets. Three perches of land merely dug and otherwise accorded ordinary treatment, yielded at the rate of 18 tons 17 cwt. per acre, and when trenched by hand labour, the return was 20 tons 14 cwt. All these facts are useful if they be acted upon by the mass of cultivators; and surely they will not be allowed to pass into oblivion. Interesting also are the trials to test the specific gravity of the tubers of different varieties. This depends upon the amount of starch they contain, and would indicate their relative nutritive values. The report runs to forty-three pages, measuring 11 in. by 8½ in., and is replete with facts from beginning to end, and given in succinct form. Printing and paper leave nothing to be desired.

Mr. T. F. Conway, hitherto foreman to Earl Dysart at Ham House, Richmond, Surrey, has been appointed head gardener there in succession to Mr. G. H. Sage.

A Fearless Blackbird.—Within two arms' length of the pathway in the greenhouse, No. 4, at Kew, a blackbird has built her nest in a bush; and is now sitting upon her eggs apparently unconcerned at the hundreds of people passing through the house.

The Electric Plant is equally happy in the stove, greenhouse or open air. Not everyone can grow it all the same—indeed, very few can, I should say, unless his employer has a long stocking, and is willing to shell out.—*Snaggs.*

Goblins again.—Amongst the goblins to be dreaded and avoided at the present day are green fly, mealy bug, scale, thrips, and red spider. Some might assert that these are only "sucklins"; but on the same principle the Vine Weevil, Pea Weevil, Bean Weevil, and all other weevils might be termed "gobble-uns."

Devon and Exeter Gardeners have cause to regret the death of Mr. J. B. Lansdale, a vice-president and prominent supporter of the Devon and Exeter Gardeners' Mutual Improvement Society. The particular hobby of this gentleman was Pansies and Chrysanthemums of which he was a successful exhibitor at more than one local show.

The Cardiff Horticultural Society would seem to have taken a new lease of life by considerably increasing the number of prizes offered at their annual show on the 11th and 12th August next. It has added a new feature by the creation of an industrial department as a test of technical education in Glamorganshire, and open to all in the county not exceeding eighteen years of age.

Carnations in America.—A great show was held by the American Carnation Society at Cincinnati on February 18th and 19th. The flowers are cut with long stems and exhibited in bunches in long cylindrical vases or jars, much in the same way as they do over there with Chrysanthemums. Colour, size, stem and calyx have precedence in value to substance form, fragrance, and colour, as fifteen to ten.

Highgate Wood.—The committee appointed to secure the Churchyard Bottom Wood at Highgate for the use of the public, has been taking active measures for that purpose. About £15,000 remains to be raised to cover the purchase of the ground, and circulars have been issued to the public giving particulars of the project and appealing for aid. Highgate Wood in the opinion of the chairman of the committee is "one of the choicest and most sylvan pieces of woodland which is to be found anywhere within the five-mile radius of Charing Cross." Mr. Lionel Curtis, 1, Great College Street, Westminster, is the secretary of the fund.

M. Georges Ville, the eminent authority on chemical manures, died on the 22nd of February, in his 74th year. He carried out a series of agricultural experiments in the trial grounds of Vincennes, Paris, as long ago as 1867, and published a book entitled *Les Engrais Chimiques* in 1868. It has passed through seven editions at least, the seventh appearing in 1890, and has been translated into Italian, German, Polish, Russian, Spanish, Portugese, and English, a translation being also made in the United States of America. The principles he taught or the views which he expounded have been generally accepted, and are advocated at the present day, including those relating to the fixation of the free nitrogen of the atmosphere by the bacteria in the nodules of the roots of leguminous plants. He was attached to the *Museum d'Histoire Naturelle*, Paris.

In Germany capture plants are often cultivated in gardens infested with eelworms, and the ground is thus in time more or less cleared of these destructive pests.

The National Amateur Gardeners' Association will visit Messrs. Barr and Sons, Daffodil Nursery, Surbiton, on Saturday, 10th April, leaving Waterloo (South Station) at 2.33 p.m. Return fare to members, 1s. 3d., on application to the hon. secretary, Leonard Brown, The Cottage, Seven Arches, Brentwood.

Entomologists will have work for many years to come in naming and describing all the insects in the world, if Professor Riley is correct in computing the number of species at 10,000,000. Other authorities consider that the number is even larger than this.

Fruit Prospects at Merrion.—The season of 1897 promises well for fruit in Ireland. Fruit trees are well cared for at Wilton House, Merrion, which is under the care of Mr. R. Russell. His trees are dwarf, symmetrical, and literally laden with flower buds. Mr. Russell uses the knife very sparingly upon the branches, but resorts to root pruning, thereby checking superfluous energy in the production of wood. Peaches and Nectarines on walls are also well managed.

Hamburg Horticultural Exhibition.—Baron J. Henry Schroder has announced that he intends exhibiting at the spring show of the great Hamburg International Exhibition, a large portion of his famous collection of Orchids at The Dell, Egham. They are to occupy a superficial area of sixty-four square yards of space and must present an imposing spectacle. Baron Schroder has an old fondness for Hamburg, hence his intention of sending such a large portion of his valuable and renowned Orchids.

Spring flowers in Scotland.—Ten years ago, or thereby, the bulk of the spring flowers sold in the principal Scotch markets, was drawn from the Scilly Isles and the south of England. The supply from these sources is yearly becoming smaller, and is accounted for by the fact that the growers in the counties of Lanark, Stirling, Renfrew, and Perth, have been stealing a march upon their more southern neighbours by quietly extending and perfecting their own establishments, so as to be able to meet the home demand. The quality of their flowers will bear comparison with any. A grower of Helensburgh has already disposed of 1,000,000 Tulips this season. Evidently the Scotch growers mean work first and talk afterwards.

Irish gardening industry.—Mr. William B. Hartland, of Cork, is a great enthusiast in his desire to benefit his fellow-men, or in urging them on to benefit themselves by pushing their various industries. Recently he wrote a practical letter urging his countrymen to take advantage of the assembling of the soldiers at the camp in the Kilworth Mountains during the season from April to October, by growing Potatos and other vegetables, as well as fruits and flowers, in order to supply the wants of the camp. He would like to see a school of horticulture established in Munster, with 1,000 acres attached to it for the purpose of training boys in the art of horticulture and agriculture.

Arbor Day in Kent.—The interesting procession, ceremony, and the planting of trees at Eynsford some weeks ago have caused a considerable amount of interest. Sir George Birdwood has recently been urging the Kentish people at Maidstone as the centre, not to rest satisfied with Arbor Day at Eynsford only, but to establish it throughout the county. He thinks that the County Council and the clergymen should work hand in hand as pioneers in this interesting and useful work. Arbor Day in Canada, he had been informed, was a Government institution. The first Friday in May is set apart by the school authorities throughout Canada for the purpose of planting trees within the village bounds, and in planting fruit and flowering trees in the school grounds. The climate of the United States is so varied over that vast expanse of country that different days are appointed for the holding of Arbor Day in the various states, in order to make the time fit each respective latitude in the matter of climate. Millions of trees are thus planted annually in the United States. The example might well be copied in this country.

An English raised Violet, named Mrs. Rawson, is said to be the finest white variety in cultivation. Swanley White and Belle de Chatenay are also pure white Violets.

In Coventry and the vicinity there are over 2,000 gardens, and many of the occupants think it very hard to be obliged to give them up owing to the needs of the rapid development of the city.

Highgate Horticultural Society.—At the thirty-seventh annual meeting of this society, Mr. E. Chitty was able to show that the debt of £20 with which they had commenced the year had been wiped off. The committee thought it highly satisfactory that they should be able to start the year with a clean sheet. The income for the year had been £218 18s. 9d., and the expenditure left a balance of 19s. 10d. due to the treasurer.

Cyphomandra betacea, the Tree Tomato, is called the poor man's fruit in Ceylon, where it is eaten both when cooked and uncooked in a variety of ways. It is coming into favour in the United States. When the outer rind of the fruit is taken off it can be sliced and served as a salad with dressing. It may also be eaten with sugar and cream. A fine jam may be made from it, having a flavour similar to Apricots. The ripe fruit stands transport very well as it does not bruise readily, the protecting rind being thick and tough.

Japanese Gardens.—In speaking of these Mr. Alfred Parsons in "Notes on Japan" says, "the gardens of the temples were gay with Azaleas, Camellias, Magnolias and Cherry blossoms, and, with the young leaves of Maples and Andromedas, as bright as any flower. The Cherry trees and Magnolias are let grow as they please, but the others are trimmed into more or less formal shapes suitable to the species, or helping the carefully studied arrangement of forms, which is the ideal of the Japanese gardener.

Bute Botanical Society.—At the recent fortnightly meeting of this society, in the rooms at Victoria Street, Rothesay, it was decided that the members should meet every Saturday at 3 p.m. during April for an excursion to some interesting locality for the collection and examination of specimens. The specimens collected on the previous Saturday formed interesting work in dissecting them for the purpose of determining the order, genus and species to which they belonged. The members exhibited great enthusiasm in this instructive work.

A Naturalist.—A hawker of Lea-bridge Road was charged at Stratford with having a quantity of shrubs in his possession, to which he had no legal right. He was seen leaving the premises of Shernhall House, Walthamstow, with a basketful of Roses, Lilacs and other shrubs. The old mansion was in the course of demolition, and the prisoner pleaded that the place was all open and he merely went in to pick up the "old things." The judge said: "You mean to say you were prowling about, and anything you could steal you would." He was fined 5s.

Candid Replies.—We learn that the editor of the *Ceylon Observer*, ever eager to extract information—sent out one of his circulars with sundry queries, one of which was—"What are the the most urgent wants of your district?"—to this a facetious planter replied, "*Good soil and a drier climate;* whilst another wag opposite the same query wrote "*wives.*" It is to be hoped that all these wants are now in course of being remedied or supplied and that *Yakdessi* like *Ambegamuwa* is coming to the front as a first rate Tea District.

The Monmouth Tree.—In August, 1681, the Duke of Monmouth in a tour through the western counties visited Whitelackington House, near Ilminster, the seat of Mr. George Speke. A retinue of 2,000 horsemen accompanied the noble visitor. At the fete which followed it is computed that upwards of 20,000 people attended. The Duke, with his immediate friends and attendants, dined beneath the spreading shade of the Chestnut tree which has ever since borne his name. This tree of many memories "that stood a thousand years, and shaded once the crownless head of Monmouth" was blown down by the gale in the first week of March. It was a giant in size, and measured upwards of 26 ft. in circumference at a height of 3 ft. from the ground.

Scarlet Poppies, and blue or purple Pansies, in the brightest shades, are the most popular flowers for millinery.

Erratum.—In the forty-second line from the bottom of the middle column, on p. 458, for leaves read "lianes." This occurs in the article on "Climbing stems in tropical forests."

Hailstorm Insurance Corporation, Ltd. — The second ordinary annual general meeting of the Nurserymen, Market Gardeners' and General Hailstorm Insurance Corporation, Ltd., was held at Simpson's, Limited, 101, Strand, W.C., yesterday, for the purpose of submitting to the shareholders the report of the directors, and statement of accounts to 23rd February, 1897, for the declaration of a dividend, for the election of directors, auditors, and a trustee, and to consider the question of directors' remuneration. The report was a very satisfactory one.

Gardeners' Royal Benevolent Institution.—At a meeting of the committee of the Gardeners' Royal Benevolent Institution held at the offices, 50, Parliament Street, S.W., on Friday, March 26th, the following resolution was unanimously adopoted:—The committee of the Gardeners' Royal Benevolent Institution desire to place on record an expression of their deep regret at the severe loss they have sustained by the death of Dr. Hogg, chairman at the Anniversary Festival Dinner in 1876, a vice-president and a trustee. For the long period of 55 years, Dr. Hogg had taken a keen and active interest in the work of the institution, he always had its welfare at heart, and his warm support will be greatly missed. The committee further desire to express their sincere sympathy with Mrs. Hogg and her family in their bereavement.

Orchids at the Sale Rooms.—The interest in Odontoglossum wilckeanum has greatly increased within the last few years owing to the splendid varieties which have been turning up amongst importations. On Friday, the 26th ult., a handsome dark variety turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, and the bidding was so keen that it very soon run up to 20 gs., at which figure it was knocked down to Mr. Fellowes. A fine form of Dendrobium nobile fetched £2 5s.; Cattleya Trianaei delicata brought 30s.; C. Schroderae, with three flowers, brought £2 15s.; and a special variety of the latter, with nearly white sepals and petals, and a distinctly marked lip was bought by Mr. Manning for 5 gs. A fine piece of Odontoglossum Reichenheimii, with enormous pseudobulbs, and a branching flower scape, 5 ft. high, was secured for 3½ gs. Anything fine or rare, and good, finds an eager purchaser.

SEVENOAKS GARDENERS' MUTUAL IMPROVEMENT SOCIETY.

The meeting of this society held on the 16th ult. at the Rose and Crown Hotel, Sevenoaks, was very well attended. Mr. W. Fox presided. After the preliminary business had been despatched, Mr. J. Buckland read a capital paper upon "Clubbing." In his opening remarks Mr. Buckland stated that until 1876 no one seemed to know the exact cause of "clubbing." At that date, however, M. Woronin, a Russian, as completely explained the cause of the disease as the Rev. M. J. Berkeley expounded the nature of the Potato murrain. It was proved both then and subsequently that a fungus by name Plasmodiophora Brassicae was the cause. This fungus belongs to a curious family known as the Myxomycetes or Slime Fungi. So much do these fungi appear like animals that an attempt has been made to transfer them to the Protozoic division of the animal kingdom. They have also been named Mycetozoa or fungus-like animals by Professor A. de Bary. No fungologists of repute, however, hold these views at the present day.

Mr. Buckland then described in detail the structure of the Myxomycetes stating that they do not form cell walls or tissues during vegetation but finally they do form a cell wall and become spores which hibernate for a certain period. After the germination of the spores the plasmodium which is formed by the union of the exuded protoplasm which creeps about by exuding arm-like processes from the margin.

Clubbing commences at an early period in the history of the cabbage, the rootlets exhibiting spindle-shaped protuberances. Some entomologist had ascribed the origin of "club-root" to the attacks of aphides, but the latest authorities reject this idea. Mr. G. B. Buckton, F.R.S. in his "Monograph of the British Aphides" thinks "that some 'clubbing' may be due to puncture of the young roots by insects," but such kinds of clubbing are distinct from the true form.

In dealing with the methods of combatting the evil, the essayist instanced a case of Brussels Sprouts, which, having become badly attacked, were lifted, the whole of the affected parts cut away, and replanted in another place. Although most of the plants had little but the stems left, they formed new roots, and in the end yielded a fair crop of sprouts. Specimens of these plants were on view.

In the discussion which followed, Mr. A. Outram, of Messrs. Sutton & Sons, Reading, laid stress upon the careless selection of seed, and faulty method of culture as rendering plants liable to disease. When the disease had made some progress, insect agency frequently augmented the mischief. He advocated changes in the order of cropping, systematic subsoiling, and the free use of soot, lime, and gas-lime, as efficacious in cleansing the land. The burning instead of the burying of affected stumps was also advocated. With regard to the occurrence of club-root in seed beds, frequent transplantation was very effectual, for the little gall could then be easily pinched off.

AMARYLLIS AT CHELSEA.

Every season has its flowers, and spring has many. Few, if any are more gorgeous, however, than the Hippeastrums popularly known in most gardens under the name of Amaryllis. On Monday last we paid a visit of inspection to the far-famed collection of Messrs. James Veitch & Sons, Ltd., Chelsea. We had a notion that only a few of them were in bloom, but the house, practically, was a mass of bloom, and will be for some weeks to come. Messrs. Veitch have been making some experiments with a view to the prolongation of the season of bloom, and if they succeed anyone may secure the advantage gained by adopting the same plan. The plants are much dwarfer than we have seen them at Chelsea, notwithstanding the comparatively sunless character of the winter and spring. This is ample testimony to the skilful treatment to which they are subjected.

Amidst the vast collection of varieties, the greater proportion of which are new, we noted only the finest forms which amply sustain the reputation of the Chelsea collection. They were noted as they presented themselves while passing round the house. The flowers of Thelma are of a dark claret, an unusual colour, with broad and regularly arranged segments. Those of Charmion are bell-shaped and white, with a few red lines on either side of the midrib. Moderate in size are those of Chigo, but brilliant crimson with white rays extending almost to the apex. Diouverza is a large, bell-shaped, soft scarlet flower with long, white rays. Cupid is scarlet on a white ground, which shows at the edges and midrib. Francisca is one of the gems of the collection, with its huge, brilliant crimson flowers and short green star. Amongst the lighter varieties Armoire is conspicuous by its clear white colour, and a few red lines radiating from the midrib. In the same style Chinea is clear white, lined with red all over the upper three segments of the flower. Mrs. Geo. Gordon is a beautifully regular or circular white flower, netted with pale red. Aemilia, on the contrary, is red netted with white towards the throat.

Quite a number of varieties are notable for the intensity of their flowers. Hidalgo is a large, nearly flat, intense crimson flower, with a light green star. It has a noble and telling appearance, and is well supported by Camis with glowing crimson and much flattened flowers having broad segments. Nesida is of a similar glowing crimson, but the flowers are more bell-shaped. Fullendon is equally a giant with intense, reddish-crimson flowers, and broad segments. The flowers of Scio are fiery-crimson-scarlet, tinted with maroon in the throat, and very telling. Two scapes carry four flowers each. The variety certainly takes leading rank. What a contrast with Virgilia, standing close by! The bell-shaped flowers are of a clear white, lined with red. Equally charming for its delicacy and distinctness is Calphurina with flowers of a light salmon on a white ground, and

having its white rays continued to the apex. So diverse are the colours that scarcely two of the varieties now flowering for the first time are exactly alike.

In another part of the house are some beautifully distinct flowers contrasting strongly. For instance, Thaisa has numerous red lines on a white ground, except on the lower segment which is white. Tamora bears five flowers on one scape and is unique as far as colour is concerned. The blooms are moderate in size and velvety maroon-crimson towards the apex, but distinctly suffused with purple in the throat. It is as charming as distinct. Sadi, close by, has white flowers with a scarlet band along the centre of the three outer segments. A huge and flat open flower is Ora and quite of the first water for quality. The blooms are crimson, heavily shaded with maroon in the throat, and of a pleasing pale green in the very centre. A noble flower is Asmodia, of a maroon-crimson and almost black in the throat. We have not seen a yellow Amaryllis, but there is a more or less marked yellow tint in the ground colour of Argo, with a scarlet band along the centre of each segment.

Undoubtedly the finest white in the collection this year is Iphis, and we are surprised it did not receive an Award of Merit at the last meeting of the Royal Horticultural Society The flowers are pure white, thinly mottled with small red specks towards the edges, the markings being more numerous on the outer face. A beautifully margined flower is Corisande, of a clear scarlet, pure white at the edges and beautifully regular in outline. Yet another fine light variety occurs in Blanche, the ground colour of which is pure white, with a few red streaks on either side of the midrib; the centre is pale green. Quite a number of the light varieties above mentioned give us cause to hope that pure white ones will turn up presently. In our opinion the best of the light salmon-coloured flowers is that named Emin, the colour being uniform and unbroken, except for the pure white rays which run to the apex. The beauty of the lighter shades is best seen by contrast with the darker ones, but they are chaste and charming even if grown by themselves, and worthy of being included in any collection. Their absence would be a distinct loss where the brilliancy of the crimson and scarlet flowers requires toning down to make them more agreeable to the eyes which require something more restful after gazing on the intensely dark and more aggresive colours.

Whether the flowers can be still further enlarged is a question of time, probably; but we think that many of the above mentioned are quite large enough for any purpose. While there is a danger of large flowers becoming coarse, that may not always happen. Mere size or breadth of flower may be as much the result of flattening out at the expense of the tube, as to the actual enlargement of all parts. In any case, those flowers which have a long tube, are seldom, if ever, remarkable for their breadth. A short tube, however, we are convinced, is a distinct advantage, because it displays the whole combination of colours in these remarkable denizens of the tropics. Messrs. Veitch's collection is certainly maintaining its pre-eminence in this respect; for many huge flowers of good substance have scarcely any tube at all.

SPECIMEN CHRYSANTHEMUMS.

I MUST thank the correspondents who, at my suggestion, contributed to the discussion of this subject. If the discussion has enabled those who may be judges to form a more exact idea of what a specimen Chrysanthemum should be, it has served its purpose. If judges were a superior class of gardeners to the ordinary gardener, then it would be impertinence on the part of anyone outside the learned and honourable body, to try and instil into their minds a more exact idea of what a specimen should be, but they are only ordinary gardeners who may be competitors to-day and judges to-morrow, and whose minds on specimen plants may be rather indefinite.

I agree in the main with Bêche's definition of a specimen; it differs little from my own except mentioning a single stem 4 in. to 6 in. long. It would be necessary in framing a schedule to state something to that effect, to enable the judges to see that it was a single plant; but in this discussion when we say a plant, we must take each other's word that we mean a plant. The specimen shown in THE GARDENING WORLD, p. 425, was not far off what a specimen should be, but the stakes were placed too horizontally, which threw the flowers too far apart, which W. B. G. well noted (p. 438). W. B. G. mentioned plants which were exhibited with three flowers each, and took the prize from larger plants. There is scarcely a variety as yet but would be too tall for its diameter with three flowers to the plant; and if it was trained down, the diameter of foliage would be too large for the three flowers; and if it was cut down or struck late, to dwarf it, the quality of the flowers would suffer. But if we had a few varieties that grew about 18 in. high and would produce three flowers about 6 in. in diameter, which would give the plant a diameter, when staked, about 15 in, and well-grown in every way, a big plant could not beat it with mere size; but we have not varieties dwarf enough for that yet.

Growers whose ideal in growing specimens was to imitate the towering Poplar, or the spreading Oak, may have got their ideal modified by this discussion. Although the sturdy stem of the oak and its strong spreading branches are suggestive of strength and majesty, and the towering head of the Poplar invites us to still higher aspirations, these are not the attractions of the Chrysanthemum; but a beautiful combination of well-developed flowers and healthy foliage in a symmetrical but natural form are the attractions of a specimen Chrysanthemum.—*'Mum.*

ORCHID NOTES & GLEANINGS.

By THE EDITOR.

Cymbidium eburneum.—This noble species has been in season for some time past, and year by year is finding fresh admirers. John W. Potter, Esq., Sligachan, Park Hill Road, Croydon, has got together the nucleus of a good collection, containing many fine things. At present a specimen of Cymbidium eburneum is carrying nineteen large and deliciously scented flowers. In their earlier stages at least, they are much more tinted with pink than usual, the colouring being most conspicuous on the back of the sepals, and the outer face of the tube of the lip. The column is pink all over and mottled with purple on the face. The lip is without spots, though the pale yellow disc, and golden-yellow or orange crest, are as well defined as usual. The type is described as having flowers 3 in. in diameter, but in this instance they measure from 5 in. to 5½ in. from tip to tip of the lateral sepals.

Orchids from Redlands. — Last week we received a box of Dendrobium flowers chiefly, from Mr. Geo. Russell, The Gardens, Redlands, Kelvinside, Glasgow. The blooms of Dendrobium wardianum were in fine form and highly coloured, but he sent them for contrast with a variety which he suspected to be D. w. candidum, and in this he is right. The sepals and petals of the latter were snowy white. The lip was also white with exception of the customary orange-yellow disc and two maroon-crimson blotches at the base. The blotches are larger than in some forms which often pass for D. w. candidum, so that the variety is really a good one. A delicately pretty variety of D. findlayanum accompanied the rest. It had sepals of the palest lilac, and white petals tipped with a rosy blotch. The long pedicels were also of a much paler lilac than usual. Oncidium maculatum having brown sepals and petals, barred with yellow, and a creamy lip, was also amongst the rest. This species continues to find its way into collections, imported probably with something else. It is variable to some extent in colour, judging from the various flowers and plants we have seen. Two plants of the rare Dendrobium brymerianum harveyanum have turned up in the Redlands collection.

PLANTS RECENTLY CERTIFICATED.

THE following subjects were granted awards by the Royal Horticultural Society on the 23rd ult.

Orchid Committee.

ODONTOGLOSSUM CRISPUM LUCIANI, *Nov. var.*—There is no question that this took the eye of everyone who noticed it and had any knowledge of Orchids whatever. The plant is yet small, recently imported, flowering on the first growth, and bearing one flower only. The sepals are very broad, elliptic, and white, with a few large, brownish-purple blotches. The petals are broadly triangular, overlapping, jagged at the edges and similar in colour to the sepals. The lip has one to three blotches in front of the crest, and completes the outline of a very round flower. It is a magnificient addition to the species and comes well within the first twelve varieties in cultivation. First-class certificate. Messrs. Linden, L'Horticulture Internationale, Brussels.

DENDROBIUM NOBILE HUTCHINSON'S *var, Nov. var.*—The flowers of this handsome variety are of great size, with an unusually broad lip. The sepals are of a pale rosy-pink, and the broadly-oblong petals white, with a purple tip. The huge lip is as large as three of the more ordinary forms of the species, and white with a large maroon-crimson blotch, and a pale purple tip. It is a distinct addition to the most popular of all the Dendrobes. Award of Merit, Major Gen. Hutchinson (gr. Mr. A. Barnes) Branksson, Wood Road, Bournemouth.

ODONTOGLOSSUM RUCKERIANUM OCELLATUM, *Nov. var.*—The typical form of this Odontoglot has a rosy band on each side of the midrib, but it is a poor thing by comparison with this splendid variety. The flowers are of a rich rose and the sepals and petals are thickly spotted with rich crimson, like small eyes as expressed by the name ocellatum. The lip is creamy with a crimson blotch in front of the crest. A grand piece bearing a panicle 2½ ft. in length was exhibited by W. Thompson, Esqr. (gr. Mr. W. Stevens), Walton Grange, Stone, Staffs. Award of Merit.

ANGRAECUM MOOREANUM.—This may be described as one of the small gems of the genus, for it has small and pretty creamy pink or flesh-coloured flowers. The spur is slender, of a deep amber yellow, and 3in. to 4in. in length. Botanical Certificate. Sir Trevor Lawrence, Bart. (grower Mr. W. H. White), Burford Lodge, Dorking.

EPIDENDRUM VARICOSUM.—The flowers of this species are small and peculiarly interesting. The glossy sepals and petals are of a rich olive brown. The creamy lip is warted on the disk as the specific name is meant to imply. The flowers are borne on a slender, erect raceme. Botanical Certificate. Wellbore Ellis, Esqr. (gr. Mr. S. Barrell), Hazelbourne Dorking.

Floral Committee.

TULIPA KAUFMANNIANA. — This new species has flowers of large size, and a distinctness possessed by few, if any, of the recent introductions. The segments are oblong of great length and creamy at first but at length becoming almost white on the upper half, while the lower portion is of a shining golden-yellow. The three outer segments have a purple-red band along the middle of the back on the upper two-thirds of their length, and nearly covering their whole width. First-class Certificate. Messrs. Barr & Sons, King Street, Covent Garden, and Messrs. R. Wallace & Co., Kilnside Nursery, Colchester.

AMARYLLIS PERA.—The flowers of this new variety are of large size, with regular, rounded outline, and broad, overlapping segments of a bright scarlet. The six white bands forming the star are three-fourths as long as the segments, and there are several other white markings. The quality of the variety generally is first-class. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

DISPORUM LESCHENAULTIANUM VARIEGATUM.—For many years we have known the green form of this Liliaceous plant, which is allied to Tricyrtis, a hardy border subject. The plant under notice is nearly hardy, but will require the shelter of a green-house to see it in its best form at least. The stems are 12in. to 15in. high, freely furnished with lanceolate leaves, and the variety under notice has silvery-white edges, and sometimes almost wholly silvery-white leaves, with green lines running up them. Award of Merit. A well grown plant, like that shown by Messrs. J. Veitch & Sons, Ltd., is hightly ornamental.

CLIVIA CHARLES VERMEIRE.—The flowers of this new Continental variety mark a distinct advance. The short and widely-bell-shaped flowers are of large size, with broad, overlapping segments of a bright orange-scarlet, with a yellow throat, the colours being well defined and clear, without any admixture of white at the base. Award of Merit. J. T. Bennett Poë, Esqr. (gr. Mr. J. Downes), Holmwood, Cheshunt.

ANTHURIUM SCHERZERIANUM GEANT SANGLANT.—The spathe of this variety is roundly-cordate, of huge size, and rich crimson-red or scarlet. It is truly a giant amongst its kind. The curled and twisted spadix is similar in colour. The leaves are large and leathery. It is bound to find its way into gardens, sooner or later. Award of Merit. Messrs. Linden, Brussels.

ERYTHRONIUM GRANDIFLORUM NUTTALLIANUM.—The flowers of this beautiful Dog's-tooth Violet are of a rich golden yellow with a pale or white zone in the centre, and measure 2in. to 2½in. across. It is a hardy border flower delighting in a slightly shady, moist position. Award of Merit. Messrs. Barr & Sons, and Messrs. R. Wallace & Co.

ROSE ANTOINE RIVOIRE.—The flowers of this hybrid Tea Rose are large, quite full, and of a delicate salmon-flesh, appearing almost white at a distance. The outer petals are revolute at the margins, when fully developed, somewhat after the style of La France, though in general aspect totally different. Award of Merit. Mr. Charles Turner, Slough.

POLYANTHUS WOODSIDE RED.—This is a gold laced variety, the largest and best of the red ground sorts, with the most persistent colour, all through its different stages of development. We have need of a revival amongst the beautiful gold laced Polyanthus. Award of Merit. Mr. R. Dean, Ranelagh Road, Ealing.

FRITILLARIA ALPINA.—The flowers of this species are bell-shaped, drooping, and produced singly on stems about 6in. high. They are yellow with exception of the outer face which is of a rich olive-brown, but yellow at the tip. Botanical Certificate. Messrs. Barr & Sons.

Fruit and Vegetable Committee.

APPLE CRANSTON'S PIPPIN.—The fruit of this variety is similar in size, and to some extent, in shape to that of Ribston Pippin, but evidently a later keeper. It has been suggested to be a cross between the Ribston and Sturmer Pippins. The skin is greenish but much covered with russet, especially on one side, and slightly streaked with red. The flesh is yellow, tender and sweet, but is now past its prime condition with regard to flavour. Award of Merit. The English Fruit and Rose Company, King's Acre Nurseries, Hereford.

Narcissus Committee.

NARCISSUS ELLEN WILLMOT.—This is a trumpet Daffodil almost if not quite rivalling Weardale Perfection. The flowers are massive with imbricating white segments and a golden trumpet. First-class Certificate. Rev. G. H. Engleheart, Appleshaw, Andover.

NARCISSUS SOUTHERN STAR.—The segments are white in this case likewise; but the short, and widely expanded crown is of a bright orange-red. First-class Certificate. Rev. G. H. Engleheart.

NARCISSUS LETTICE HARMAR.—Here again we have a trumpet or Ajax Daffodil with white segments and a golden trumpet of handsome size. Award of Merit. Rev. G. H. Engleheart.

FRUIT UNDER GLASS.

EARLIEST POT VINES.—As the fruit shows signs of colouring the atmosphere of the house must be suffered to become much dryer, the same temperature being maintained as hitherto. Any plants, therefore, that are in the house should be shifted out to other quarters without delay. The water supply must not be reduced in the earlier stages of ripening, since with a restricted root-run such a proceeding would be attended with fatal consequences, but manure water should not be given so frequently, and when the later stages of maturation are reached must be knocked off entirely, its place being taken by clear water. A good circulation of air by day as well as a little air at night will greatly expedite the ripening.

EARLY VINERY.—The Vines in the house started about the middle of December will soon be stoning their berries. Keep the borders well supplied with moisture. The chief work here will be the pinching out of laterals. The canes should be gone over frequently to effect this with the least possible waste of energy by the Vines. It is a mistake to allow laterals to reach a length of 1 ft. or so before they are attended to. Bunches which have large and heavy shoulders will require to be supported. A great deal can be done in this way towards increasing the size and improving the appearance of bunches. Moreover it is obvious that the berries will neither swell nor ripen equally if they are suffered to press heavily upon each other. The night temperature here should stand between 65° and 70°, the former being the temperature for very cold nights when more fire heat is required. Air may be given in the morning as soon as the temperature commences to rise. Shut up fairly early in the afternoon so that the house may rise nearly to 90°. Imprisoning the sun's heat in this way not only economises firing, but the heat is more congenial than that of the fire.

PEACHES.—In the succession houses the first thinning of the fruit will now be necessary. Follow up the laying-in of the growths as soon as they can comfortably be brought down, and if possible keep them all underneath the wires. Keep the syringe going regularly morning and afternoon, always using soft water of the same temperature as the house. Black fly must be carefully watched for, and happy will be the gardener who does not receive a visit from it. Fumigation is the only effectual method of dealing with it, and this should be put in operation before the trees get too dirty.

MELONS.—As soon as the fruit is about the size of cricket balls it must receive artificial support. This may be given by nets or by pieces of board about 5 in. square suspended at the four corners. If boards are favoured they should have a hole cut in the centre to prevent the collection of moisture at the point of contact between the fruit and the board, which would infallibly result in the rotting off of the former.—*A. S. G.*

THE FLOWER GARDEN.

SEED SOWING.—The greater part of the seeds that are to furnish plants for bedding purposes, particularly such subjects as Stocks and Asters are sown in heat, under glass at the beginning of March, in order to gain time. Naturally, such plants, with their longer season of growth before them, come into bloom earlier, and make larger stuff for filling beds than those sown in the open at the beginning of April. Still, there is the question of succession to be considered, and in the event of a mild autumn plants raised from seed sown out of doors will come in very handy in the autumn.

In order to supply stock plants it will be well to prepare a seed bed now. A place on a warm border facing south will answer admirably. On such a position germination will be rapid and satisfactory. Break the ground up finely, level it down carefully, and sow thinly, unless the seed is not above suspicion as to germinating power. Thin sowing enables the plants to become fairly strong before they are lifted for transplanting to the nursery beds in preparation for the final stage. In the event of the weather proving propitious it is often wonderful how comparatively small a difference there is between the plants raised under glass and those sown in the open air.

CUT FLOWERS.—In most gardens the question of the supply of cut flowers is an important one, and thus deserving of special attention. These annuals, both hardy and half-hardy, play a conspicuous part. Beds and borders in the flower garden proper, may be filled with them to advantage, but not only is it undesirable to curtail their beauty by cutting from them, but in not a few cases they would not afford a sufficient supply. The best way out of the difficulty is to plant breaks of subjects suitable for cutting from in some convenient corner of the kitchen garden, when there need be no fear, whatever, of the supply running short. Amongst plants which are most valuable for furnishing cut flower in almost any quantity, the following are worthy of mention, but it must not be supposed that they exhaust the store. On the other hand they must be regarded as representative only:—Yellow Sweet Sultan, and its white form, Marigolds, both French and African, single and double Scabious, Salpiglossis sinuata, the marvellously beautiful and varied coloured flowers of which are very effective, annual Chrysanthemums, Centaurea Cyanus, and its dwarf form, nanus compactus, Coreopsis tinctoria, C. atrosanguinea, C. coronata, and C. grandiflora. The last-named is really a biennial, but it will answer to the same treatment as the others, and may therefore be placed with them. Sown in April with the others it will bloom as soon and as freely as they. The favourite Mignonette also must not be forgotten, and it is advisable to have a good stock of it, for it is always in request.

In addition to these, patches of the following may be sown in the herbaceous border, or in other places where it is intended that they should flower:—Gilia tricolor, G. minima caerulea, G. nivalis, Godetias in variety, Glaucium luteum, Shirley Poppies, Clarkias, Brachycome iberidifolia, Candytuft, Bartonia aurea and Amaranthus caudatus. If no more subjects than the above named are employed there will be no lack of colour in the garden.

SWEET PEAS.—As soon as the young plants are two or three inches in height, staking should be performed. Our friend the sparrow must be carefully watched at this juncture, for he is very fond of nipping off the points of the young plants for a reason probably known only to himself. Early staking may help to protect the young plants against his unwelcome attentions, but consistent scaring away of the birds must also be carried on. The depredations of slugs have likewise to be guarded against by timely dustings of soot, and trapping. In localities where either sparrows or slugs are very numerous, the poor Sweet Peas have a hard time of it.

GLADIOLI.—The planting of these must be proceeded with at intervals, choosing a variety of places and aspects, thus extending the flowering period as much as possible. The corms should be buried from three to four inches deep, a trowel being the handiest tool to use. Where Gladioli are done well the soil has to receive a thorough autumnal manuring, and there is no doubt that any trouble taken in this direction pays. The common G. brenchleyensis is excellent for planting almost anywhere, and its cheapness is a help to its extensive employment. A few extra corms may well be planted for the purpose of securing a few extra spikes for cutting.

BEDDING PLANTS.—A great part of the frame space is now choked up with bedding stuff, and for the next five or six weeks the process of hardening off will be in progress. Cuttings of all kinds of bedding subjects will also be calling for potting off, and they must not call in vain for long. Meanwhile, all the blooms should be kept pinched out of zonal Pelargoniums, and any very gross shoots should be stopped. After they have got over the check of the shift, the points should also be taken out of the spring struck cuttings.—*A. S. G.*

Gleanings from the World of Science.

Stipules, their Forms and Functions.—At a meeting of the Linnean Society of London on March 18th, the Right Hon. Sir John Lubbock, Bart, M.P., read a paper on "Stipules, their Forms and Functions." This embodied observations supplementary to those published in previous papers (Linn. Soc. Journ., Bot. xxviii. 217, and xxx. 463). It was shown that while the usual function of stipules is to protect leaves in bud, in some cases they replace them, and in others serve to hold water. Instances were mentioned in which stipules developed into spines, and in other cases became glandular. Where stipules were absent, other arrangements for bud protection were found to exist. Attention was especially directed to the formation of the winter buds of certain common shrubs and trees, and some curious differences were noted even in nearly allied species. In the Wayfaring-tree, Viburnum Lantana, the author remarked that the young leaves are uncovered, but are protected by a growth of hairs; in the Ash and Thorn the outer scales of the bud consist of expanded petioles; in the Willow the outer scales consist of leaves; in the Poplar of stipules. The buds of the Oak and Beech were also described; and it was shown by the aid of lantern slides that in the Beech the outer scales of the bud consist of two pairs of stipules, that the twelfth pair are the first which have a leaf, and that the subsequent growth is between the leaves, while the portion of the shoot between the stipules scarcely elongates at all. As a consequence the seat of each winter bud is marked by a ring, and thus a series of successive rings which remain visible for many years indicate each year's growth. A discussion followed in which Mr. A. W. Bennett, Prof. Farmer, and Mr. A. B. Rendle took part.

HINTS FOR AMATEURS.

The Gladiolus.—Without disparagement to any of the other plants that bloom in our outdoor gardens during the months of late summer and early autumn it may truly be said that the Gladiolus is not outdone by any. Apart from its actual showiness, which, when the plant is well done is undeniable, its happy nature admits of its association with so many other subjects, that the methods by which its beauty can thus be turned to account are in proportion.

Possibly the situation in which Gladioli are most commonly to be seen is the mixed herbaceous border. Here they do remarkably well, and when planted in clumps of from five to seven, or even more, at irregular intervals throughout the border they perform yeoman service. But this is only one way, although many a gardener does not exercise his ingenuity in devising new surroundings for them whereby another phase of their bright beauty might be shown up to advantage. Shrubberies near to dwelling houses are usually furnished with a ribbon border of some 18 in. or thereabouts in width. Occasionally such a border will run to 3 ft. or 4 ft. in width, but this is the extreme. Now, although we do not advocate planting in lines as a rule, this case would prove an exception. A single line of Gladioli next to the shrubbery, more particularly when the outline of the latter is a bold curve is a most imposing sight. Naturally the plants are of stiff habit, but this does not seem so apparent with the shrubbery as a background. The space in front of the Gladioli may be devoted to Pelargoniums, Calceolarias, and other dwarf subjects.

Either of these two methods will suit those who do not intend to make a speciality of Gladioli, but those who do will find it better to plant the corms in a specially prepared bed or border where they may receive closer attention than it would be possible to give in the former cases.

With regard to the question of association of Gladioli with other plants there is plenty of room for the cultivator to exercise a little originality or failing that he may well follow any good example that may have been set by someone else. Certainly one of the finest and most effective combinations that were to be seen last year in the whole of Kew Gardens was a large circular bed filled with Galtonia candicans, and Gladiolus brenchleyensis, the pearly-white of the former and the rich crimson-scarlet of the other making a most striking contrast. Wherever two plants are thus associated for the sake of combined effect, the Gladiolus being one of them, the other one should obviously be a plant that flowers naturally at the same time.

For planting between dwarf American shrubs in small beds in the same way as Liliums, Gladioli are likewise very suitable. Here there is no necessity to trouble about the correspondence in time of flowering of the two subjects for the idea is to obtain a prolongation of the show, that is for the Gladioli to brighten up the shrubs after their flowers have all gone, and their is nothing but the foliage to look at.

As a cut flower the Gladiolus is not altogether an unmixed success. It lasts very well in water, but it is somewhat stiff, and needs a considerable amount of ingenuity to make it look well. It comes in useful, however, for helping to fill large vases, which it is required should present a very imposing appearance.

Planting Gladioli.—We have said enough to show that Gladioli are thoroughly deserving of a place, and an honoured place, too, in the flower garden, Now comes the question, "when are we to plant?" Planting may be performed at any time from the beginning of March until the end of April. The exact time will depend upon two things; first, the state of the weather, and second the time at which the flowers are required. In a season like the present it has been almost impossible to plant early for the soil has scarcely ever been out of the quagmire stage since the commencement of the year, and upon heavy soil it is impossible to work under such conditions. There is, of course, an infinite variety of soils with a proportional variety of behaviour. Some, of course, will dry pretty quickly, and the late fine weather will have brought them into condition for planting.

With regard to the time at which it is required that the plants should flower, it is advisable to plant batches at various intervals extending through the whole of the planting season, thereby giving a succession of flowers. For the same reason different localities should be chosen, with different aspects. These conditions will have a very material effect upon the blooming period. Thus corms planted on a border facing the south or west would be in bloom some time before others planted at the same time on a border facing to the north, or in a shaded nook.

Soil.—In order to do Gladioli well it is necessary that the soil should receive some preparation in the autumn. The plants love a rich soil, but the corms must not be brought into direct contact with rank manure of any kind. Therefore, all manuring must be done in autumn. Almost any soil can be made to grow good Gladioli if treatment according to its kind is given. For a soil of medium lightness a dressing of cow manure is admirable. This should have been dug well in before winter, and the surface soil thrown roughly up for the frosts to work their will upon. Go over the site now and level the surface by means of a fork and plant at once.

Skinning the Corms.—Amateur cultivators have from time to time been somewhat exercised in their minds to account for apparently sound and healthy corms producing malformed and distorted growths. This is due to the skin of the corm being of so tough a nature that the growth is twisted and injured in pushing its way through. The remedy for this is to break the tough skin at the top of the corm in the case of any varieties that are special sinners.

The trowel will prove to be the handiest tool for planting with. In the case of common varieties all that is necessary is to make a hole about 4 in. in depth, lay the corm in and return the soil to its place. A little more attention may be given to the finer varieties. Make the hole a little deeper, and put in at the bottom a good layer of wood ashes mixed with sand. Lay the corm upon this, and then cover with soil. The corms should not be buried more than from 3 in. to 4 in. below the surface of the soil.

Tulips in Pots.—These are unusually forward this year even where no fire heat has been given them through the winter. The flowers are opening rapidly, particularly on such varieties as Keizer Kroon, Ophir d'Or, and Pottebakker White. If they are required for any special function they must be shaded closely, and the flowers kept from opening by tying a thin strand of raffia round them. Keep the house as cool as possible.

Richardias.—These are held in great esteem for the Easter celebrations, at which they are much used, when they can be had for church decoration. Easter being so late this year, it will be a matter of some difficulty to have them in bloom at that time. Plants which flowered early will, except in exceptional cases, be out of flower even now. In such a season as the present, the utility of keeping some of the plants back will be well demonstrated. These should now be well fed with liquid manure. It can generally be ascertained by feeling the centres of the plants, whether they are going to throw up a flower or not. Those plants which feel thin and empty may as well be turned out into another house, or into a sheltered position out of doors. This does not mean that they are to be neglected. On the contrary, they must still be watered regularly, although clear water may be substituted for manure.

Hyacinths in the Open.—If support has not been given these it should be seen to at once as the flower spikes are large and heavy, and a moderate wind would knock them about sadly if unsupported. Let the stakes be as neat and thin as is consistent with the required strength and rigidity. They should reach to the lowest bell of the flower, but need not be longer than this. It will be advisable now to take notes as to the relative periods of flowering of the various varieties. This will be a guide for another season when arranging beds with several varieties that it is wished should be open at the same time. Nurserymen can only give general information as to the flowering time, which information is more or less modified according to the special locality, and thus it behoves all cultivators to observe for themselves. —*Rex.*

Authors state that something like 300,000 species of insects in the world have received scientific names. The vegetable and animal food consumed by them must amount to many tons, besides that which they render useless.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Plant to Name.—I enclose spray of flowering plant. Would you tell me the name of it, and where it can be bought, also how to propagate and cultivate it? Does it grow in a greenhouse, or outside.—*Plena.*

Acacia armata, a native of Australia, is the name of the plant you send. It is a handsome greenhouse shrub, and one of the most free-flowering and useful of all the Acacias. You should be able to obtain it from any respectable nurseryman. It is an exceedingly easy plant to grow, the chief point to observe about it being that it needs abundance of water at all times, and must never be allowed to get dry. After the danger of frost is over, the plants will do better outside than they will under glass, for they are not so likely to be attacked with red spider and thrips and moreover they ripen their growths better. For soil, a mixture of equal parts of peat and loam with sand will suit them well. Pot firmly. Propagation may be effected by cuttings, which root with great freedom. The cuttings should consist of the points of the shoots and may be about 3 in. in length. Take them off some time before the middle of the present month, insert them in pans filled with sand, put them in a propagating frame, keep them warm and moist, and they will root in from six to eight weeks time.

Treatment of Genistas. You may give your plants a little manure water at alternate waterings, *Tenderfoot.* They will require pruning presently to keep them in shape, but you need not trouble about this until after flowering. The dropping of the leaves you complain about is due to the lack of light, and to the uncongenial atmosphere of the dwelling room.

Green Glass for Fernery.—*Subscriber* is erecting a fernery and has been advised to glaze with green glass. He wishes to know whether this will suit the Ferns.

We should not advise the employment of green glass under any circumstances. It used to be very popular some years ago, but its inutility and positively harmful tendency has since been demonstrated. The ferneries at Kew used to be glazed with this kind of glass, but the greater part of it has been removed, and with beneficial results to the plants. The shade needed by the Ferns should be given by means of blinds.

Cut Grass for Hotbed.—Mowings from a lawn are of little use for making up a hotbed. They give out a very fierce heat for a few days, but this soon goes. The bulk of the material should consist of leaves, which have more "last" in them than anything else. The grass may be turned to some account by using it for making up fresh linings when necessary.

Potting Odontoglossums.—September is possibly the best time of the year for potting Odontoglossums *C. B.*, and we should advise you to shift them then. For the slugs the best thing to do will be to lay traps of Lettuce leaves. These should be gone over in the evening with a light, when the marauders will likely be caught.

Smell of Violets.—There are various flowers the smell of which has injurious effects upon the nerves. The humble Violet is the latest addition to the list according to *W. Rushton*, who states that the smell of Violets always causes him to sneeze violently. He declares that this is not imagination but a positive and painful fact.

Seedling zonal Pelargoniums.—*Tenterden* has a batch of seedling zonal Pelargoniums, and wishes to know how to hasten them into flower so that he may see as soon as possible what sorts they are and whether they are worth keeping or no.

The best way will be to grow the plants on, shifting them from small sixties into small thirty-twos. Do not stop or pinch them at all, but take them up with a single stem, until they develope a flower bud. Then pinch the points out, and thus throw all the strength of the plant into this bud. Seedlings are not infrequently rather shy of blooming, but by treating them thus they are not only induced to

flower early, but there is a good chance of seeing by the first flower whether they are likely to be of service.

Tomatos.—*T. Machin*: We always prefer the single rod system of growing Tomatos, because we have found it to be a surer method of obtaining a full crop of fruit than what may be termed the "extension" method. Still, this does not mean that the "extension" plan is a failure. On the contrary in a good season it may yield excellent results. Where a sufficient number of plants cannot be obtained to fill the space, by training them single rod fashion it is the best way to solve the difficulty. You may thus economise your plants by training them as you propose.

Chionodoxa Tmolusii is fully a fortnight, sometimes three weeks later in blooming than C. Luciliae, *W. Rushton*. The flowers resemble those of C. Luciliae, but they are larger, and the area of white in the centre of the flower is greater.

Primroses upside down.—*Octoroon* comes up with a quaint old superstition that obtains in country places with regard to the method of procuring coloured Primroses. It is said that in order to induce the yellow Primroses to produce coloured flowers it is necessary to plant them upside down in cow manure. Our correspondent wishes to know if there is any truth in this.

We should imagine that this fallacy had been effectually disposed of long ere this, but it seems otherwise. To plant a poor Primrose upside down is little short of barbarous, and cannot possibly have any other effect than killing the plant nine times out of ten. If at the tenth time there happens that a plant with coloured flowers makes its appearance it can only be caused by some accidental variation such as sporting. Rich soil and change of situation will cause alterations and modifications in some things, but—don't plant your plants upside down.

Cyclamen.—The practice of growing Cyclamen on year after year has been proved a mistake, *Caligno*. Much finer flowers, both as to colour and size are obtained from young plants. A good time to sow is in the early part of November, which allows the plants about fifteen months from seed sowing to the time when they are expected to be in full flower. Other good growers sow their seed as early as August, thus giving their plants a still longer season in which to grow. The plants to flower in one season thus overlap those grown on to flower during another for fully six months.

THE COMMON JUNIPER

(*Juniperus communis*).

ONLY three species of Coniferous trees, the Yew, the Scotch Pine, and the Common Juniper, are found wild in the British Isles. As will be inferred from the annexed illustration, the habit of the common Juniper varies to a wide extent, and on our commons and downs, it ranges from a low spreading shrub (as at Ogwen Lake, on the Snowdon range of hills), to a ragged tapering tree of 25 ft. in height, as one sometimes sees on the chalky downs of southern England. Some specimens are tall, straight, and of gradual taper throughout, others scrubby of growth and forming wide expanses of procumbent shoots that often do not reach a foot from the ground, while others again form wonderful hemispherical masses of the brightest tinted foliage, or shoot up to 6 ft. or 8 ft. in height, and perfectly pyramidal as if they had been trimmed with the shears or pruning hook.

It is of the latter, the so-called Irish Juniper (J. communis hibernica) that I wish particularly to speak, for this very distinct form is not confined to the Emerald Isle, as is usually stated, I am now well convinced. Both on the Kentish and Hertfordshire commons I have found specimens equally columnar in habit, and with the branches as closely adpressed to the main stem as any that have ever found their way across the English Channel. Along the boundary of a woodland at Keston, in Kent, there are many self-sown plants of the Common Juniper that I have found it quite impossible to detect from those that come from Ireland; while on Shrub Hill Common, near Hemel Hempstead (where the accompanying illustration was taken by Mr. Robertson, of Boxmoor), there are, or rather were, several perfectly erect specimens of from 4 ft. to 6 ft. in height. The procumbent variety (J. communis nana) I have often met with at high elevations on the Welsh hills, there forming the daintiest and neatest carpet of the brightest of silvery green foliage. No amount of coaxing in the best soil in lowland situations has the least effect on this dwarf Juniper, it always remaining as flat and prim as a cushion—at least this is my experience of the plant after many years of cultivation.—*A. D. Webster.*

VARIETIES OF THE COMMON JUNIPER ON SHRUB-HILL COMMON.

AN AMATEUR'S ORCHIDS.

I HAVE been very much interested in the page you have devoted to your "amateur" readers. Many of them grow Orchids, and I suppose many more wish they could. No one should ever take these plants in hand unless they have a real regard for them. If only a fair amount of success is attained, it is astonishing how the love of cultivating them grows; and a constant yearning takes possession of the grower to add another and still another, although the space available has long been filled up.

This goes on till suspended from the roof and shelves, wherever they can be put, there are generally quite as many plants as the stages can contain.

The obstacles an amateur has to overcome are considerable. Generally he builds his own houses, and heats them too. They may not be models like those which are seen in a showyard. Still, it is really wonderful what can be done when care and skill are brought to bear on the treatment of the plants. Failures occur, no doubt, but that happens with the best practical growers at times, who have not the same excuse as gentlemen who leave for business at nine o'clock in the morning, and do not see their plants again till five in the afternoon. Airing and shading have to be done whether it is suitable or not, unless the good lady of the house gives a look at them and sees that the fire is kept up for the tropical subjects. The fortunate possessor of such a helpmeet is no doubt grateful as one should be. That good specimens are grown under these conditions is all the more creditable In many instances growth is rather quick for the limited space, and so plants have to be put away when just at their best, and a fresh start has to be made with smaller specimens.

The collection of Peter Ewing, Esq., F.L.S., is worthy of notice in your columns. Two small span-roofed houses are joined to his villa, one of which is used as a stove, and half the space is devoted to Cypripediums, all in good health. Mr. Ewing is the most successful grower of the C. bellatulum type that I have seen. He attributes his success chiefly to the fact that the leaves are kept dry, and no sphagnum is allowed near the surface of the pots. In any case they are splendidly done, C. Godefroyae, C. concolor, and C. niveus, growing and flowering freely. Among others the following are a few of the best: C. oenanthum superbum, C spicerianum, C. Chantini, C. insigne Maulei, C. Exul, C. virens, C. Doris, C. Almos, C. callosum, C. villosum, C. Boxallii, C. Charlesworthii, C. chamberlainianum, C. crossianum, C. bullenianum, C. Hookerae, C. hirsutissimum, C. Ashburntoniae, C. Dauthierii, C. lathamianum, C. Curtisii, C. grande, and many more fine sorts.

Dendrobes are numerous, and many of the best forms are to be seen, as also a promising lot of hybrids that have not yet flowered. D. nobile is represented by plants from all the various districts. D. n. nobilius is still unsurpassed for fine colour and size.

Then there are the hybrid forms: such as D. Cooksoni x nobile, D. Ainsworthii, and D. leechianum. The finest form of this hybrid I have seen is flowering in this collection. A good bit of D. n. murrhinianum is showing for flower.

Among the D. wardianum section a good plant of the rare D. w. candidum has cropped up. D. crassinode, D. c. barberianum, D. Farmeri, D. heterocarpum, D. devonianum, D. albo-sanguineum (a very fine plant), D. Phalaenopsis schroderianum, D. P. statterianum, D. lituiflorum (very fine), D. nobile Cooksonii, D. n. elegans, D. thyrsiflorum and D. densiflorum are all in fine condition. Suspended from the roof are splendid specimens of Odontoglossum citrosmum, Cattleyas and Laelias. Noticeable are some highly coloured forms of L. pumila and L. dayana. Here may be seen Coelogyne cristata, C. c. lemoniana and C. speciosa. The latter is nearly always in flower. Lycaste Skinnerii, L. lawrenceana and L. aromatica, Zygopetalum mackayii and Z. intermedium, Pleione Lagenaria, P. Wallichii, P. maculata, and various other species are al doing well.

The other house is filled with cool and intermediate sorts, chiefly Odontoglossums, of which there are about 300 of O. crispum. Many fine forms have been purchased in flower, and imported ones have turned out well. A grand white form finely spotted was conspicuous. Others grown here are O. Hallii, O. ramosissimum, O. wilckeanum, O. arnoldianum, O. cirrhosum, O. Hallii zanthoglossum, O. hastilabium, O. harryanum, O. nebulosum, O. pulchellum majus, O. grande, and the best forms of O. Rossii, O. Cervantesii and good forms of O. Pescatorei. Many of them are showing for flower. Oncidium

macranthum, O. serratum, O. gardnerianum, O. tigrinum, O. flexuosum, O. dasystyle, and O. sarcodes are all in fine form. Particularly noteworthy are the Miltonias, including the pure M. candida and the rich M. morelliana atropurpurea. These are only a few of the many choice things to be seen at the "Frond," Uddingston, N.B. Mr. Ewing has his boilers so placed that he heats his dwelling along with the Orchid houses, this being both economical and effectual.

Mr. Ewing is one of the best known botanists in the west of Scotland, has long held the honourable position of vice-president of our Natural History Society of Glasgow, and his extensive knowledge of the flora of the West is largely taken advantage of. —*Visitor.*

ENGLISH ORCHARDS.

(*Continued from page 474*).

In passing I would mention, as indicating the care and thoroughness with which the investigations were made and recorded, that, although I have received several hundred letters in reference to the reports, in no instance has their accuracy been called into question. I had previously gone over much of the ground myself, and it was a great satisfaction to me to find how closely my instructions that the condition of the orchards examined should be described with exactitude and without embellishment were being followed. One had need have something that will give rise to a feeling of satisfaction in connection with the orchard question, for the record is one that can hardly fail to fill the mind with profound regret. It brings into strong relief the fact, that while in the whole of the counties fruit is grown in private gardens and in many market garden plantations in accordance with the most advanced practice, orchards have for the most part been so neglected as to have become a blot upon the landscape and a discredit to their owners. I shall not weary you by reading any considerable proportion of the reports; but to convey an adequate idea of the state of things that now obtains, it will be necessary to give a few shorts extracts from those on the counties specially favourable to the profitable cultivation of fruit.

KENT.

As you are well aware, it is a quite common occurrence to speak of Kent as the "Garden of England," and, so far as our hardy fruits are concerned, it might justly be described as the "Garden of the World," for nowhere can Apples, Cherries, Pears, and Plums be grown to a higher degree of perfection than within its boundaries. It is a matter of common knowledge that the most advanced practice obtains among a section of the fruit growers of Kent. Yet what do we find? For an answer to the question I must turn to the report on the county: "An orchard of standard Apples soon gave me material for survey; the field was one of some twenty acres, and the trees seemed to be about fifteen years old. I was struck by their miserable appearance. In the whole field there was hardly one that looked healthy, and with but few exceptions they were dying of canker, being covered with great gaping wounds and leafless branches. Some were bearing fruit, but in appearance and quality it was of the most wretched description. It will go into the market, of course, stunted, specked, and discoloured as it is, and come into competition with large, fresh-coloured American produce."

In the reference to another district we are told, "I came upon as instructive an example of how not to do it in fruit growing as could be found in the whole kingdom. A peculiar whiteness on the trees, as though they were silvery with a fall of summer snow attracted my attention, and on getting amongst them I found, as I expected, that they were attacked by American blight. But what an attack! The sight of those trees, thick with heavy masses of the loathsome pest on trunk, limbs, branches, and spurs, will not quickly fade from my memory." Speaking of the common black Plum which is so largely grown in some parts of Kent, more especially in the Ash and Sandwich districts, the report states, and I quote it as bearing upon a point to which I shall have to refer later: "We have heard the old story about plums rotting on the trees. We shall hear it again until some of the hundreds of thousands of trees, the produce of which a wise public will hardly buy at any price, are swept away or grafted with sorts that the public want." If we find, in the fair county of Kent, trees dying in consequence of their having been improperly planted or from insect infestation, and of orchards that are unprofitable because they consist of inferior varieties, it is not surprising to find in proceeding westward that the orchards of Sussex, Hampshire, and Dorset are also in a wretched plight. I do not, however, purpose detaining you with extracts from the reports on these orchards.

FOUR LEADING WESTERN COUNTIES.

The four great fruit-producing counties in the West of England are Devonshire, Hereford, Somerset, and Worcestershire, and it is in these that the greatest need for improvement exists. These four counties contain about 97,678 acres of orchards, and, notwithstanding the highly favourable character of both soil and climate and the facilities that exist for the disposal of the produce, not one-fourth of this large area gives an adequate return. Here we find not only trees that are unproductive through age, starvation, or some other form of indifferent management, but thousands that, in consequence of the inferiority of the varities, bear fruit that is utterly useless, excepting it be to make bad cider. In the formation of many of the Apple and Pear orchards, trees that had sprung from the pips distributed through the medium of the refuse from the cider or perry press were planted, and there they have remained until the present day, giving neither pleasure or profit to their owners, and without anything being done to improve them by the simple process of grafting.

With regard to the capabilities of Hereford as a fruit-producing county, we are told that "almost every holding in Herefordshire could produce magnificent fruit for home use or for supplying the market if the trees were given proper attention and the right varities grown. The soil is naturally rich and fertile, resting on the old red sandstone in many parts of the county, and the colour of the fruit when ripe is very bright and striking." The manner in which the great natural advantages of the county are in too many instances utilised may be gathered from the following statement in reference to the Leominster side of the county: "With the exception of gardeners, no one appears to trouble much about the orchards, except when the faggot heap needs replenishing. Then the farmer turns his attention to his orchards, and the dead wood is cut out of the trees, with also, it may be, many of the large limbs. I never saw worse mutilated trees than those met with in one or two orchards. . . . Canker, American blight, lichen, dead wood, and general carelessness are only too apparent on almost every side. Young trees that should be producing full crops of the largest Apples may be seen in a dying condition, through sheep or young horses having gnawed off all the bark on the trunk. The tree-guards are in many instances of the most primitive description, and practically worthless. Hundreds of young trees are literally choked by a mass of thorns or small branches of forest trees tied up in a bundle round the stems. This rough and ready method certainly answers the purpose of protecting the young trees from sheep, but in a year or two nettles, thistles, and other noxious rubbish grow up amongst this protecting material, reaching almost as high as the trees, thereby excluding all moisture from the roots."

With regard to the orchards in another part of the county, it is stated "I found on measurement trees only fifteen feet apart, and, as a matter of course, the heads were literally interwoven with each other. . . When the tops get into this very congested state, all the enemies natural to fruit trees hold high revel, devouring foliage, blooms, and even the points of the shoots, until all the food at hand is exhausted. These wasted orchards are a standing menace to other growers who exercise proper care with their trees, as they are practically a nursery for all sorts of injurious pests, which spread and attack other orchards in the vicinity."

As Hereford has long been known for its cider, it follows as a matter of course there should be a reference to that beverage, and, so far as it relates to the produce of the farm orchards, here it is: "There seems to be a general opinion that farmers in Herefordshire do not make such good cider as they did years ago. It is not surprising there should be a decline in the quality of the beverage when, as I had more than one opportunity of seeing, they neither take the trouble to keep the varieties separate when grinding up the fruit, nor to throw out the rotten fruit! They in many cases smash sound and rotten Apples all up together, consequently the liquor is injuriously affected. More might be stated about the slovenly manner in which some of the farmers make their cider, but the marvel is that men can be tempted to drink the unpalatable stuff. There is no reason why they should not manufacture the most delicious cider and perry, for the county is specially suitable for producing fruits for conversion into these beverages; and I was informed by one of the most successful makers of cider and perry, whose name is familiar, that both are annually becoming more in demand as a summer beverage by all classes." There is, I am anxious to state, much excellent fruit grown for market in the county, and large quantities of cider and perry of the highest class manufactured; but the farmers' orchards are on the whole in a most disreputable condition, and the cider produced is of inferior quality, with no evident signs of improvement.

(*To be continued.*)

VARIATIONS OF SEEDLINGS FROM FRUIT.*

No doubt raising seedling fruit has for many years been a matter of great interest to those who have entered all forms of fruit culture; and pomologists have attempted, with more or less success, to secure improved varieties of fruit, with rather less than more success. One name, that of Andrew Knight, has achieved a lasting reputation in England, and the name of Van Mons in Belgium is equally well known as the raiser of numerous Pears, the greater part of which have not retained the position he claimed for them. The Pear known by his name, the "Van Mons," (Leon le Clerc) was not a seedling, but named by the raiser (Leon le Clerc) as a compliment, the compliment being returned by a Pear named Leon le Clerc (Van Mons), a very inferior fruit, and fit only for the kitchen.

The number of Pears described by André Leroy and Dr. Hogg testify to the persistent attempts of seedling fruit raisers to obtain Pears of superior quality. It is natural to suppose that for this purpose the fruit selected for sowing would be of the best quality, and yet how disappointing are the results. New fruits appear and disappear in regular order, for whether the failure is caused by soil or climate, it is seldom, indeed, that varieties carefully cherished by the raiser fulfil the description given of their qualities.

The eccentric differences observable in Pears alone are exasperating. Crossing with sorts possessing superior qualities does not appear to give any special results; there is always the element of chance, and the careful experimenter is beaten by a chance-grown seedling. The Duchesse d'Angoulême, a most popular Pear in France, the climate being better suited for its development than England, was found in a farm garden near Angers; the Beurré de Rance was also derived from a small village garden in Flanders. There is a strange adherence to the prototype in some Pears, the Jargonelle for instance. This Pear is a standard of excellence of some. Under the name of Epargne it is said by André Leroy to have been a popular Pear in France in the year 1580. During this long period there does not appear to have been an exact reproduction. Synonyms there are in plenty, Leroy gives twenty-two, but there is not a single hint of any of these synonyms being seedlings.

One of the oldest known Pears in England, the Autumn Bergamot, said to have been introduced by the Romans, has seedlings in plenty, and a long list of synonyms, but apparently no exact reproduction. The seedlings are earlier and later, larger and smaller, but none are exactly like the propotype. Another popular Pear, the Marie Louise, persists in keeping the place it has gained; and has numerous synonyms, but no seedlings which exactly reproduce the original. This Pear, from its excellent quality, must have been a source of many experiments. Of other typical Pears which have not been reproduced the following will be familiar examples:—Williams' Bon Chrêtien, Louise Bonne of Jersey, Glou Morceau, Doyenné du Comice, Passe Colmar, and Easter Beurré, though they have been in existence long enough to have produced many seedlings. I have raised seedlings from these varieties, and have not gained a single fruit like the

* A paper read recently at a meeting of the Horticultural Club, Hotel Windsor, Victoria Street, S.W.

parent, and in fact all have been more or less worthless.

As with Pears so with Apples. The Ribston Pippin has not to my knowledge been reproduced; it is said to have been raised from a chance seedling. The Wyken Pippin, a very old and esteemed variety, has not been reproduced, nor the King of the Pippins, and Golden Pippin. Old Nonpareil, of which the seedlings are nearer the prototype than most of the old varieties, is not exactly reproduced.

The Peach is perhaps the fruit which approaches more nearly reproduction than most, but does not differ mucb from the apparent rule of diversity. The Grosse Mignonne, Bellegarde, and Madeleine have numerous seedlings wbich approach the originals in quality, but differ in the flowers and glands. The catalogue of the Royal Horticultural Society enumerates forty synonyms of the Grosse Mignonne. These do not appear to be seedlings, but the names seem to have been given by those who have grown the sorts, but lost the original names.

Nectarines are subject to the same law. Tbe Elruge and Violette Hâtive seem to have kept to their types. The Plum has also an apparent fixity of tenure. The Greengage, which was introduced into Europe many centuries since, seems to have adhered to its prototype, although it is said to be raised from seed, with the result of perfect reproduction. The number of synonyms points rather to the fact that seedlings vary, as do the seedlings of other classes. The Early Prolific, of wbich I have raised many seedlings, does not reproduce itself, and tbe fruits differ essentially from the parent.

Cherries are also subject to the same law. Tbe number of synonyms accorded to the May Duke, Bigarreau, and the Reine Hortense seem to show that exact reproduction has failed. The subject is interesting, and is capable of much extension. In our uncertain climate the aid of glass is almost absolutely necessary, and the experiment, if a man wish to see the results, should be begun at an early age.—*T. Francis Rivers.*

A GOOD DECEMBER BROCCOLI.

As we get near the close of the year the difficulty of obtaining good Broccoli, and the more so if the autumn and early winter is severe, is felt by many. Broccoli and Cauliflower being vegetables of great importance in many places, it often taxes the gardener's resources to keep up a continued supply during December and January, especially in cold and exposed situations. A good supply for Christmas and the New Year is of much value, and to bave this a good deal of thought and attention is required.

Having had to meet this demand for many years has made me acquainted with many different methods of procedure, also the growing of various varieties. During the last few years I have relied on one variety to carry me through October to the middle of January, and that variety is Veitch's Self-Protecting, and I consider with that, if we had no other winter Broccoli, no one need be out of a supply, providing they obtain the true stock.

For several years I have made a rule of sowing this kind at the end of March, and again at the end of April, planting out batches of plants from these sowings as early as the ground was available, and the plants strong enough. Being short of garden space I invariably mark off a piece of ground early in the year, whereon I intend to grow this crop. This is deeply worked and well manured as early as possible in the New Year. About the end of March or early in April we mark off this ground, planting a short-topped early Potato in rows 2½ ft. apart. These are kept clean witb a Dutch hoe, and not moulded up, as we find the less stirring the ground has the better the Broccoli succeeds. As soon as the Broccoli plants are strong enough they are planted out between the rows of Potatos, tbe early ones 2½ ft. and the later sowings 2 ft. apart. The Potatos are dug as fast as wanted for use, getting them off the ground as quickly as possible.

In land of this character the Broccoli make rapid progress, and attain a large size. Early in the autumn when frost is approaching these are gone over and the leaves folded in the usual manner; but, as the frost increases the plants are lifted as soon as large enough, placed together in large batches, and covered over with mats at night to protect them from the severe frost. Early in November I make a point of lifting all tbat are large enough, placing tbem in some deep frames on dung beds, where Cucumbers bave been grown, taking them up with as much ball as possible, and putting them as close together as the heads will allow. In this position they soon draw through, owing to the latent warmth in the beds, whereby the heads develop and form useful material to cut from. Like this we can readily cover them from severe frost, and keep them dry in wet weather; but whenever the state of the weather allows we pull the lights off by day, and by the second week in January, we have a good supply, which carries us on for some little time longer.

Where people can obtain a good stock of "Snow's Winter White" and treat it in the way described, a continued supply of winter Broccoli may be kept up till other early kinds such as "Penzance," "Early White," etc. come in.—*J. C., Chard.*

MESSRS. CARTER'S CINERARIAS AND PRIMULAS.

The other week we passed through the Forest Hill Nursery of Messrs. J. Carter & Co., High Holborn, London, and were about a week or ten days too early to see tbe Cinerarias at tbeir best, and just a little too late for tbe Chinese Primulas. Nevertheless, we got a pretty good idea of the floriferous character of both races of popular flowers.

Cinerarias.

These would now be at their best or nearly so, but owing to the lack of sunshine, they have come along slowly, and for the same reason will prolong the display much longer tban usual, unless we get a spell of bright warm weatber. Cinerarias are, however, profitable, because durable flowers to grow for a winter and spring display in greenhouse or conservatory. Moreover, they possess a variety of rich shades of colour, quite distinct from most other classes of garden flowers at any particular period of the year. The shades of blue are ricb and varied, and some of them are practically unique, for they cannot be matched exactly by any other blue we have seen. The self colours are the best according to the views of some growers; but it must be admitted tbat the bicolors, that is, those with a wbite zone surrounded with some other colour, give a brigbt and sparkling appearance to a collection. Amongst the self-colours the range is from white to pink, rose, purple, mauve, crimson and blue, in most varied shades and tints. The white varieties have either a purple or a violet disc. The blooms also vary greatly in size, and the breadth of the rays. The plants are also very vigorous and healthy, with leaves sometimes of massive proportions, and branching stems.

Passing through a span-roofed house, which is 100 feet long, and filled from end to end, we noted a few of the more striking colours. Brilliant indigo blue witb a wbite centre is a very taking colour, as are lighter sky-blue and other shades, eitber selfs or having a white centre. Again, one comes upon dark velvety blue-purple and other rich hues, for which it is difficult to find an exact definition. Anon a white variety with blue tips and variously spotted or variegated with white calls for notice. Another peculiar break is a purple variety blotched with white. Some have a double set of ray florets, as if the bloom were inclined to become semi-double. White sorts with lively sky-blue tips are conspicuous and effective. Chaste also is a large white flower, having delicate mauve tips. A blue-purple flower streaked with rose shows another attempt at variegation. Uniformly rosy-purple, blue with a narrow white zone, and dark purple with a white zone also call for attention. Dark crimson, and dark velvety blue selfs are amongst the richest of their colour. A sky-blue variety, shaded with purple and having a French-gray centre, serves to show practically endless combinations of colour. In spite of the general absence of bright sunshine, the colours of the Cinerarias do not seem to have suffered in any way.

Chinese Primulas.

As these are grown entirely from seed tbey do not last long in perfection, because the flowers begin to drop a few days after they have been pollinated. The plants have been most floriferous, and though laden with young seed pods, most of them carried flowers while the naturally late varieties were still bearing a profusion of bloom. One of tbe darkest and brightest is Vermillion, the name indicating the colour. The new selection is superior to the old in this latter respect. The opening flowers of Ruby are pale, but tbey intensify as they get fully developed. Very bright is that named Scarlet. Elaine (Fern-leaf) is a handsome and useful white variety wbich throws its flowers well above tbe red-stalked and beautiful foliage. It is practically a late variety. Magenta is a plain leaved sort. Rose Queen is a pleasing pink variety like Princess May, but differs in being dwarfer and a later bloomer. Princess May is of a most beautiful shade of pink, and the flowers are amongst the largest in cultivation, the finest blooms being produced on plants carrying tbeir first or leading truss.

Quite of another shade of colour is Carmine Empress with richly-tinted flowers. On tbe other hand, Carmine is several shades paler, but otherwise in the same vein. Holborn Blue still maintains its position, though considerably improved upon tbe original. The flowers of Rose are profusely produced in tiers one above the other, forming a pyramidal mass wben at its best. Imogene is something in the way of Princess May, but the flowers are smaller, much later and produced with great freedom. Its foliage is of the Fern-leaved type. Venus is a white flower, mottled with purple. Iris is a larger and darker blue flower than Holborn Blue above mentioned. The rose-purple flowers of Hercules are noteworthy on account of their great size. Queen is a pleasing wbite variety with light green foliage, and flowers very late, tbe plants being still laden with a profusion of bloom.

Double varieties had not yet passed out of bloom, though some of tbem are decidedly early. Snowflake would come under this definition, and is practically one of the first to make a display of its snowy white flowers so useful for cutting. Double Scarlet seems identical in hue with the single variety of that name. Next to Snowflake in point of earliness we may place Princess of Wales, a white sort of a different tint as well as habit. Vivid is a double red sort of ricb and brilliant colouring. All of the above are grown in 48-sized pots, and now carrying an abundance of seed pods besides a considerable quantity of the later flowers.

TOMATO CULTIVATION.

Some experiments were carried out at tbe Agricultural and Horticultural School, Holmes Chapel, during the year 1896, under the auspices of the Cheshire County Council, and the subjoined notes give the result of the trials. The Tomato (*Lycopersicum esculentum*) has become such an important article of food, and there are so many amateur and cottage gardeners in tbe county who grow their own fruit, that it is thought desirable to issue tbe following report on its cultivation, and also of tbe different kinds of artificial manures used for its growth.

Method of Cultivation.

All of the plants were grown and fruited in pots 10 in. in diameter, one plant in a pot. The seed was sown in December, 1895, and when tbe young plants were large enough to handle they were transferred singly to small pots, and afterwards to pots 5 in. in diameter. When well established in the latter size they were placed in the fruiting pots. A small quantity of sand and leaf mould was mixed with the soil used in the seed pots, and also in the small pots in which the plants were first placed singly, in order to encourage free growth by assisting the young and tender roots to permeate the whole body of soil. The soil was of a heavy and rather adhesive description. It was taken from a pasture field, and was stacked for a few months previous to using, in order to destroy the vitality of the grasses and other indigenous plants growing upon it. Nothing was added to the soil at the final potting, with the exception of a small quantity of lime rubble for supplying food to the plants, and to prevent the soil from becoming too adhesive. Pot sherds and broken bricks about 1 in. deep were placed in each of the fruiting pots to afford ample drainage for the large quantity of water required during the season of growth. With a view to keeping the plants sturdy and short-jointed, the soil at the final potting was made quite firm. The growth of the plants was restricted to one stem, by the removal of the lateral shoots as soon as they were perceived.

The too common practice of removing the greater portion of the leaves was *not* followed, with beneficial results.

The plants were grown in houses recently planted with Vines and Peaches. Many of them were trained to the back wall at a considerable distance from the glass. Had they been grown in houses specially constructed, and devoted entirely to them. there is every reason to suppose that a heavier crop would have been obtained.

An attack of Potato disease (*Phytophthora infestans*) made its appearance early in May on the Hackwood Park variety. The plants were sprayed with a solution of ½ lb. sulphate of copper and ½ lb. quicklime mixed in ten gallons of water, which removed all traces of the disease in the later fruits.

EXPERIMENTS IN MANURING..

No manure was applied until the roots had taken full possession of the soil, at which time a number of plants growing in different houses, and under varying conditions as to light and sunshine, were selected for the purpose of experimenting with the following manures, which were applied fortnightly at the rate of one-eighth of an ounce to each plant. In each case where more than one kind of manure was used they were mixed in equal proportions, and the exact quantity given. The plants were carefully attended to, and their condition and results noted at the time.

No. 1. Nitrate of soda and muriate of potash.
" 2. Superphosphate of lime, muriate of potash, and sulphate of iron.
" 3. Sulphate of ammonia, and muriate of potash.
" 4. Muriate of potash, sulphate of iron, and nitrate of soda.
" 5. Sulphate of iron, and muriate of potash.
" 6. Muriate of potash.
" 7. Sulphate of iron.
" 8. Nitrate of soda.
" 9. Sulphate of ammonia.
" 10. Superphosphate of lime.

Nos. 2, 5, 6, 7, and 10 were quite a failure; the fruit was below the average size and the foliage had a yellow sickly appearance, indicating a deficiency of nitrogen in the soil. The plants appeared so unhealthy that several persons who were not experienced in plant growing noticed their poor condition. Nos. 3 and 4 produced a moderate crop, and appeared to be fairly healthy. Nos. 1, 8, and 9 were good strong healthy plants, and produced a full crop of fruit. These plants were very similar in condition to others which were supplied with diluted liquid manure from the stables and shippons, but in the end the latter manure produced the most satisfactory results. It may be observed that sulphate of ammonia alone, produced better results than when combined with muriate of potash. Potassic manures have long been considered the best for Tomatos, and yet when muriate of potash was applied by itself it proved to be a failure. In future experiments we shall endeavour to find out whether nitrate of potash, or kainit, will produce any better results than muriate of potash.

YIELD, AND VALUE, AND VARIETIES GROWN.

The first ripe fruits were gathered on May 4th, 1896, and the average yield was over 8½ lbs per plant, the total yield of fruit from 130 plants being 1127 lbs. The price varied from 6d. to 1s. per lb. The total amount realised, after payment of carriage and commission, was £35 6s. 6d., thus averaging 7½d. per lb. The varieties grown were Hackwood Park and Neild's Seedling. The former is a prolific variety, but its fruit is too large to suit the requirements of consumers. The latter variety is a seedling of my own raising. It was tried at Chiswick last year, and was given an "Award of Merit" by the Royal Horticultural Society, who state it is of "compact growth, great cropper, clusters overlapping each other, averaging six fruits each; moderate size, round, smooth, dark red, solid, and good flavour." Smooth fruits of medium size are more highly appreciated in the market than large ones. In nearly every instance the smaller fruits realised from 1d. to 2d. per lb. more than the larger ones.

PACKING AND PREPARING THE FRUIT FOR THE MARKET.

Large quantities of fruit are destroyed by bad packing. In many instances the fruit is placed loosely several layers deep in baskets or boxes, with the result that in most cases it arrives at its destination in a bruised and damaged condition.

The best system of packing is to place the fruit in a single layer in shallow boxes. The boxes should be strong and light, holding from ten to fifteen lbs., and when a larger quantity is to be sent away a number of boxes could be placed on the top of each other, and fastened together with strong cord. A little soft hay, sphagnum moss, or wood wool should be placed in the bottom of the box, and on this a covering of soft white paper. The fruit should be packed closely together, stalk end downwards. When the box is filled, or the requisite quantity put in, the fruit should be covered with paper and all vacant spaces filled with the packing material before the top is put on. Too much emphasis cannot be laid upon the absolute necessity of packing the fruit firmly, to prevent it moving about, as it would thereby become damaged. Neither grass, nor any damp material, should be used for packing Tomatos, for if they remain in the boxes for several hours heating or fermentation takes place, which materially injures the quality of the fruit. When Tomatos are sent to market or have to undergo a railway journey, it is advisable to gather them before they are fully ripe, as in that state they should reach their destination in a better condition. It should, however, be remembered that probably there is no fruit that deteriorates more quickly than the Tomato after it is removed from the plant. It is owing to this fact that good home-grown Tomatos are so incomparably better than those imported. When Tomatos have attained their full size, and are cut off in a green state, they will subsequently assume an appearance of ripening, but there can be no comparison between such fruit and that which is ripened on the plant.

EXPERIMENTS IN GRAFTING.

An interesting experiment was made by grafting the Tomato plant on the stem of the Potato, and *vice versa*. The Tomato grafted on the Potato produced a good crop of fruit, although not equal in quantity, nor were the individual fruits so large as those produced by plants growing on their own roots. The Potato stock did not produce the least perceptible change in the flavour of the fruit.

A curious circumstance in connection with this union was that the Potato tubers emitted roots quite freely where, under normal conditions, buds are produced. The Potato stems grafted on Tomato plants did not grow so freely as the Tomato on the Potato. Small tubers were produced in the axils of the leaves. The tubers were quite green, and in course of growth produced a number of small buds. —*W. Nield, F.R.H.S., Holmes Chapel, March 15th, 1897.*

HARD-WOODED PLANTS AT BUSH HILL.

IN addition to the great reputation possessed by Messrs. Hugh Low & Co., with regard to all that relates to Orchids, they have long been celebrated for their cultivation of hard wooded subjects, more particularly those commonly known as New Holland plants. Orchids are the flowers of to-day, Heaths, Epacrises, and Acacias are the flowers of yesterday, but it is not at all an extravagant expectation to anticipate another time in the future when the sun of popular favour shall again shine upon what is after all a highly decorative class of plants. The Messrs. Low's establishment at Bush Hill Park, Enfield, is one of the largest of those complex machines—a modern nursery. The glass department is especially spacious, and indeed it had need so to be, considering the great variety of the subjects that receive skilled attention, as well as the vast numbers in which they are annually turned out. We may say at the commencement that the standard of attainment with regard to cultural skill there exhibited is great; and more, that it is maintained throughout, no matter what is taken in hand.

ERICAS.—There is but a moderate demand for these at the present time; that is to say moderate as compared with former years, when they were at the flood-tide of public favour. Actually, however, considerable numbers are still sent out each year. E. wilmoreana is one of the best late flowering forms, and when properly looked after is a great success. The variety E. w. caliculata is similar to it with regard to size and habit, but the flowers have a strongly developed petaloid calyx, bright rosy pink in colour. This is about half the length of the corolla, and gives the flower a very distinct appearance. E. regerminans has pale red flowers, rather small, but very attractive in the mass. They are also very sweetly scented—an additional attraction. E. persoluta alba, a well-known variety, was represented by large batches of bushy healthy plants, in large forty-eight or small thirty-two sized pots. All of the plants were showing well for flower, and will make a brave display in the near future. E. melanthera is a very free flowering species of exceedingly compact habit. The flowers are of medium size, and of a charming pink shade. The exserted black anthers are at once distinct and attractive. E. gracilis is often seen upon the markets through the winter months, and may ordinarily be depended upon to come in for the Christmas season, when the spikes of rich purple red flowers are well received. Some later plants are still in flower at the Bush Hill Nurseries.

Amongst the hardwood section of heaths which is now very seldom seen in private gardens are not a few pretty plants. They are usually regarded as being difficult of culture, and this has doubtless militated against them. E. Holfordii is well worthy of attention. It is very dwarf in habit, and produces its light red tubular flowers in terminal whorls in the same way as the better known E. fairieana. E. vernis coccinea bears curious subglobose flowers, singly and in twos and threes at intervals along the stem. The flowers are large and bright red in colour.

EPACRISES.—When well grown, as they are by Messrs. Low, these plants have few compeers, and for conservatory decoration in the winter months they are all that could be desired. A single well-flowered plant is brilliancy itself; what then must be said of large batches of such plants all flowering from end to end with colour? for such was the sight that we were favoured with. E. Alba Odorata is a well-known white of great beauty, but it is far outdone by E. Her Majesty. This has pure white flowers fully double the size of the former variety; moreover, it is taller and more vigorous, for plants in 48's were many of them bearing racemes of flower fully 18 in. in length. E. Diadem is the counterpart of E. Her Majesty as far as size of flower and habit go, but the colour is a rich rosy carmine. Other notable forms are E. exquisita, rosy magenta, and Viscountess Hill, brick red, both of them being varieties of a good many years standing.

ACACIAS.—Bearing in mind the size of this genus with regard to the number of species it contains, as well as its importance from a garden point of view of the decorative value of the plants, and the variety of habit that they manifest, it is a pity that Acacias should be so inadequately represented in our greenhouses. A. armata may be seen almost anywhere it is true, and the same may be said of A. dealbata, and A. Drummondii, but beautiful as these are, they are by no means all that are deserving of cultivation. A. riceana, for instance, cannot be surpassed for grace and elegance, with its huge pendulous trusses of pale-yellow flowers. Several grand specimen plants possessed by Messrs. Low were a perfect picture. A. undulata is very close to A. armata but differs from it in having larger heads of paler yellow flowers, and the stems are pale red instead of white. A. pubescens makes a very handsome specimen, and is very suitable for planting out in the conservatory. It has long sub-pendulous branches, and the bright-yellow flowers are disposed in compound axillary racemes. The leaves are bipinnate, and with the younger stems thickly clothed with short downy hairs. A. cordata with its long dense spikes of pale-yellow flowers, and its small cordate phyllodes shows a marked difference of habit from the foregoing. In a small state for window decoration it is a great success. A. platyptera was out of flower at the time of our visit, but earlier in the season had been very gay. It is grown in considerable numbers in common with the other forms noted.

GREENHOUSE RHODODENDRONS are a specialty at Bush Hill, and the collection comprises some charming varieties. One of the finest is Lady Alice Fitzwilliam, and it is certainly the largest in point of size. The pure white blooms measure between four and five inches in diameter, and are deliciously fragrant. Princess Alice is a white variety with pale yellow stripes. Gibsoni is white striped faintly with pink. Countess of Sefton is white with a large light yellow blotch at the base of the tube internally. Multiflorum a pink flowered variety has rather small flowers, but is of dwarf and compact habit and very floriferous. Exoniensis is white flushed with pink, with a yellow blotch at the base of the tube. All the above are very sweet-scented. The plants themselves were shapely samples of their kind in small

thirty-two-sized pots, thus proving that they do not need a great deal of room to accomodate them.

In addition to these, Azaleas are grown in large quantities, all of the leading kinds being represented in great abundance. Roi d'Holland, red, flushed with vermillion; Remembrance, white, flushed with rose; and General Postmaster Stephens, crimson red; were a few of the most noticeable. Besides the plants in flower we observed a large stock of younger ones. Many of these were planted out in frames in light peaty soil, and had recently been cut back to induce a bushy growth. By next autumn these self same plants will have developed into saleable stuff thickly set with buds, and will command a ready sale.

Miscellaneous Hard wooded Plants.—The extensive and comprehensive character of the collection of this class of material, within the confines of the nursery became more apparent at every step. A nurseryman must perforce grow what he can sell most easily, but still plants with a past as well as a present met us at every turn. Chorizema Lowii has had its praises sung too often to need further recommendation. It is of hybrid origin, being the result of a cross between C. elegans and C. illicifolium. The progeny retains the Holly-like foliage of the latter species to its no small advantage. It should not be trained to any definite shape, but allowed freedom of action after the first stages have been passed. Polygala dalmaisiana is another old fashioned favourite that is still thought highly of. A batch of symmetrical and floriferous plants arrested our special attention. At this season of the year we can see Cytisus racemosus hawked round every street on each coster's barrow, but we do not so often see C. elegans, which is a far finer form, and one that only requiries to be better known to supersede it entirely. This fact is demonstrated very forcibly when the two plants are seen side by side. The leaves are larger, stouter than in C. racemosus, and glabrous. The colour of the flower is a deeper yellow and the individual flowers are larger, whilst the racemes are much longer. Besides this two crops of flowers are obtained, smaller side racemes being pushed up when the principal ones have faded.

Aphelexis humilis purpurea is grown to considerable extent. The white shining leaves show off the light purple flowers to great advantage. A. humilis is dwarfer, and the flowers are deep crimson and very showy. The flowers may be included amongst those popularly known as everlastings since they keep their colours for a very long time. Correa cardinalis was represented by shapely little plants full of the long bell-shaped red flowers with the bright yellow tips. Witsenia corymbosa is distinctly a plant with a past since it is rarely seen now, although at one time pretty common. The peculiar arrangement of the erect, rigid, sword-shaped, clustered leaves imparts a grotesque appearance to the plant. Lomatia elegantissima is a pretty foliage plant with bipinnate leaves, the ultimate segments being pinnatisect, although it has a somewhat stiff appearance. We must not forget to make mention of the Boronias, and with them we must bring to a close a list that has already assumed cumbrous proportions. The delightful fragrance exhaled by hundreds of B. megastigma, probably the most sweet-scented of all, is not easily described, and when to this desirable qualification we add the quaint beauty of the flowers it is not surprising that the plant is thought highly of. B. heterophylla with its large rich carmine blooms is also a gem. B. elatior is rather weaker in constitution, and not so floriferous as B. heterophylla, and is decidedly inferior to it in floriferousness.

READING AND DISTRICT GARDENERS' MUTUAL IMPROVEMENT ASSOCIATION.

An Interesting Meeting.

The usual fortnightly meeting of the above was held in the Club Room, "British Workman," on Monday evening last, and was largely attended. The president, Mr. C. B. Stevens, occupied the chair. Apart from the lecture, the feature of the meeting was a presentation to the honorary secretary as an acknowledgement of services rendered to the association. After the formal business had been transacted, Mr. C. B. Stevens, who had been requested by the chairman of the association, Mr. T. Neve, to make the presentation, said he wished someone else who had known Mr. Pound longer than he had, had been selected to occupy the position; yet he felt it a great honour to act on behalf of the members in asking Mr. Pound to accept the present which had been so liberally supplied to by the members. He was, from the first time be attended their meetings, struck with the singular ability of their secretary, who had proved himself quite worthy of the token of esteem they were paying him. Mr. Pound feelingly replied, and thanked the members most sincerely for the kindness they had shown him in presenting him with such a handsome gift, and also the president for making the presentation and for the kind words be had spoken.

Messrs. Phipps, Martin, Turton, Hinton, and Tufnail also spoke of the services the recipient had rendered to the association. The gift consisted of a purse of gold (£18) and an album containing the names of 138 subscribers, amongst whom were the Rev. A. Cheales, Messrs. C. B. Stevens, the president, C. T. Murdock, M.P., Martin Hope Sutton, Alfred Sutton, G. W. Palmer, F. Cowslade, Alfred Palmer, W. H. Palmer, Sutton & Sons, J. T. Strange, Miss Russell, Miss King (Burghfield), Miss Harman (Sindlesham), &c. Proceeding with the usual routine of the meeting, the president called upon Mr. Townsend, The Gardens, Sandhurst Lodge, to read his paper on "Summer Bedding and Summer Flower Gardens, also the Water Garden."

Mr. Townsend first dealt with flower beds in front of the drawing room or dining room windows, and said that he gave preference to having the beds as large as space would permit, something after the beds in Hyde Park, not a fantastical design of small beds. Illustrations were given as to the best beds, the plants to be used, and the distance they should be planted apart. The plants mostly used at Sandhurst Lodge and strongly recommended by the lecturer were Fuchsias, Ivy-leaved Pelargoniums, Lobelia cardinalis, Verbenas, Petunias, Violas, fibrous-rooted Begonias such as Sutton's Crimson Gem, Princess Beatrice, and Afterglow, Ajuga, Phlox Drummondii, Mimulus, Gladioli, Cineraria maritima, Ricinus Gibsoni, Maize, Salvia (Sutton's Scarlet Queen), Marguerites, Heliotrope, Euonymus radicans variegata, Zinnias, Habrothamnus, Erythrinas, &c. Passing on to the borders this was certainly the best and prettiest of all out-door flower gardening if not made too formal. What could look better than a good wide border filled with Cupressus, Retinosporas, Junipers, Acers, Japanese Maples, Hollyhocks, Michaelmas Daisies, Cannas, Ricinus, Hydrangeas, Liliums, and tuberous Begonias? Or another with hardy plants leaving spaces for the introduction of tender plants and annuals as the warmer weather approached so that the border should contain flowers in bloom the whole summer through, where there may be planted herbaceous Phlox, Delphiniums, Cannas, Lupins, Lavatera, perennial Sunflowers, Dahlias, Rudbeckias, Pyrethrums, Lychnis, Sweet Rocket, Spiraeas, Montbrettias, Lobelia cardinalis, Gypsophilas, Picotees, Carnations, Calceolarias, Asters, Sweet William, Mimulus, Aubrietias, Zinnias, Godetias, Funkias, Begonias, &c.?

Reference was made as to the grouping of pot plants about the lawns, by inserting the pot to the rims in the grass. This is carried out at Sandhurst and greatly admired, Fuchsias, Plumbago capensis, Plumbago capensis alba, Solanum jasminoides, Habrothamnus, and Swainsonias, lending themselves admirably to this purpose. The water garden was then touched upon, the lecturer dealing with the various plants most suitable for different sized ponds. The paper was such an exhaustive and practical one on these particular subjects that questions were not asked, and but little discussion took place, although many interesting remarks were made by Messrs. Martin, Neve, Lees, Hinton, Turton, Callaghan, &c. as to the work carried out by Mr. Townsend at Sandhurst Lodge where every opportunity and encouragement is given by the owner, Sir William Farrer, for the developing, in its highest degree, of this fascinating part of floriculture.

A beautiful collection of Cinerarias was sent by Messrs. Sutton & Sons, consisting of their well-known florist varieties and Cineraria cruenta hybrids; also specimens of Cineraria cruenta, the original type introduced from the Canary Islands in 1777. The object of the exhibit being to demonstrate the result of a cross made between C. cruenta and the flowers of the present day, thus showing one generation removed from the original. The hybrids are sweetly scented with a hawthorn perfume and are exceedingly useful for cutting.

GARDENING MISCELLANY.

RICHARDIA ELLIOTTIANA.

This beautiful yellow Arum is an acquisition to the list of decorative flowering plants, and when it becomes more plentiful and to be obtained at popular prices it will find a place in every greenhouse and conservatory. There is already a great demand for it, indeed much greater than the supply. I believe a well-known firm would now gladly give treble the price charged last year for plants again for stock. A fine spathe with me finds many admirers. Its colour commends itself, being a beautiful golden-yellow. The spathe is more cup-shaped at the base, and rounder than the common Arum, is not so flat, nor does it roll back so far when opening. It is quite green on the outside, and becomes yellow with age, the green gradually disappearing into lines or veins contrasting harmoniously with the ground colour of the spathe. The leaves, borne upon stout leaf-stalks prettily spotted, are broader at the base, about as broad as long, and not so deeply sagittate, and more obtuse at the apex; are deep green, and spotted with white blotches. I fertilised and obtained seed last year from this plant, but whether my plant was too weak to ripen seed properly I do not know, but the seed when gathered was not perfect. I only succeeded in obtaining one seedling. Young suckers or buds taken from the parent rhizome grow very rapidly.—*A. P.*

AMARYLLIS AT AIGBURTH.

Not only do Messrs. R. P. Ker & Sons increase the stock of this popular plant, but this year the flowers certainly are a grade onward in the right direction. The colours certainly fully hold their own, and the form shows more substance and a better outline. The following, perhaps, might be considered the cream a few days ago:—Terentian, large bright crimson, a noble flower; Old Port, rich dark maroon; Ruby, glowing dark crimson; President, red, with white bands; Midas, good light carmine; Excelsior, nearest approach to white, the lower half of the flower pure white; Eurydice, large flower; Chiron, fine crimson; Mercury, scarlet; and Scarlet King, scarlet. The season promises to be a prolonged one, many of the bulbs at present just showing the flower spike. The stock from the latest batch looks in good health, and is clean throughout.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Odontoglossum Flower.—*J. W. Potter*: The flower sent was not O. crispum andersonianum, but a pale variety of O. odoratum, and belonging to the type usually named O. odoratum baphicanthum. You will notice that the column is furnished with two slender horns or wings, which are characteristic of O. odoratum. On the other hand, the wings of O. crispum andersonianum are broader, shorter, and more fringed or cut. The strong scent also points to O. odoratum.

Colour of Odontoglossum Rossii.—*H. G.*: The petals of this species are usually white, and the lip even of a purer white; but there are varieties of it in which these parts are more or less tinted with rose. One well marked variety is named O. Rossii rubescens, which usually has its petals more or less rolled back and of a warm rose colour, as is the lip. Possibly it is a new variety, but you had better watch it till it is a week old, and see what colour the flower assumes. The colours sometimes change a bit with age. If you could send us a flower after it is a week or ten days old we could tell you whether or not it is any of the named varieties, or worthy of a separate name. The seed pods of Orchids are usually green, brown, or gray. We have never seen a scarlet pod, though some of them may be reddish. Are you sure the pods given you are Orchid ones?

Cyrtoceras reflexum.—*W. B. G.*: This plant has had at least half-a-dozen names applied to it, and good authorities consider that it should be placed under Hoya, making it Hoya multiflora. If the name Cyrtoceras is to be retained, then C. multiflorum would be the name of the species, so that there was no mistake in so putting it. The oldest correct name is always considered the one that should be retained.

Beetles in a House.—*David Stuart*: There were two species of beetles in the box you sent. Both are often found in old houses, the larva living in old wood, seeds, &c. The larger one, Niptus hololeucus, is very well known to most people, owing to its spider-like appearance. The smaller one (Niptus crenatus) is not so common. They attack dry vegetable matter of any kind, and are sometimes abundant enough to be destructive. It seems strange, however, that they should behave in the way you mention. A good plan would be to wash the woodwork occasionally with carbolic soap. Pyrethrum powder, otherwise known as buhach should be dusted in all cracks and crevices of woodwork. By perseverance with these two remedies we should think there would be no difficulty in getting rid of the pest.

Book on bulbs.—*G. W.*: We do not know that there is any book which deals entirely with the forcing of bulbs, but there is a good book entitled *Bulbs and Bulb Culture*, by D. T. Fish. It is published by L. Upcott Gill, 170, Strand, London, W.C. Price 5s. There is a small pamphlet on *Lily of the Valley*, dealing with the forcing of it in various ways, and Published by L. Upcott Gill. Price 6d.

Names of Plants.—*M.D.*: 1, Pyrus japonica; 2, Lonicera Cavendishii; 3, Forsythia viridissima; 4, Cornus mas; 5, Erica carnea.—*J.H.*: Adiantum formosum; 2, Adiantum diaphanum; 3, Polypodium plesiosorum appendiculatum; 4, Asplenium bulbiferum minus; 5, Selaginella uncinata; 6, Selaginella Braunii.—*T. Hadley*; 1, Scilla bifolia; 2, Ornithogalum umbellatum; 4, Saxifraga crassifolia cordifolia; 4, Saxifraga sancta; 5, Lamium maculatum aureum; 6, Omphalodes verna,—*W. A.*: 1, Lycaste aromatica; 2, Laelia pumila; 3, Dendrobium crepidatum; 3, Dendrobium crassinode.—*Omega*: The Heath is Erica carnea; the Spiraea is S. Thunbergii; the blue flower is Chionodoxa Luciliae.

Wright's Fruit Manual.—*J.D.*: The work you mean is published by Messes. J. S. Virtue & Co., 294, City Road, London, E.C. It is published in 2s. parts and is sold only to subscribers. We are informed that six parts are now out. The price of the whole book we cannot say,

Compost for Orange trees in tubs.—*Omega*: The Orange likes a substantial soil in which to grow, and does not require frequent repotting, as it may be top-dressed annually and supplied with weak liquid manure during the time its fruits are green and growing. Small shifts are better than large ones. The compost should consist of rich, fibrous, yellow loam, to which some well rotted manure has been added. If there is plenty of fibre in the loam, manure may be dispensed with till top-dressing is required. Give very good drainage, and use sufficient sand in the compost to keep it open.

Vines to associate with Black Hamburgh.—*Omega*: Under the same conditions which enable Black Hamburgh grapes to give satisfaction, you may with safety plant Foster's Seedling, Buckland Sweetwater, Madresfield Court, Royal Muscadine and Raisin de Calabre. We have also seen Muscat of Alexandria, Mrs. Pince, Duchess of Buccleuch, Trebbiano, Gros Guillaume and several others placed together, but not started quite so early as you mention. You might however stick to the first six, of which Black Hamburgh and Madresfield Court are black, the rest being white grapes.

Tomatos diseased.—*Wildman*: We fail to find any fungus in the stems and leaves supplied, and are inclined to think it is a case of constitutional weakness in individuals. This often occurs in gardens, especially in the case of early batches. The past winter and spring have been particularly deficient in sunshine, which is detrimental to the well-being of Tomatos, which delight in an abundance of sunshine, a moderately high temperature, and a dry, airy atmosphere. We should advocate a drier atmosphere for your plants, and more air to strengthen the tissues. If you want to hurry on the growth of the plants and the ripening of the fruits you might give a little more fire heat with good ventilation whenever the weather is favourable or will permit of its being done. We have seen the young shoots of Pelargoniums behaving in the same way as your Tomatos, and attribute it to general weakness owing to the lack of sunshine.

Communications Received.—D. W. D.—A. P.—Laing and Mather.—J. M. C.—Primula freak.—J. M., B.—Cray.—T. Warminster.—F. Bowden.—S. Gales.—P. G.—Grower,—Vera.—Alpha.—M. N.—T. Jenkins.

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FIXTURES FOR 1897.

APRIL.

6, 7.—Brighton and Sussex Show.
7.—Shropshire Horticultural Society's Show.
7, 8.—Royal Caledonian Society's Show.
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
15.—Linnean Society.
24.—R.B.S. Meeting,
27.—R.H.S. Committees and Lecture.

MAY.

6.—Linnean Society.
7.—R.B.S. Lecture.
8.—R.B.S. Meeting.
11.—R.H.S. Committees and Lecture.
14.—R.B.S. Lecture.
19.—R.B.S. Summer Show.
21.—R.B.S. Lecture.
22.—R.B.S. Meeting.
24.—Linnean Society's Anniversary.
24 to 28.—Bath and West and Southern Counties Show at Southampton.
26.—Gardener's Royal Benevolent Institution, Annual Dinner.
26, 27, 28.—R.H.S. Temple Show.
28.—R.B.S. Lecture.

JUNE.

3.—Linnean Society.
4.—R.B.S. Lecture.
11.—R.B.S. Lecture.
12.—R.B.S. Meeting.
15.—R.H.S. Committees and Lecture.
16, 17, 18.—York Floral Fête.
17.—Linnean Society.
18.—R.B.S. Lecture.
23.—National Rose Society's Show at Portsmouth.
23 to 28.—R.A.S. Show at Manchester.
25.—R.B.S. Lecture.
26.—R.B.S. Meeting.
29.—R.H.S. Committees and Lecture.
29.—Royal Oxfordshire Horticultural Society's Commemoration Show.

JULY.

1.—R.H.S. of Ireland Summer Show.
2.—N. Rose Society Show at Crystal Palace.
7, 8.—County Boro. of Hanley Fête.
8, 9, 10.—Newcastle Show
10.—R.B.S. Meeting.
13.—R.H.S. Committees and Lecture.
13, 14, 15—Wolverhampton Floral Fête.
15.—N. Rose Society's Show at Norwich.
24.—R.B.S. Meeting.
27.—R.H.S. Committees and Lecture.
28.—Beckenham Show.
28, 29.—Chester Fête.
28, 29.—Carnation and Picotee Society's Show at Birmingham.
31 and Aug. 2.—R.H.S. of Southampton Society's Show.

The Gardening World.

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"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 10th, 1897.

DIAMOND JUBILEE VINES AT SWANLEY.—As announced in our columns some weeks ago, some philanthropic gentleman in the neighbourhood of Hextable, Swanley, conceived the idea of buying 60 vines, one for each year of Her Majesty's reign, and bestowing them, first upon residents in Hextable, then to suitable candidates in Swanley, and, lastly, to the inhabitants at Swanley Junction. The ceremony of presentation took place at the Homes for Boys, Swanley on the 27th ult. The boys to the number of 150 assembled in the principal hall at 4 p.m., when Mr. Edward Hanbury took the chair and called upon Mr. Robson (the secretary of the Homes) to state the nature of the proceedings. The generous donor chose to remain incognito, so that the vines had to be presented through the medium of a committee, which was responsible for the selection of poor but deserving and otherwise eligible candidates as recipients of one each of the 60 vines. The execution of the order was entrusted to Messrs. Geo. Bunyard & Co., the Royal Nurseries, Maidstone, who selected the old Sweetwater as the most suitable vine for outdoor culture, on account of its free bearing character and faculty of ripening its berries in the open. The donor had further intimated his intention of offering four prizes of £1, 15s., 10s., and 5s., respectively, as prizes to the four cottagers who should produce the best grapes when the vines came into bearing. Besides benefiting the cottagers, the donor wished to demonstrate what could be done in Kent in the way of grape culture in the open. He, himself, had never before tried vine-planting, but he had planted Apples and Plums against cottages in Herefordshire. The ceremony was completed by the singing of the National Anthem, and in giving cheers for the donor.

THE DAHLIA.*—This Composite flower has undergone many changes since it was first introduced to European gardens in 1789. It seems that the florists took to it at once with the object of improving it; and the pliable nature of D. variabilis readily lent itself to the efforts of man to fashion it more to his own special liking. There were several failures in the early endeavour to cultivate and preserve the tuberous root; but fresh introductions gave the cultivators plenty of opportunity of improving upon their treatment. Continental growers, it would appear, were more successful in preserving and improving the species than were British gardeners; so that we find evidence of the first double or semi-double varieties having been introduced from France in 1814. After that time great advances were made in the improvement of the species, until the shapely and refined show Dahlia was evolved and brought to a great pitch of refinement. The late Dr. Hogg wrote a book on Dahlias when a young man in the prime of life; but up to the close of his career, he could not be brought to believe that Dahlias were any better now then they were 40 years ago, except in size, and that was done at the expense of refinement. He, of course, referred to the show Dahlia; and perhaps after all he was not far wrong. Nevertheless, size is one of the ruling passions of modern florists.

Different times, different tastes, however, and it might well be admitted that the developments among Dahlias since the fifties well merited being recorded. In any case Messrs. Dobbie & Co., Rothesay, N.B., have undertaken the duty by employing several well-known writers to treat of different phases of the history, propagation, botany, cultivation, and exhibition of the various types of Dahlias grown and cherished in the gardens of to-day. A complete catalogue of the varieties grown and catalogued by several of the largest and most frequent exhibitors of Dahlias, arranged alphabetically in their respective types or sections, forms a kind of landmark that should be interesting and useful to future historians in bringing any given record down to date. The value of such lists is undoubtably greatly enhanced by the descriptions attached to each variety. Cactus and decorative Dahlias which were taken into public favour as recently as 1880 (we shall not say originated, except we admit Juarezi as the first true Cactus type, for Dahlias with pointed and narrow petals were well known as early as 1828 and despised) are given in one list with an asterisk attached to those considered by the National Dahlia Society as the best Cactus types. We should have liked to see the two types defined and separated; but we believe it would be a more difficult operation than the troublesome classification of Chrysanthemums; more is the pity, for each race has a particular beauty of its own, and intermediates might well be eliminated, so that the two sections might stand on their own merit.

We have for many years been tickled by the fanciful and artificial distinctions between a show and a fancy Dahlia, and the writer of the article treating of the various sections or types, admits the artificial character of the limitations hedging the two races about. Would it not be simpler to limit the show Dahlia to self-coloured and shaded kinds. Edged flowers might very well be classed with the fancy sorts; for surely there is not much inherent difference between two varieties, one of which has the dark colour at the outer edges of the florets, and the other having the dark hue at the base. All parti-coloured, striped or variegated flowers might very easily be relegated to the fancy section, without prejudice either to the flowers or their exhibitors. Fancy Dahlias are equally as eligible for exhibition as those termed show varieties. Self or shaded flowers generally find the greatest number of admirers, as the highest type of refinement; but where numbers are necessary, these variegated flowers add largely to the diversity of the show stands. Moreover, the Cactus and decorative types proclaim once for all that the general public will no longer be tied down to loving and admiring the old florists' ideal of true beauty, which threatened to strangle the Dahlia in public favour. The entirely different method which now prevails of exhibiting Cactus, decorative, pompon, single and single Cactus Dahlias, has undoubtedly taken the public fancy immensely in recent years, just as Japanese Chrysanthemums, and border Carnations have done in other directions. All these things are set forth in order in the book before us, so that the merest tyro need no longer despair of understanding all that it is necessary to know concerning the practical matters and classification of the flower he loves. The chapter on the botany of the Dahlia is not wasted space, for the rising generation of gardeners, who do not understand these things, loses much in more respects than one. To Dahlia lovers and would-be cultivators the book is well worth the money.

*THE DAHLIA: ITS HISTORY AND CULTIVATION. By Richard Dean, F.R.H S., Robert Fife, F.R.H S., John Ballantyne, Stephen Jones, and William Cuthbertson, London: Macmillan and Co., Limited, New York: The Macmillan Company. Rothesay: Dobbie & Co, 1897. In cloth, 1s 6d.; in stiff paper covers, 1s.

Gardener's Royal Benevolent Institution. — Mr. Arthur W. Sutton, of Messrs. Sutton & Sons, Reading, has given a donation of £100 to the "Victorian Era Fund," of this institution.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, April 13th, in the Drill Hall, James Street, Westminster, in connection with which the National Auricula and Primula Society will hold their annual show, 1 to 5 p.m. A lecture will be given at 3 o'clock by Mr. J. J. Willis, on "Artificial Manures."

Elementary Science Lectures for Children.—Mr. R. Lloyd Praegar, B.A. has just delivered the third of a series of six lectures for children, under the auspices of the Royal Dublin Society, Leinster House, Kildare Street, Dublin. He took for his subject "Plants and their movements," following the science of the subject as laid down by Darwin. The movements of roots, seedlings, and stems, but particularly climbing stems, were explained to a large audience.

Tree-planting Association.—Very few trees adorn the streets of New York, owing to the fact that very few have been planted within recent years. Those still remaining in lower Fifth Avenue and side streets of that neighbourhood, show that trees will grow, and even thrive under suitable conditions in that populous city. The tree-planting Association has been formed to remedy this state of matters. It is calculated that 20 dollars will pay for the planting and maintenance, of a handsome tree for two years, while it is calculated that 50 dollars would be necessary per tree for that time in Paris.

Spring flower show at the People's Palace.—The third annual spring show of the People's Palace and East London Horticultural Society was held in the palace, Mile-end-road, on the 1st inst. There are now 381 members on the register, and at this exhibition they mustered 251 entries, showing an increase on last year. There were about 100 pots of Hyacinths in good form. Tulips were also fairly good. The Society's Silver Medal for a collection of plants was awarded to Mr. A. J. Foster, who deserved it. Mr. F. W. Barnes received a Bronze Medal for three plants in flower; and Mr. H. A. Woodbridge got a similar award for three foliage plants. The show was continued for three days.

The Rainfall in London during January, February and March of the present year, according to the rain gauge measurements taken by the Royal Botanic Society, Regent's Park, was 8·62in. This is about 2in., in excess of the rainfall during the same period for any year in the past 10.

A Pea pill story.—It is said that a Birmingham man bought a box of pills at a local huckster's shop, and took some of them without the slightest effect. He placed the rest in a cupboard, which being damp, the supposed pills began to grow, producing a green shoot. Examination of the pills proved them to be white Peas covered with some white coating.

Cedars in Goodwood Park.—Having ascertained that it is possible to raise Cedars from seed, the Duke of Richmond has resolved on planting them extensively in Goodwood Park and pleasure grounds this year, in commemoration of Her Majesty's long reign. The gales that prevailed during March blew down eleven of the fine trees of Cedrus Libani, which form the remnant of the 1,000 planted on the estate by Charles, the third Duke.

Newcastle-upon-Tyne Summer Flower Show.—We have received a copy of the schedule of prizes to be offered for competition at the Newcastle Flower Show, on Thursday, Friday and Saturday, 8th, 9th and 10th July, in the Recreation Ground. Since last year the schedule has been increased in several instances. The following are some of the principal prizes:—Roses, £75; table decorations, £23; Pansies, £14; and herbaceous flowers, £13. The committee have arranged to re-strike the medal of the society, and gold, silver, and bronze medals are included in this year's schedule. Copies may be had on application to the secretary, Mr. Jas. J. Gillespie, Jun, A.C.A, B.A., LL.B., Cross House Chambers, 54, Westgate Road, Newcastle-on-Tyne.

London Wild Birds.—The County Council of Middlesex has applied to the Home Secretary, asking him to enforce the new Act of August last, which gives greater powers for the protection of wild birds than the Amended Wild Birds Protection Act of 1894. The Home Secretary has enacted a "close time" for the whole year in favour of more than 50 birds, which inhabit or visit the county. Singing birds, such as the lark, nightingale, linnet, goldfinch, and various warblers are included in the list. The cuckoo, owl, magpie, woodpecker, nightjar, tomtit, chaffinch, kingfisher, blackcap, and swallow now enjoy the same protection. As far as we know, no mention is made of sparrows and wood pigeons, which are amongst the commonest of birds in London. The latter are quite tame in Hyde Park, and the other day we noted one nesting in a tree close to South Kensington station. The domestic or rock pigeon is very abundant about St. Paul's and the Law Courts, where they may be seen dodging vehicular traffic as well as pedestrians, picking up food. They are perfectly tame, and we hope to see many others accepting the companionship of man and enjoying his hospitality.

Carshalton, Beddington, and Wallington Horticultural Society held its annual dinner in the Public Hall, Carshalton, on the evening of Wednesday, March 31st. The platform was prettily decorated with Palms and flowering plants, and at the other end of the hall tastefully arranged groups of plants were contributed by Messrs. J. Peed & Sons and Messrs. Silver & Co. Mr. H. Cosmo Bonsor, M.P., presided, and was supported by Mr. E. J. Halsey (Chairman of the Surrey County Council) and various other gentlemen of note. After the usual loyal toasts had been honoured, the chairman gave the toast of the evening, "The Beddington, Carshalton, and Wallington Horticultural Society," and in the course of his remarks spoke of the extensive system of horticultural education which was in practice in the county of Surrey, and bore testimony to the value of the work which their society had accomplished. Mr. Smee, in responding, endorsed the chairman's remarks concerning the horticultural education given to the inhabitants of Surrey. Their society, too, had grown very steadily, and they had been able to put by money, and at the present time had from £112 to £114 in hand against a rainy day. A lengthy toast list was got through, and the proceedings were enlivened by vocal and instrumental music contributed by the "London Glee Singers"

Farm and Garden Pests.—The twentieth annual report on injurious insects has just been issued by Miss E. A. Ormerod. Therein she calls special attention to the fact that the mildness of the winter of 1895-6 had no apparent effect upon insect depredation, but that the subsequent drought was favourable to the propagation of caterpillars preying on leaves. Eelworms have been busy, although not specially so. A list of remedies and preventives is appended.

Orchids at the Sale Rooms. — Odontoglossum wilckeanum seems to maintain its reputation or popularity with buyers, whenever a really fine form makes its appearance, as it did at the rooms of Messrs. Protheroe and Morris, Cheapside, on the 2nd inst. A richly blotched variety was quickly run up to 24 gs., making at least four in relatively quick succession which have commanded high prices. The grand O. triumphans Lionel Crawshay did not change hands at 21 gs. It is a very handsome and richly coloured variety. A hybrid Odontoglot was secured for 6½ gs. The largest O. Pescatorei we have ever seen fetched 9 gs. The individual blooms were as large as those of a good O. crispum. They were white, beautifully tinted with a lively rose on the sepals and petals.

Deaths through Eating Privet.—Quite recently an inquest was held by Coroner Jackson, at Croydon, on Janet Challen, aged nine, and Ada Challen, aged one year and ten months. The elder had taken the younger out, and next morning she was taken ill with pain, purging, and sickness, dying two days later. Her younger sister died in the same way on the following morning. They had been seen eating the young shoots of Privet. Dr. William James Coles was called to see the children, and found them both suffering from enteritis. The post mortem showed acute inflammation of the stomach and bowels, with slight peritonitis; and in the case of the younger, a piece of leaf surrounded by inflammation. Witness believed both children died of acute enteritis, probably through eating Privet, and gave that verdict.

Presentation to Mr. Douglas.—The Committees of the National Carnation and Picotee Society, and of the National Auricula and Primula Society in accepting the resignation of Mr. James Douglas, their late Hon. Secretary, passed the following resolution:—"In accepting with much regret, the resignation by Mr. James Douglas of his post as hon. secretary of the National Carnation and Picotee Society and the National Auricula and Primula Society, the committee desire to place on record their hearty appreciation of the devotion with which he has always striven to promote to the utmost, the interests and prosperity of the societies, and to express to him their grateful thanks for his long, faithful and efficient service." Some members of both societies wish to present Mr. James Douglas, on his retirement, with a slight testimonial—which will be an expression of their own feelings of gratitude and esteem, and at the same time a pleasing reminiscence to him of his long association with the societies. The presentation of a clock and a purse of money will take place at the "Hotel Windsor," after the luncheon, on the 13th inst., the occasion of the annual show of the National Auricula and Primula Society. The following gentlemen were amongst the first who intimated their intention of subscribing:—Martin R. Smith, Esq., £5; Sir John T. D. Llewelyn, Bart., M.P., £5; H. Selfe Leonard, Esq., £5; J. T. Bennett Poë, Esq, £2 2s.; Rev. J. D. Horner, £2 2s.; Robert Sydenham, Esq., £2; J. J. Keen, Esq., £1 1s.; E. Colby Sharpin, Esq., £1 1s.; Dr. Masters, £1 1s.; John T. Hedley, Esq., £1 1s.; H. J. Pearson, Esq, £1 1s.; Chas. Turner, Esq., £1 1s.; Robert Gordon, Esq., £1; Rev. H. Honywood D'Ombrain, 10s. 6d.; William Smith, Esq., 10s. 6d.; E. Charrington, Esq., 10s. 6d.; M. V. Charrington, Esq., 10s. 6d.; Aubrey Spurling, Esq., 10s. 6d.; A. W. Jones, Esq, 10s. 6d.; Ben Simonite, Esq., 10s. 6d.; John Jennings, Esq., 10s. 6d.; E. Hill, Esq., 10s. 6d.; Martin Rowan, Esq., 10s. 6d.; Nigel M. Smith, Esq., 10s. 6d.; W. J. James, Esq., 10s.; A. J. Sanders, Esq., 5s.; J. Gifford, Esq., 5s. Subscriptions to date amount to 50 guineas. *Hon. Secretary and Treasurer, T. E. Henwood, 16, Hamilton Road, Reading.*

Vegetarians are now agitating for soap made of vegetable fat, crockery in which no bone has been ground, and gloves made of vegetable fibre.

Crystal Palace Fruit Show.—The schedule for this show will be issued by the Royal Horticultural Society in a week or 10 days time, and will contain an authoritative list of dessert and cooking Apples, Pears, and Plums, post free for one penny. Donations towards the prize fund will be gratefully received by the Society.

Scottish Horticultural Association.—At the monthly meeting held on Tuesday April 6th in Edinburgh, the President, Mr. M. Todd in the chair, several plants and cut blooms were exhibited—notably some seedling greenhouse Rhododendrons by Mr. Macmillan, Trinity Cottage, and by Mr. Brown, Mayfield, Trinity. Some very fine Neapolitan and Parma Violets and Niphetos Roses were shown by Mr. Brough, Duntreath Castle. A most interesting Lecture was given by Mr. A. Chalmers, Manager to Mr. David W. Thomson of Frederick Street Edinburgh), on "A Trip through the Bulb Farms of Holland." The use of some good lime-light views made a very good lecture, even more intellectual and entertaining. On the motion of Mr. A. Mackenzie (Treasurer) a very hearty vote of thanks was accorded the lecturer. A number of new members were elected to the association. The paper for next month (the first Tuesday in May) will be; "The propagation of the Tuberous Begonia" by Mr Burgoyne of Beech Hill.

Soils and Manures.—This was the title of a lecture delivered recently at Goring to the members of the "gardening class," by Mr. D. A. Gilchrist, B. Sc., Edin., director of the Agricultural Department of the Reading University Extension College. The Rev. L. J. Wallace presided. The first point considered by the lecturer was the effect of the climate on the soil, for it largely depended upon the amount of rainfall and sunshine what the soil was capable of producing. As an instance of this they obtained spring flowers much earlier in Cornwall and Devon than they could in that district. The reason was that, owing to the action of the Gulf stream the west and south-west of England was much milder than, and the rainfall was about double that of, the east, and there were many more hours of sunshine in the east than in the west. By means of a geological map embracing a wide area around Streatley, the lecturer pointed out the kind of soils in their locality. Dealing with chalky soils he stated that water always drained away from chalk, and that many parts of Oxfordshire would have made better residential districts if water could be obtained more easily. In the comparatively small area of the garden it was possible to convert a thin chalky soil into a strong useful medium, but this could not be done on the farm. With clay soils the great difficulty was to keep them in good physical condition. They must take care never to work a clay soil when it was wet. Soils were sometimes spoken of as spend-thrifts and misers. Sandy soils were the spendthrifts, because while perfectly willing to give up the plant food contained to the plants, they were also liable to have these ingredients washed out of them by the rains. Clays were the misers, because although they contained plenty of plant food, they were unwilling to part with it. In speaking of the application of manures Mr. Gilchrist pointed out the best kinds for different soils. Stable manure was good and useful, unless allowed to get hot when much of the nitrogen would be lost. It was a popular but mistaken idea that manure should be well-rotted before it was applied. It should be kept as near the surface as possible, so that it could mix with the upper six inches of the soil.

ORCHIDS AT CHARDWAR.

The Orchid houses at Chardwar are now very gay; one plant of Dendrobium aggregatum having no less than 57 spikes, is a lovely sight. Several grand plants of Dendrobium superbum giganteum have really gigantic blooms, and a fine spike of the rare and distinct D. atro-violaceum (a lovely variety) is very conspicuous. The rarely seen D. Lowii, also a lovely form of D. Adrasta, and a good D. Rubens, are also fine. There are still some grand spikes of Phalaenopsis amabilis, P. gloriosa, P. stewartiana, and P. leucorhoda, and the plants are in rude health and vigour. They are a source of great pleasure to the owner.

The cool houses are now very bright and attractive. Among many good things in bloom, I noted a magnificent variety of Odontoglossum ruckerianum, several good O. andersonianum, many fine O. crispum, several good forms of O. luteo-purpureum, and O. Hallii. O. Edwardii was also very distinct, and carrying very strong spikes. Many fine forms of O. Pescatorei were noted, and some grand forms of O. Rossii. I also observed a good form of Maxillaria sanderiana, and some good Odontoglossum cirrhosum. The Cattleyas in bloom included several good varieties of C. Trianaei, C. Mendelii, some rather distinct forms of C. Schroderae, and a marvellous variety of C. dolosa. The latter variety seems quite at home, and grows and flowers very freely.

There is also a great variety of Cypripediums, and one very dark form of Miltonia Roezlii. The plants of Chysis bractescens are in grand form, and several plants in bloom suspended in one of the houses are quite a feature. I never remember seeing so fine a lot; and when grown and flowered as they are at Chardwar, they would be admired by most Orchid growers. I have only noted a few of the good things in bloom in the collection, but may add that the plants generally are making good progress, and the collection promises to be the finest in this part of the kingdom.—*J. C.*

FORCED STRAWBERRIES.

I am sending you a few fruits of Royal Sovereign and Vicomtesse H. De Thury. Both varieties were started on the same date, namely, November 30th, when I closed our earliest Peach house. I gathered the first dish on the 27th ult., so you will see they have not been hard forced. The two varieties ripened together as near as possible. You will conclude by the largest fruit (Royal Sovereign) that it is a good forcer, and a long way ahead of the Vicomtesse as to size, and according to my taste, equally as good in flavour (please give your opinion as to this). I potted up 250 of Royal Sovereign and am more than satisfied as to its behaviour. It is a strong grower, sets its fruit exceedingly well, and swells up to a good size, for this date. I shall certainly discard the other kind, and depend principally upon the one I am writing in praise of for my supply in pots. It throws up its flower stalks to a good height, an advantage in early work. Both kinds are in 5½-in. pots. Royal Sovereign carries six, and Vicomtesse nine fruits respectively. —*J. Mayne, Bicton.*

[The fruits were all that our correspondent claimed for them. Vicomtesse Hericarte de Thury is a very good Strawberry for general purposes; but if large fruits are desired it is nowhere. Its mild, sweet flavour loses much by being forced, becoming comparatively tasteless. Its fruits are small and conical. Royal Sovereign, on the contrary, gains largely in appearance by the fine size of its fruits, which are often broad and flattened at the apex, like a cockscomb. The rich, aromatic flavour of the fruit is acidulated, and this is largely retained, even after forcing, giving the taster the true smack of fruit grown in the proper season under natural conditions. We can, from observation, corroborate Mr. Mayne's statement as to the superiority of Royal Sovereign for forcing purposes.—Ed.]

STANDARD CHRYSANTHEMUMS.

The grafting of standard Chrysanthemums is a hobby that I have indulged in for a number of years with very gratifying results. These grafted specimens never fail to attract the public at our autumn exhibition. It is such a relief from the stereotyped specimens we are all so well accustomed to that I have taken the liberty of sending you a photo of one my productions, which was awarded a Certificate of Merit at one of the Dundee Chrysanthemum exhibitions.

For grafting plants of this kind I preserve a few of my last year's plants with long, straight stems 3 ft. or 4 ft. above the pot. Some time in March, or during the spring months, I place them in a newly-started Vinery until they commence to grow, and the bark will rise freely. I make a T-shaped cut in the bark of the stem in the same way as I would for budding a Rose, selecting for grafts clean, healthy tops about

3 in. long, taken from plants of this year's growth. I take a slice off one side, insert the graft in the bark, and tie it tightly with a piece of matting to exclude air and moisture as much as possible, this being all that is required. I prefer to select the smaller or decorative flowered kinds for grafts that will all bloom at the same time, and with colours that will harmonise with each other. I have had as many as eight kinds on one plant. After a sufficient number of grafts has been inserted, I put the pots on the floor, bring the heads through the stage, and spread some damp moss on the stage round the head of each, and then put a bell glass over them to keep them from flagging until the grafts have taken and started growing.

Before placing the plant out of doors in May I see that all the grafts have been carefully tied to prevent accidents. I never pinch the shoots, but allow them to grow on and break, that is, develop the buds of their own accord, which they will do freely. I then train the shoots to form a head about a yard across. I have had plants of this kind five years old, which never failed to produce an abundance of bloom. After they are done flowering I keep them cool all winter; and before starting into growth in the spring I give them a prune with a pair of hedge shears, repot them with a little fresh soil, and replace the drainage, which is about all they require. The sorts grafted on this plan are Soeur Melanie, Eclipse, Roi des Precoces, Pink Christine, Golden Christine, Isadore Ferrel, Julia Lagravere, and Elsie; but of course this is simply a matter of taste. I would like to see a greater number of specimens of this kind exhibited this autumn, and I hope some of your younger readers will try their hands at it. I may say that I never staged a plant of this kind at any exhibition but I always got a medal or an acknowledgement of some kind. I merely mention this as a means of encouragement for others to try.—*J. M., C.*

[Our correspondent sent us a photograph of one of his standard specimens, but unfortunately it was too heavily shaded to come out well as a reproduction. The plant in question was twice in succession awarded the Silver Medal of the Scottish Horticultural Association at Edinburgh, beating all the other plants staged in competition against it. On one occasion there were as many as nine competitors. The specimen was one of the most admired in the Waverley Market.—Ed.]

AMARYLLIS AT KEW.

Ten or fifteen years ago the improvements of garden plants at Kew, by means of cross-breeding and hybridisation, would have been considered beyond the pale of the true work of the national botanic garden. Since then, however, more progressive views have been entertained by the authorities, and ample room has been found for developing the popular side of gardening, side by side, so to say, with true botanical work. The fine display of bulbs, both in beds and on the grass, and which has continued in unbroken succession from the middle of February, to be prolonged by Lilies, Galtonias, &c., almost to the end of the season, is evidence of a successful endeavour to please the general public. In speaking of hybridisation we need only recall the impetus given to the improvement of Streptocarpus by hybridising S. Dunni with S. Rexii and allied species. This was practically the origin of the fine modern races, or rather pioneer work leading up to what has been done since.

Amaryllis, or, more properly speaking, Hippeastrums, have been taken in hand within the last few years, and some fine groups of seedlings and named varieties, mostly the former, may be seen in the greenhouse, No. 4, where they have been producing a gorgeous display for some time past. The seedlings have been raised at Kew by the intercrossing of good varieties. Large quantities of seedlings are in various stages of progress, from those that were germinated last year to those that are several years old. The seedlings are planted out in beds in span-roofed pits until they reach the flowering stage, which they do very rapidly with a minimum of care and attention. The bulbs are potted up singly after they reach the flowering stage. Mr. Baker, of the Herbarium, has been examining those in flower with the view of determining how many species are concerned in the parentage of the modern race, and of that we shall hear more anon. His book on "The Amaryllideae" shows that he has done much botanical work for this natural order.

The first attempt was made in 1891 by the crossing of the famous old Continental variety Empress of India with Thomas Speed. The flowers of the progeny are small, but of good colour and shape. The finest varieties, however, are many of those now flowering for the first time, and which were raised from crosses made in the spring of 1894. This will give an idea of the rapidity with which seedlings may be grown to the flowering stage. At the date mentioned Aztec was crossed with a variety here named Soames' Seedling, resulting in numerous seedlings of first-class merit. The tube in many cases is almost obliterated. The flowers in one case are dark crimson shaded with maroon in the throat, and showing a 3 to 5-rayed star. The segments are broad and overlapping. Another from the same cross is red, with purple-tinted midribs, a 6-rayed star, and a crimson base. Another is dark crimson to the base, shaded with maroon in the throat. Very fine is a fiery-crimson sort, having the basal half maroon-crimson. The flower is regular and handsome, in fact, one of the very best. A huge crimson-red flower, with regularly recurving segments, measures 8 in. across, and only 3 in. deep. Another massive flower has practically no tube, and is deep crimson, tinted with maroon in the lower half, and very dark on first opening. The above half-dozen first-class varieties from one cross prove that a very lucky, or shall we say judicious, hit was made.

The reverse cross (Soames' Seedling × Aztec) has also given rise to some beautiful forms having a family resemblance to the above, but different. A large flowered one is regular, and of a brilliant crimson-red with a short-rayed star. Another is almost without a tube, and crimson-red, tinted with purple on the midribs; the base is green, with six white rays proceeding from it.

Her Majesty crossed with Monarch has given rise to a bell-shaped flower of a crimson-scarlet. Two scapes from one bulb, in the aggregate, carry eight flowers. Her Majesty crossed with Zitella has given rise to a number of seedlings having a pure white ground. One is ornamented with crimson lines; and another has a few red lines on the upper three segments. A third bulb carries six large, funnel-shaped flowers, that are pure white, lined with red on either side of the midrib.

Landseer crossed with Soames' Seedling has given rise to a regular flower of medium size, and rich crimson to the very base, tinted with maroon in the throat. Two scapes from one bulb bear seven handsome flowers. The above are but a few of the many fine varieties in the collection raised at Kew.

Gleanings from the World of Science.

The undermentioned subjects were brought up at the meeting of the Scientific Committee of the Royal Horticultural Society on the 25th ult.

Bulbs with Arrested roots.—With reference to the samples sent to the last meeting by Mr. Atkinson, Mr. Douglas was of opinion that the treatment had perhaps not been quite advisable, for he thought that they should have been put out of doors, and not in a shed, and covered with 6in., of cocoa-nut fibre. If, however, there was something deleterious in the compost sent for inspection, this could be at once ascertained by analysis. Such, however, would be beyond the province of the society.

Wireworms among Carnations.—Mr. Weguelin of Torquay asks for remedies against this trouble. The suggestions of linseed cake, Carrot, scooped out Potatos, as for slugs, &c., were made, but it would appear that in the present case they are too numerous for such traps, as indeed the writer admits. Gas lime was recommended as the only very efficient remedy, but it might injure the Carnations. The land having been well dressed with lime or soot shows that these ingredients are quite insufficient, though gas lime would probably have been effective.

Carnation Leaves Diseased.—Mr. Fagents of Honey Pots, Westfield, Woking, sent some leaves with peculiar red streaks upon them. They were forwarded to Kew for further investigation.

Germination of Mushrooms.—Inquiries were made by Mr. Baker of Cobham Park as to somewhat contradictory statements in books upon this subject, as in Mr. J. Wright's "Primer of Horticulture" it is stated that it has been observed, whereas in Dr. Scott's "Flowerless Plants" (page 268), it appears to have never been seen. Mr. W. G. Smith, having been appealed to by the secretary for his opinion, writes as follows:—"I have many times seen the spores of the Mushroom and its allies germinating. With me they have often quickly germinated on glass, and more often on moist blotting paper. The fungi must be allowed to shed their ripe spores on to the moist paper. After a day or two a damp microscopic slide must be placed upon the part of the damp paper where the spores have fallen, and it will often happen that some will be found to have germinated. I have seen the germinating examples whilst drawing the spores with a camera lucida. . . . Messrs. Wood of Wood Green managed to get spawn of the Morel (from material sent by me) to germinate and form spawn. I once exhibited before the R.H.S. examples of Coprinus atramentarius raised by me from spores. This species can be easily raised (and it is not very far removed from the Mushroom) from spore to perfect fungus. The time it takes is three months. I believe some of the French manufacturers of Mushroom spawn have raised Mushrooms direct from the spores. The spores of some of the allies of the Mushroom germinate readily in expressed juice of horse-dung. I have many times seen them, and am not the only person who has seen them on glass."

Portugal Laurel with Defective Foliage.—Rev. W. Wilks showed branches, one healthy for comparison, the other showing a silvery appearance. It is a well-known case, and apparently attributable to defective nutrition. The peculiarity resides in the fact that the upper epidermis becomes detached, and the presence of air gives the whitish appearance. The palisade tissue also separates readily from the mesophyll, and its cells are easily broken asunder. There is no trace of fungi or other organism. Mr. Henslow observed that a tree in his garden exhibited the same appearance and died. Its roots were found to have penetrated pure gravel.

ORCHID NOTES & GLEANINGS.

By The Editor.

Odontoglossums at Westmount, Glasgow.—For many years past a fine collection of plants has been got together at Westmount, Kelvinside, Glasgow. Various kinds are grown, but Odontoglossums are the favourites. There are now about 3,000 plants, mostly of O. crispum, and though not the finest forms in the country, yet for a healthy collection of large specimens, many of the most competent judges in the country assert that it has no equal. Mr. David Wilson has been in charge of the collection for many years, and has given abundant proof of his ability in managing Orchids. Both the houses and stages are admirably fitted up, consisting largely of iron, particularly the staging.

Cattleya Trianaei Dr. Gorton's var. *Nov. var.*—A very massive-flowered variety of the popular and useful Cattleya Trianaei bloomed recently with Mr. P. McArthur, 4, Maida Vale, London, W. The flowers measured 8 in. across the petals, a size that used to be reckoned large for C. Warscewiczii and C. Mossiae. The petals were a feature in themselves, for each measured 3 in. across; and they as well as the sepals were of a soft rosy-lilac, contrasting well with the intensely dark purple hue of the lamina of the lip, which had a long tube corresponding with the magnitude of the other parts of the flower.

Odontoglossum Reichenheimii.—A prominent feature of this uncommon Odontoglot is the enormous size of the pseudobulbs of well grown plants. Those of a specimen we recently noted measured 5 in. in length by the same in width. They are necessary for the support of the branching flower stem which reaches a height of 5 ft. The flowers are moderate in size with rich brown sepals and petals, banded with pale yellow. The lip is obovate, rosy purple on the lower half and blush towards the apex.

Cypripedium Rothschildianum.—In almost every form we have seen, this Cypripedium is a bold and telling flower; but we noted a magnificent variety recently and which flowered in the collection of T. McMeekin, Esq., Falkland Park, South Norwood Hill, under the care of Mr. A. Wright. The dorsal sepal was prominently banded with very dark lines along the course of the veins. The organ itself was very large, and the colours unusually dark. The petals were 6 in. long, more or less decurved, and richly spotted and lined with crimson brown or almost a black hue. Such varieties are an ornament to any collection.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned subjects received Floricultural Certificates of Merit at the Spring Sbow of the Royal Botanic Society at Regent's Park on tbe 31st ult.

AMARYLLIS XANTHO.—A deep crimson form with a short tube very open, and large flower, and segments of great width an l substance. Messrs. James Veitch & Sons, Ltd., Cbelsea.

AMARYLLIS HIDALGO.—This flower is several shades lighter, being of a richer scarlet hue than Hidalgo, but it is much larger, measuring nearly 8 in. in diameter. Messrs. James Veitch & Sons, Ltd.

AMARYLLIS FRANCISCA.—This is brigbt scarlet, with a central green star. The tube is very short, and tbe flower is fully 8 in. in diameter; altbough one of tbe largest forms this is by no means coarse, whilst the form is very good. Messrs. J. Veitch & Sons, Ltd.

NARCISSUS SANTA MARIA.—This variety has a long rich orange-yellow corona with fimbriated margins, and sligbtly spreading. The segments of the perianth are lanceolate, and of the same colour and length as the corona. Messrs. Barr & Sons, Covent Garden.

NARCISSUS VICTORIA.—In build of flower, size, and colour of the trumpet, and colour of the perianth segments this is very close to the well-known Weardale Perfection. The perianth segments (white in both cases) in the latter variety are, however, larger, and of stouter texture. Messrs. Barr & Sons.

NARCISSUS SAMSON is a huge flower fully 3 in. in length. Tbe rich yellow trumpet is tubular, and spreads but little, although it is deeply notcbed at the margin, where it is about 1¼ in. in diameter. The ovate segments are not quite so long as tbe trumpet, and exhibit a two shades lighter yellow. Messrs. Barr & Sons.

NARCISSUS SNOWFLAKE.—A medium-sized pure white form. The segments are much twisted, and nearly as long as the corona, which has deeply notched and much frilled edges. There is a yellow blotcb at the bases of the segments externally. Messrs. Barr & Sons.

NARCISSUS ODORUS HEMINALIS.—This is the latest addition to this section. The scapes are two flowered. Tbe segments are elliptic in shape, longer than tbe corona, and light orange-yellow in hue. The corona is short, spreading, and ricb orange-yellow. Tbe flowers possess the additional quality of being deliciously sweet scented. Messrs. Barr & Sons.

NARCISSUS INCOMPARABILIS BEAUTY.—The segments here are twice as long as the corona, lanceolate in shaped, and bright yellow in colour. The corona is short cup-shaped, and deeply stained with orange, after the fashion of Cynosure. Messrs. Barr & Sons.

ERYTHRONIUM JOHNSONII.—This has bright rose flowers of medium size borne singly on scapes from 4 in. to 5 in. in in lengtb. The leaves are ovate in shape, and prettily mottled after the style of E. Hartwegi. Messrs. Barr & Sons.

MUSCARI CONICUS.—A very fine form of this species was shown with very long and dense racemes of bright violet-blue flowers. Messrs. Barr & Sons.

CYCLAMEN GRANDIFLORUM ALBUM.—This is a very fine strain sent by the St. George's Nursery Co, Hanwell. The plants are very vigorous, the foliage of large size and handsomely marbled. The flowers are of giant proportions, and pure white, the segments being broadly obovate in shape.

ROSE ANTOINE RIVOIRE.—For the description of this fine new Hybrid Tea see the list of plants certificated by the R.H.S. at the last meeting. Messrs. Wm. Paul & Sons, Waltham Cross.

CAMELLIA DUCHESS OF YORK.—This is a rosy-pink flower of good form and medium size. Messrs. Wm. Paul & Sons.

CLIVIA QUEEN VICTORIA. — This is a very vigorous grower, and throws an enormous truss of large bright orange-scarlet flowers of excellent form. Each flowerh as a whitish-yellow band at tbe throat, and this passes to deeper yellow at the base. Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, N.

AMARYLLIS LORD BRASSEY is a fine flower from five to six inches in diameter, the form being excellent. In colour it is rich crimson-scarlet with a green base, the ray of tbe star shading to greenish-white. Messrs. B. S. Williams & Son.

RICHARDIA PENTLANDI MACULATA.—Tbis appears to be an intermediate form between the well-known R. elliottiana and R. Pentlandi. It has the large and prettily maculated foliage of the former, but the flower is certainly tbat of R. Pentlandi, having the characteristic black ring round the spadix at the base of the spathe internally. Messrs. John Laing & Sons, Forest Hill, S.E.

MIGNONETTE, MORLE'S IMPROVED MACHET.—There was an extensive exhibit made of this strain, which gave an ample opportunity of noting the strength and vigour of the plants, which were grown singly in 48-size pots without support of any kind; and tbe uniformly large size of the flower spikes. Messrs. Morle & Co., Finchley Road, N.W.

Botanical Certificates of Merit were awarded to the undermentioned :—

STREPTOCARPUS PARVIFLORUS.—Althougb very pretty, this species is not often met with. The leaves are large oblong in shape, dark green, and much crenulated. The scapes are many-flowered, and from 5 in. to 6 in. in height. The flowers are light blue, passing to white at tbe base of the tube, and a little over ½ in. in diameter. The tube is short, and the limb of the corolla very spreading. Messrs. J. Veitch & Sons, Ltd.

EPIDENDRUM ELEGANTULUM.—In this case the sepals and petals are orange-yellow, thickly barred and blotched with deep chestnut. Tbe lip is orbicular in shape with a fringed margin, white, striated slightly with pink, and with a small yellow spot in the centre near the throat. The flowers are about an inch in diameter. Messrs. J. Veitch & Sons, Ltd.

ODONTOGLOSSUM CIRRHOSUM AUREO-MARGINATUM.—The sepals, petals, and lip bave all developed at their apices long caudal processes wbich impart a peculiar and striking look to the flower. The colour is white with a flush of yellow, and the mottlings of deep chocolate-brown are rather heavy. The yellow margin to the lip is very conspicuous. Messrs. B. S. Williams & Son.

VEGETABLE CALENDAR.

ALL old stems of Sprouting Broccoli, Brussels Sprouts, Cabbages, and other Brassicas, retained for the sake of a few greens, and which are now rapidly getting into the flowering stage, should be cleared off the ground without delay, as no crops are more exhausting to the land; and where clubbing has been prevalent it is advisable to burn the lot. Before this general clearance takes place it is always satisfactory to see the earliest Cabbages in a forward condition, to prevent any break in the supply, and so unite the latest and earliest crops. The young Cabbages should be hoed frequently, and a little fresh soil drawn up to the stems will be an incentive to more vigorous root action and earlier development.

CELERY.—The main crop should be sown at once. It is better to prepare a slight hotbed, laying a few inches of prepared soil over the bed, and covering with hand glasses. Press tbe seeds into the soil and cover very lightly. Plants raised in this way are not so liable to suffer from drought and fluctuations of any sort as when raised in shallow boxes in a warm house. The earliest sown plants should be pricked out in a warm frame as soon as they are strong enough to handle.

SEAKALE.—Where the cuttings of these were placed in a little warmth a month ago, they will be found to bave formed buds at tbe top, and should be planted out on the first favourable opportunity. Good land is essential to produce fine strong roots, and early maturity. A plantation of a few dozen roots on a north border, will be found useful in giving a late supply. In such a position the plants are late in going to rest, and slow to move in spring.

PEAS.—These, in various stages of growth, will require constant attention. Staking early and protecting the rows with a few Fir boughs or anytbing that will help to ward off cold winds, will greatly assist in producing quick and healthy growth. Should the weatber prove dry, and watering be necessary for the earliest crop, a dressing of blood manure will be found an excellent stimulant, producing fine pods covered with bloom. A regular succession should be sown every fortnight for some time to come to keep up a constant supply.

VEGETABLE MARROWS,—Where these are appreciated, the principal crop should be sown in a brisk heat. Keep the seedlings close to the glass. Pot them singly as soon as fit to bandle; and when established, gradually harden them to stand frame treatment, preparatory for outside planting next month.—*J. R.*

THE ORCHID HOUSES.

CATTLEYA HOUSE.—The beautiful Cattleya aurea I notice bas, after a good long season of rest, commenced to push forth large healthy roots and correspondingly strong growths. Any plants that were not repotted in August, as advised in these notes, should be seen to witbout delay. We grow ours in pans which are suspended from the roof; in this position they get all the light and air possible wbich suits them admirably; for quite small pieces will flower most readily. In the early stages of growtb the watering must be done very carefully, for although not quite so susceptible to the spot as is C. dowiana, with which it is closely allied, tbe plants, nevertheless, do sometimes show it.

As most things show great activity in all divisions, the grower must take the hint from nature and provide them with increased moisture at the roots and in the air by damping down more frequently. Our summers are all too short, so that it beboves us to make as much use of the few bright and warm months as is possible. At tbis season there are always changes in the outside temperature, so that it is as well to have the heating appartus well in hand in case of sudden falls, caused by slight snowstorms, such as passed over this district last week.

SEEDLING ORCHIDS.—We have a quantity of Laelia and Cattleya seedlings growing in this division, and as they, like their parents, require some fresh material they will receive attention forthwith. Tbe very tiny ones which are only just large enough to handle, we prick off into eitber specially prepared pots, or round the edge of a newly potted plant where the peat is good and the moss in a growing condition. This latter plan I think is the best, for the roots from the plant take up the moisture afforded and keep the compost from becoming sour. Tbere they are allowed to remain for a season, guarding them carefully from thrips and woodlice, by setting traps for the one, and by using XL All Vaporiser for the other.

The larger and older plants that already occupy small pots on their own account will also require a shift, and must have it or you will never succeed. Do the potting carefully and well, but do not be afraid to touch them.

COMPOST.—What suits the parents generally suits them. Select some good peat and tbe live points of the sphagnum moss; thoroughly mix together and then chop the whole up together. This, with some very finely broken up bits of potsherds I find to be excellent for them.

POSITION.—When potted, we put a wire round the pot and suspend them as recommended for C. aurea. Here they are carefully attended to as regards water and shade, and I am bound to say the treatment is what they require judging by the yearly increase in the size of leaf and pseudobulbs.

COOL HOUSE.—Here too we have some seedling Odontoglossums which we are treating in the same way with marked success. The only difficulty with Odontoglossums is that tbey do not germinate so readily as do Cattleyas, &c.; but once get them up and it is all plain sailing, and, what is more, most interesting work.—*C.*

An acquired taste.—Shopkeeper : "Was that beetle-poison any good I sold you the other day?" Customer : "Good? I should think it was good, they won't eat anything else now."

Weeds are a blessing!—This will doubtless seem a strange statement to make to the farmer and the gardener who are struggling to keep down the weeds. And yet, after all, weeds are but the couriers sent by Mother Earth to remind us of our negligence. The act of exterminating them becomes a necessity, and the turning over that the soil gets thus prevents it from coming hard and baked. In dry summers it minimises the effects of drought, and in wet ones secures the better aëration of the soil.

HINTS FOR AMATEURS.

Disbudding Wall Peaches.—If there is one part of Peach culture more than another that is liable to puzzle an ordinary amateur cultivator, it is the disbudding of Peaches. That we are well within the mark in making this statement receives abundant proof from the fact that so many trees are to be met with that are suffering from the effects brought about by lack of this particular attention. The poor trees are crowded with a lot of weak, ill-ripened growths that mutually injure the fruiting powers of the other. Now the fact that disbudding is not practised is an effect in itself of which the probable cause is lack of knowledge. Another cause there may be certainly, viz , carelessness, but we would not impute this wantonly to the amateur who is certainly the most painstaking of all cultivators; indeed, he oftentimes puts himself to a great deal more trouble than there is any necessity for.

Now most people will readily grasp the idea that it is necessary to remove a portion of the fruit in order that the size and quality of the remainder may be improved, and also that the resources of the tree may be husbanded. The same principle applies to the removal of some of the young shoots, those that remain profiting immensely by the thinning, both with regard to the reception of increased nutriment, as well as the enjoyment of more light and air, in themselves important factors in securing the health, vigour, and fruitfulness of a shoot.

The pruning of Peaches in reality begins with the removal of unnecessary shoots in the spring, and the operation finds a fitting sequel in the winter when the shoots that are of no further service are removed because they have fulfilled their allotted task. The winter pruning is greatly lightened by proper attention given throughout the year, and may, if desired, be rendered almost unnecessary. Certain, it is, however, that if we want to husband the strength of our trees, and keep them in a fruitful condition by insuring a sufficient supply of successional shoots, we cannot afford to neglect disbudding.

Every tree produces many more growths than is necessary. Some of these nature prunes by rendering abortive their attempts to become branches, but we ourselves may save nature the trouble by taking away those that are not wanted, and leaving others in suitable positions, so that they may carry on the work of the tree, which is, of course, to bear fruit.

After the flowers have all dropped and the wood buds have pushed out several leaves, a start with disbudding must be made. The great point to observe is that it must be done gradually. Too many shoots removed at once would cause a serious check in the flow of the sap. The fruits being borne upon wood made during the previous year, it is manifest that shoots which are bearing fruit this year will not do so next, and that unless they are needed to extend the spread of the tree they will have to be cut away at the winter pruning, or after the fruit has been gathered, if it is so desired. The shoot at the base of the present year's fruiting branch should be left to form a succession shoot. This, besides being as close to the base as possible, should be on one side of the branch bearing it, but must not spring from the side nearest the glass, or from underneath the tree, for it would then require some bending to get the succession shoot into position on the wires. A shoot near the top of the bearing branch should be trained on so as to cause a free circulation of sap, but intermediate growths may be removed at various intervals, thus giving room for the succession shoot at the base to be trained in alongside the branch whose place it is presently to take. If, on the other hand, the bearing branch is long, two shoots may be trained in for succession. On this point, however, we must perforce leave the cultivator to decide for himself. If two shoots are required, by, all means lay them in, but under any circumstances avoid over-crowding.

Cucumbers in Frames.—Supposing the plants to have been successfully planted at the beginning of last month they will now have recovered the slight check and will be growing away freely. The tops should, therefore, be pinched out at once. This will induce the plants to throw out a number of side growths, which will not be long in covering the area of the frame. One plant will ultimately cover the area of an ordinary light, but two plants will naturally do it much quicker. Earlier plants that were consigned to the hotbed at the beginning of March, and were stopped in this way, have now reached the sides of the frame, where the growths must again be stopped. Should the growths become rather crowded there need be no fear of pinching them out, since unlike the Melon, the Cucumber will bear any amount of cutting about with equanimity. Close shade will be necessary in bright weather, and this will do away with the necessity for giving a great deal of air, a chink of about an inch wide at the top and bottom of alternate lights being quite enough with the shading. The plants should be syringed, and the frame shut up about 3 p.m. for this month, but after that it may be left open for another hour. Plenty of water, plenty of heat, and fairly close shade are what Cucumbers require to do them well.

Early Peas.—The fine weather during the third week in March gave a good opportunity for planting out Peas that had been raised under glass, but the poor plants have had a sorry time of it since they were transferred to the open ground. Frost, snow, wind, and rain have all had a go at them. If the plants are tall varieties, it will be well to stake them at once, for the stakes will not only break the force of the wind but they give facilities for protecting from frost. Dwarf varieties may be best sheltered by running up a framework of light wooden spars around them and covering with mats. These mats should be put on at nightfall if it threatens to be at all cold.

Top-dressing Liliums.—In referring previously to the potting of Lilium Harrisii, L. auratum, L. speciosum albiflorum, L. s. roseum, and other Liliums suitable for pot culture, we laid stress upon the fact that when potting was complete the pots should not be more than two-thirds full of soil to allow sufficient room for subsequent top-dressings. The need for some top-dressing will now be evident, if the plants are fairly strong and healthy, for at the base of the stem thrown out from the bulb will be seen a mass of thick fleshy roots. In order to obtain the best results these roots must be brought at once into contact with good soil. The top-dressing should consist of two parts of good loam, and one part of cow manure with a sprinkling of sand. Make it pretty firm by means of the rammer, but do not fill the pots up higher than within half an inch of the top of the rim. The plants will require a good deal of water presently, and room must be allowed so that it can be given easily.

Tomatos for the Open.—Plants that are intended for planting in the open when the season is a little further advanced, have now got well hold of the soil in the 32-size pots into which they have been shifted from the thumbs. They should have been given a light stake each after potting, and if this has not been done they must be looked to at once. Shift them out of the warmer house into a cold frame of sufficient depth so that their tops may not be bent by pressure against the glass. Keep the frame close for a week, thence commence to air freely until finally at the end of the month, if the weather prove favourable, the lights may be drawn off altogether during the day, and put on the last thing at night.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Iron Houses.—*Alpha* wishes to know why iron is disliked as material wherewith to construct greenhouses, and wishes to know if it exercises any harmful effect upon the plants.

Wood is usually preferred to iron for the construction of greenhouses chiefly because the latter is so much colder than the wood. Again, the iron is liable to rust and then presents a dirty appearance. Once it gets rusty, moreover, no amount of painting will keep the house clean for long together, for the rust soon works through the paint, or rather the paint does not take well to the rusty iron. For large houses, however, iron is much used on account of its greater rigidity and strength. If kept properly painted plants do well enough in such houses, and it cannot be truly said that iron exercises a directly prejudicial effect upon them other than being rather colder than the wood.

Spiraea japonica.—Is a plant of this any further service after the flowers are over. If so, what would you advise me to do with it.—*T., Warminster.*

The plant will not be of any use for forcing next year, so you must give it a rest until the year following. Plant it out in the garden presently and there let it remain until the autumn of 1895, when it may be potted up and flowered indoors. If you keep it in the pot you will only succeed in starving it, for Spiraeas are free-rooting things and need a lot of water. Therefore you will save both time and trouble by planting out.

Edging Plants.—Will you please tell me what plants are suitable for the front row of a greenhouse stage? I should like something that would droop over if possible. I have some plants of Isolepis gracilis.—*Vera.*

Ivy-leaved Pelargoniums are a host in themselves, and if they are not staked at all will droop gracefully over the side of the stage in the manner you suggest. Campanula isophylla and C. isophylla alba also do well like this. Then you may have Mimulus Harrisoni and Blue Lobelias—the two make a most effective contrast.

Isolepis gracilis.—Please tell me the best time of the year to divide Isolepis gracilis. My plants are very strong, but I should like more of them.—*Vera.*

You may split up your plants at any time. Keep them rather close in a warm house for a couple of weeks after division. They will soon recover themselves, and will be ready to go into the conservatory at the end of the time specified.

Pruning Camellia.—*F. Bowden.*—If your plant is of good shape and there are no scraggy branches it will not need pruning at all, but will just want to be let alone. Pruning is only needed when the plants are of bad shape or have a lot of half naked branches. You must not run away with the idea that a gardener prunes a plant periodically for the same reason that many people take their breakfast, viz., because it is customary to do so. Pruning is conducted with a definite object in view.

Planting Pear Trees.—*R. G.*—It is too late now to think of planting or shifting fruit trees—except Figs.

On Flowering Carnations in Winter.—Many amateur Carnation growers think, and not without some reason, that the term "Winter-flowering" as applied to a section of Carnations is a misnomer; because, although they grow these winter-flowering plants, they obtain no flowers till long after winter is passed. But to obtain bright flowers in winter we must make use of the summer sun, prepare our plants for winter service in the golden summertide, and flowers will be sure to follow.

If we want to force Strawberries and obtain ripe fruit in early spring, we take care to choose the best runners only, give them every attention, and utilise all the natural forces to obtain ripe crowns. In other words, we grow the plants and prepare the buds and flowers in embryo before the dark, dull days begin, so that when we place the plants under the more favourable conditions of a forcing-house temperature the flowers very soon expand.

The same method must be followed if good Carnations are to be had in winter. The buds must be formed in a well-ripened growth. Choose good healthy shoots or grass, layer early, and pot up as soon as the layers are well rooted. Do not be afraid to pot firmly, and when the pots are filled with roots, which under favourable circumstances would be (if the plants were layered in July) at the end of August or early in September, expose them to all the sunshine and air possible. Don't saturate them always with water, but keep them moderately dry, and it will be found that many will exhibit a tendency to throw up a flower spike, and, with a greenhouse, very little difficulty will be found in persuading the blooms from such plants to expand at any time during the dull months.

This is a method I have successfully practised with Uriah Pike, Souvenir de la Malmaison, and a few other varieties. I recommend this to amateurs who find it difficult to strike cuttings in spring. Where

facilities exist for propagating, cuttings may be struck in February and potted up when rooted, pinched when they have become strong to ensure four or five breaks, then repotted again when strong enough, and the growths have made some progress, into 48 or 32-sized pots, according to the strength of the plants. These will make excellent stuff, and in these pots plants may be obtained bristling with buds by October or November. It is not wise to pinch the growth after July, but such varieties as Winter Cheer, Miss Jolliffe, Mary Godfrey, Reginald Godfrey, and Mrs. Leopold Rothschild are amenable to this treatment.—*A. P.*

ROYAL CALEDONIAN HORTICULTURAL SOCIETY.

On the occasion of the spring show of this society we embrace the opportunity of noticing some of the

MR. J. MORRISON.

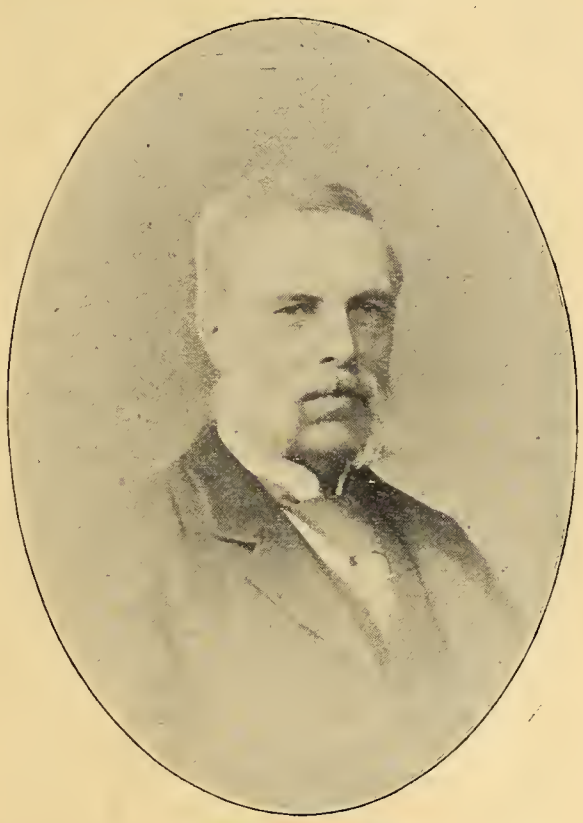
members of the council, accompanied with a portrait of the same. We have already reproduced the photograph of other members of this body in recent volumes of the Gardening World. The Royal Caledonian is one of the oldest societies in the United Kingdom, having been instituted in 1809, and incorporated by Royal Charter in 1824. The Horticultural Society of London, now the Royal Horticultural, was established in 1804, and incorporated by Royal Charter in 1809, granted by King George III. The Royal Caledonian holds two shows during the year, one in Spring, and the other in September, which is noted for its magnificent display of fruit, particularly Grapes. An account of the show will be found on p. 508.

Members of the Council.

Mr. James Morrison (see portrait), Archerfield Gardens, Drem, deserves well of the society, for he is a hard working member of the council. Being a gardener, he reminds us of the fact that many more of his profession should be at the helm in all that pertains to the aim and end of true horticulture. He is a Perthshire man and served his apprenticeship under Mr. Cuthbert, at Ferntown, near Crieff. From thence he went to Airthrey Castle, Stirlingshire, under Mr. Cathn. From here he went to Strathallan Castle, Perthshire, where he stayed under the late Mr. Thomson for five years, as journeyman and foreman. He next moved to Dalkeith Palace, where he acted as foreman under Mr. Malcolm Dunn for a period of seven years, so that he has had a good schooling in "the art that does mend nature." From here he was appointed as head gardener to Lady Mary Hamilton, Archerfield, Drem, East Lothian, just seventeen years ago, where he still remains. He has well maintained the high reputation which Archerfield enjoyed in the days of the late Mr. Lees, and Mr. David Thomson, who is now retiring from Drumlanrig. He puts himself heartily into whatever he undertakes, and we wish him many years of service in the cause of horticulture.

Mr. Malcolm McIntyre (see portrait) adds another to the list of gardeners on the council, being gardener to Sir Charles Tennant, Bart., The Glen, Innerleithen, Peeblesshire. He has been connected with the Royal Caledonian Horticultural Society since 1863—a period of thirty-four years. At the time he first joined it he was foreman under Mr. Gordon, at Niddry House. He was then what they called a half-crown member; because, being an under-gardener, he received a ticket for 2s. 6d. which admitted him to all the shows during the year. The principal competitors at that time were Messrs. Thomson, Dalkeith; Smith, Melville Castle; Patterson, of Mill Bank (just then beginning his career as exhibitor); and Gordon of Niddry. From the latter place Mr. McIntyre was appointed head gardener to Mrs. Evans, Ford Abbey, Dorsetshire. From there he got an appointment as head gardener to Sir Henry Doulton, The Woodlands, with whom he stayed for five years. Sir Henry having sold The Woodlands some years ago, is now in Essex. The subject of this note was next engaged by Walter Richard, Esq., Kingsmuir Hall, where he spent another five years, and then left to fill his present appointment. Here he completed nineteen years service, on the 1st of March last. He has been one of the most successful competitors at the shows of the Royal Caledonian Society, both in fruits, flowers, and plants, as our pages in past years testify. He has not yet retired from the field, but is still waging the warfare of the competitor in the friendly ranks of horticulture.

P. Neill Fraser, Esq. (see portrait), Rockville, Murrayfield, Midlothian, is the treasurer of the society, and has held the position since 1870. His "name" father, Dr. Patrick Neill, one of the founders of the society was its secretary from its commencement in 1809, till his death in 1851. The



P. NEIL FRASER, ESQ.

subject of this note was treasurer to the Edinburgh Botanical Society for many years. He is well known to be one of the best living authorities on Ferns. He is, in fact, a regular exhibitor of that beautiful and interesting class of plants, always taking leading positions at the exhibitions. Rockville, his residence, is finely situated in the western suburbs of Edinburgh, and is rich in alpine and rock plants, another of his specialities. Mr. Fraser is always pleased to meet and converse with brother horticulturists on gardening subjects.

LONICERA FRAGRANTISSIMA.

We have none too many flowers that bloom in winter in the open garden. The list is not a long one, but is still far more numerous than many suppose, especially to those who have not made a study of this matter. They will find a fair number if they reckon them up.

Many kinds bloom in the dead of the winter when the weather is open, and amongst them are two kinds very sweetly scented, one the subject of this note, and the other Chimonanthus fragrans. Both of these should be grown by every lover of sweetly scented flowers. Although neither of them can boast of an extremely showy appearance, they are nevertheless deliciously scented.

This Lonicera blooms from December to the middle of March, and is most useful for placing in vases in rooms in a cut state, as a good handful of this wil scent a room. We have it in this garden growing both on a west and south wall, and during the early part of January we were able to cut many sprays from it. It grows freely and is of the easiest culture. One of the principal points is to allow the growth to extend and ripen early in, the summer, as it flowers from the axils of the leaves on the old wood. When desirable to cut it in this should be done as early as

MR. MALCOLM McINTYRE.

possible after flowing is over, thereby giving it every opportunity of ripening the wood early in the season.—*J. C., Chard.*

NOTES ON THE QUALITY OF GRAPES, &c.

With deep sorrow a large number of horticulturists of every grade will have received the sad intelligence of the decease of Dr. Hogg, one of the most estimable of gentlemen who has honoured our craft, and whose name stands out as a great benefactor to the whole gardening community. It is not my intention to give full expression as to what gardeners, and others in the north feel for such a loss; but we see in northern daily and weekly papers the qualifications of the Doctor laudably commented on.

I am prompted to make these remarks at a time when I have been reading closely a large portion of the latest edition of the Fruit Manual, and after comparing some fruit catalogues with the former, I find they are most misleading. Many depend on trade reports, which differ from each other widely, and this in due time leads the unwary into error. Correct reports of quality is most essential, and I have to thank the Manual (by a close perusal of it for many years) for much information in the classification of Grapes. I fear that this matter is still very imperfectly understood by many of us, who have for many years tabled them for exhibition; and often by censors, whose opinions of high excellence vary widely. The classification of fruits as to their primary value, will not (I fear) come very close to perfection just yet. The controversies held at exhibition tables, and at other gatherings, indicate this. The complaints of defeated exhibitors are as loud and demonstrative as ever they were. Judges, however, should depend on a standard of excellence higher than their own judgment; some trouble should be taken to cultivate the palate by the censor who has to adjudicate on the merits of fruits.

The classification of Grapes seems to be less

understood than other fruits, and it is only by frequently coming into contact with the varieties, and carefully noting their merits that one can put a proper estimate on their condition and quality. Some censors are as destitute of this knowledge as the writer is of the genuine flavour of wines, spirits, or ales—luxuries which he never imbibed. During many years judging I have had to listen to strange remarks adduced at exhibition tables, and at other gatherings, which go far to illustrate the false position one is in who has consulted narrow views only —indefinite and environed. Some go in for colour only, almost ignoring large berries, form and size of bunch. Give colour a prominent place certainly, but that should not decide if other desirable points are absent. Grapes, unlike Peaches, Pears, Melons, and most other fruits, do not ripen if they are cut when unripe; and colouring is often at its best long before Grapes are fit to eat. They are often tempting in this condition to unwary purchasers in market, who find out their mistake when the fruit is put to the masticating test. For invalids such Grapes are positively dangerous.

It is next to impossible to find at September shows such sorts as Lady Downes, Gros Colmar, and Alicante, in eatable condition; and often Muscat Hamburgh, Madresfield Court, and Mrs. Pince, at the same time (by careful inspection) are found to be acid, green near the footstalk, and leathery in substance. But these three sorts, with Black Hamburgh, in first-rate condition, will hold their own against all the varieties which are only fit for use in December and onwards. During December, January, February, and onwards, Gros Colmar and Lady Downes are first-rate in flavour. Before that period many connoisseurs will not eat them. We have seen fine Lady Downes ripened at the warm end of a Muscat house during August, and little inferior to the Muscats themselves. The Muscat of Alexandria and Cannon Hall Muscat will always hold the leading positions in the Grape classes; and coming next to these in white Grapes, Duke of Buccleuch and Golden Champion, with berries averaging an inch and a half deep, of a golden colour, free from spot or blemish, and the bunches of fine form, will eclipse all other white Grapes. White Frontignan, Grizzly Frontignan and Duchess of Buccleuch hold a different position, and can only have fair play when exhibited in their own classes. Their flavour is exquisite, while the berries are too small to be admired.

I would divide Grapes into three classes; but if second or third rate varieties were of high-class culture I would give them a better position than first-rate sorts exhibited in poor condition, which they too often are at northern and southern exhibitions alike. Shrivelled, limp, rubbed, or unripened Grapes should never be brought to any exhibition; and judges do well to pass over such, no matter to what class they belong. Muscat of Alexandria, with berries uneven, many of them stoneless, and showing the footstalks, sometimes receive awards, because the colour is good; but judges should ignore such, when first-rate culture is being the object of competition. While I would advise judges to adjudicate on definite lines, it is necessary that they should not be influenced by those who are ever found carping. In such cases justice cannot be associated with mercy; and some exhibitors cannot "See themselves as others see them," which "would from many a blunder free them."—*M. Temple, Carron, N.B.*

ENGLISH ORCHARDS.

(*Continued from page* 490).

Devon.

Devonshire has the largest acreage under orchards of the English counties, and consequently the report on the present aspect of fruit culture in this shire, has special interest, and no excuse will be necessary for the two quotations I shall make. We are told with regard to the capabilities of the county: "By way of showing what it is possible to do in Devon, I give a few figures supplied by Mr. Snow who has an orchard only one acre in extent, but which has been thoroughly well-managed from the time it was first planted. In 1893 Mr. Snow grew enough fruit to make thirty-one hogsheads of cider, which he sold at the rate of 35s. per hogshead. In addition he gathered and sold 500 score pounds of Apples which fetched, on an average, 1s. per score. Good crops were again had in 1894, and 13½ hogsheads of cider were made, this fetching 26s. per hogshead, while no less than 350 score of Apples were marketed, this time at 13d. per score. If the old notions to the effect that some varieties of Apples only bear fruit once in every two or three years were true, then Mr. Snow ought to have had very little fruit in 1894, and not a very heavy crop in 1895. As it happens the trees are not in a crowded state, nor individually in want of thinning out, nor of being cleared of moss, nor in need of assistance at the roots, and, as a consequence, were fully equal to bearing an even heavier crop. Twenty-nine hogsheads of cider were made, and six hundred and fifty score pounds of Apples marketed." The way in which these capabilities have been taken advantage of may be gathered from this excerpt: "Devon is certainly famous for its orchards, and noted for the excellence of much of the cider that is made in the county; but the orchards will not, as a rule, bear critical examination, nor is cider sufficiently in demand to justify such a waste of space in growing Apples for its manufacture. As a matter of fact, Devonshire, compared with other counties, has made little or no progress of late years, and there are hundreds of orchards in that county that are little short of disgrace to those who own or rent them. Here and there are signs of improvement taking place, and it is hoped the capable instructors engaged by the technical education committees will not expend their energies in vain. The majority of the orchards are rented by farmers, who too often are the worst of gardeners and the poorest of fruit growers, and they cannot be induced to improve on their methods. All the while the trees remain standing that is sufficient for them, and not a few that have blown over—for they get some heavy gales in Devon—are left where they are as long as life remains in them, or the cattle that roam in the orchards leave them fairly intact."

Somerset.

Much the same state of things exists in the orchards of Somerset, which ranks next to Hereford in the area under fruit trees, and with reference to these it is stated, "Somerset, all things considered, is one of the most fertile counties I have yet passed through, and in the matter of climate there is also little room for complaint. Yet, curiously enough, several kinds of hardy fruit have to be imported—Plums and Damsons chiefly from Worcestershire, and Cherries from Kent." Also "great areas are devoted to cider Apples, which produce heavy crops; but they are of little value, and not until there is an immense improvement in the manufacture and increase in the consumption of the beverage can there be any profit from cider." Worcestershire has the next largest acreage of fruit, and with regard to the farm orchards we are told—and this is the last extract from the reports that I shall trouble you with—"In no case did I find the average tenant farmer abreast of the times in the matter of orchard management. These men's ideas are immovable, as their actions are generally confined to the practice of sticking in a tree in the position occupied by one that has fallen fnto decay. Pruning appears to be quite neglected by them, and the trees in the majority of cases are in such an unsatisfactory condition that no possible system now pursued will so restore the fertility of the orchards as to ensure fruit of such quality as can compete in open market with foreign productions." I should like to speak in some detail of the condition of the orchards of Beds, Berks, Bucks, Essex, Cambridgeshire, Liecestershire, Notts, Norfolk, and other counties, but time presses, and I have already said sufficient to show that the English orchards are, in the majority of cases, in a condition that renders it impossible for the trees to produce fruit worth sending to market or worthy of the purchaser's attention, should the owner be unwise enough to consign it to a salesman.

Is Renovation Possible?

It might well be asked at this point whether the possibilities of profitable fruit culture in England are such as to justify a serious attempt to renovate the orchards capable of being brought into a productive state and replace those where renovation is practically impossible with new ones. In case this question should be in the mind of any member of the audience I will at once give an answer, and this must be in the affirmative. Assuming fruit to be an important article of food, and a plentiful supply over the longest possible period desirable, it will be readily admitted that it would be very much better for the farm orchard to be in a condition to supply the household with an abundance of fruit during nine months of the year than for the farmer to have on his holding a large number of nnproductive trees and have to purchase at the nearest town or village foreign fruit, either fresh, dried, or in tins. This is not the principal aspect of fruit growing, bnt it is one that deserves the instant attention of both the tenant and his landlord, and also of the several bodies which exist for the encouragement and improvement of rural industries. The most important aspect of orchard management is unquestionably the production of fruit for profit, and with reference to it I have no hesitation in stating that if carried out on proper lines it will give a good return. In making this assertion I must not be understood as being in sympathy with those who would have us believe that it is possible to make a fortune in a short time from a few acres of fruit trees. What I submit is that under proper management orchards will be at least as profitable in proportion to their area as any other crop that can be grown. They should give a far greater profit than the best of the farm crops, and add materially to the value of the holding, but it will suffice for the purpose of my argument to submit that while worthless orchards are unprofitable, those in good condition give an ample return for the initial outlay and the expenditure incurred in their management.

There are, of course, a large number of both tenants and landowners who are ever ready to contend that there is no profit in orchards, and to declare "That you cannot restore the prosperity of agriculture with a few pots of jam." But these will also tell you that "the farmer cannot be made rich with a few pats of butter or a few fowls," and such catchy phrases may appear to those who have bestowed no thought upon the subject to dispose of the question. Let us see whether the culture of fruit, the making of jam, and the keeping of poultry would, if properly carried out, help the farmer to contend with the difficulties inseparable from the low prices of his staple crops. I shall not trouble you with a large array of figures, but shall confine myself to those found in last year's official returns, as they are quite sufficient for my purpose. These show that the value of imported fruit was £5,540,069, of poultry £605,458, of eggs £4,184,567, and of butter £15,344,083, making the respectable total of £27,256,648. I do not suggest that the whole of this sum could have been retained in this country, but I submit that a very large proportion would have been had those concerned fully informed themselves in past years as to the possibilities of the demand for these so called minor products, and the best means of supplying them in abundance, of good quality, and in the most attractive and convenient form. I am now only concerned with the amount we pay the foreign growers for fruit, for the greater part of the supply might, and, indeed, should be produced in our own orchards and plantations.

With regard to Apples we imported last year 6,177,192 bushels of the declared value of £1,582,471 and I submit that a very small proportion of this enormous quantity should have been required from the foreign and colonial orchards. In case anyone may be inclined to question this assertion I will at once state that in no other country are the conditions more favourable to the production of Apples of the finest quality than are those which obtain in England. For proof of this it will suffice to point to the splendid Apples that are produced in gardens where the trees receive proper attention, even in districts that are not particularly favourable to hardy fruits. It is not the soil or the climate that makes ns so largely dependent upon the foreign growers for our fruit supplies, but the apathy and ignorance of our cultivators. The lamentable state of our orchards is one proof of this, and the wretched manner in which the principal part of our fruit is placed upon the market is another. Not only is there a want of care in gathering and packing, but fruit is sent to market without regard as to the season, and, in consequence, the late Apples that may be had in perfection until March or April are sent to market in the autumn, with the result that the prices of the early varieties are unduly depressed and the markets are almost wholly dependent upon foreign supplies after Christmas.

A kind of Beer is made from the Pepper plant by the natives of Borneo.

GARDENING MISCELLANY.

DORONICUM PLANTAGINEUM HARPER CREWE AS A FORCED PLANT.

FLOWERS for decorative purposes, either for conservatory as pot plants, or cut for rooms, are never too plentiful at this time of year. Frequently early in March a difficulty is experienced in making supply meet demand; and the list of suitable subjects for forcing purposes is always open to receive additions. For this purpose few things are more easily forced and prepared than Doronicum plantagineum var. Harper Crewe. Having a good stock in my borders, I lifted large clumps of the above mentioned variety, and also D. Clusii, and when the blooms were required I placed in gentle heat, and useful flowers were obtained for very little outlay and trouble. The variety, Harper Crewe, is much more easily forced, and has larger flowers; indeed, whether forced or grown naturally, this is a splendid decorative flower. Small roots, planted out in good ground now, would make capital material for lifting and potting in autumn. For cutting, I lift and put the roots into boxes, finding it unnecessary to use pots.—*A. P.*

MONOCHAETUM SERICEUM MULTIFLORUM.

THIS is a good, amateur's plant, and a valuable addition to any collection of greenhouse subjects, flowering during the winter months when, with the exception of Primulas, Cinerarias, and forced bulbs, flowers are scarce. It is closely allied to the Pleromas and Lasiandras. Its flowers are very similar in form to those of Pleroma, and of a purplish-mauve colour. The habit of the plant is good, and free flowering. It is readily propagated in spring, using sandy peat when placed in bottom heat under a bell glass. Light sandy peat, with just a very little yellow loam, is a good compost for it. During the winter months a damp atmosphere should be avoided, as under such conditions it is liable to damp off.—*W. B. G.*

FRENCH BEAN, VEITCH'S EARLY FAVOURITE.

THIS is a very useful variety for forcing, and establishes its claim to early fruitfulness. The samples sent you were from the second picking from a sowing made on February 2nd, and grown in a temperature of 65° to 70°. The time was six weeks from sowing till the first gathering of the pods. I allow five plants to a 16-sized pot. The variety is also very productive.—*A. P.* [The samples were very good indeed, of medium length, straight, smooth, practically stringless, brittle, and appetising.—ED.]

RHODODENDRON LADY ALICE FITZWILLIAM.

A SHORT time ago we received a spray of this hybrid Rhododendron from Mr. J. Mayne, gardener to the Hon. Mark Rolle, Bicton, Budleigh Salterton, Devon. The spray carried five of its immense flowers in one cluster, each bloom measuring 4 in. to 5 in. across, and pure white with the exception of a pale lemon stain towards the base of the tube. The truss of bloom was cut from a small plant growing in the Orangery at Bicton, and bearing in the agregate three dozen heads of bloom, though not then all open. A few of such flowers are, however, capable of producing a fine effect on account of their size and delightful shade of white. They are also powerfully and deliciously fragrant. Mr. Mayne tells us that the plant is easy to strike from cuttings taken in the spring, with a little heel of the old wood attached, and put under a bell glass with a slight bottom heat. Along with the above came a spray of Lonicera fragrantissima, and contrary to expectations, the scent of the Rhododendron had not overpowered the Honeysuckle, which had a distinct and grateful scent of its own.

AZALEA ROSAEFLORA.

THE habit of this Azalea is dwarf, very bushy, and closely branched. The leaves are in keeping with the rest of the plant, in being small, though a size or two larger than those of the well-known Azalea amoena. The plant, as far as we have seen it, never attains the size of the latter, and it is therefore well-adapted for growing in small greenhouses where space is limited and at a premium. The flowers are perfectly double, of beautifully compact shape, resembling a rose, as expressed by the name, and likewise of a charming shade of rose. It has been flowering for some time past in one of the houses of Messrs. J. Carter & Co., at Forest Hill. It is usually grown in pots and kept in the greenhouse, but has been proved to be hardy in the open air.

KALE FOR GARNISHING.

A considerable advance has been made of late years in the forms of Scotch or Curly Kale, that are used for garnishing. The plants form heads of brightly and variously coloured and variegated heads by the autumn, and these colours defy any ordinary winter, lasting well on into the spring. But they may be put to another use than ornamentation in the kitchen, for if properly manipulated they make effective and decidedly unique bedding plants. The lower leaves should be stripped off and holes dug deep enough to allow of the stems being let well in, so as to bring the heads of coloured leaves close to the soil. If lifted with a fair amount of roots the plants do not suffer in the slightest and will last until they begin to run in the spring. Messrs. Barr & Sons have a very fine strain of these Kales, for not only are the plants dwarf and sturdy but the range of colours is great, passing from various degrees of variegation to shades of rose, deep red, and dark purple.

A YELLOW RAMBLER ROSE.

THE name attached to this Rose is Aglaia. Though closely allied to the Crimson Rambler, it is of hybrid origin, if its reputed parentage is correct. It is stated to have been raised from Rosa multiflora sarmentosa, the parent type of the garden "polyantha" Rose, crossed with the pollen of Reve d'Or, belonging to the Noisette section. Now, this type was originally obtained by crossing the Musk Rose (R. moschata) with a form of the China Rose (R. indica). Aglaia was raised by Mr. Peter Lambert, the rosarian of Trier, Germany, who kept it for eight years before sending it out. It is very hardy and produces fragrant, cup-shaped flowers that are so nearly double that they only show a small opening in the centre when fully developed. They are produced in great abundance, in pyramidal panicles or trusses like those of Crimson Rambler, but are of the golden-yellow hue of Madame Falcot. The plant is a vigorous grower, developing shoots 8 ft. to 10 ft. long in a season.

THE NURSERYMEN, MARKET GARDENERS', AND GENERAL HAILSTORM INSURANCE CORPORATION LIMITED.

THE second ordinary annual general meeting of this corporation was held at "Simpson's," Ltd., Strand, on Friday, April 2nd, Mr. H. J. Veitch presiding. After the notices convening the meeting had been read, and the minutes of the last general meeting read and signed, the report and financial statement was presented by the secretary, Mr. Alexander James Monro. The report announced the gratifying fact that the first issue of 5,000 £5 shares had all been subscribed for, and 10s. on each share called up. Whilst the income had been largely augmented, the working expenses were less than in the previous year. Dealing with the appointment of agents, it stated that twenty-five additional ones had been appointed during the past year, making a total of seventy-two.

The special advantages offered by the society were drawn attention to—viz., that of being able to insure the contents of the glasshouses by increased insurance of the glass; also that insurers had the option of replacing the glass themselves, the corporation paying them at the rate of insurance per sq. ft. of glass.

One very gratifying fact was touched upon—viz., that although there had been hailstorms in various parts of the country, none of the glass insured with the corporation had been damaged. Altogether the directors had to report a very satisfactory year of steady progress.

The financial statement showed the total income to be £993 10s. 6d., made up of premiums amounting to £889 11s. 5d, interest on investments, £54 6s. 1d., and balance from last year, £49 13s.

The total sum charged against the revenue was £670 9s. 10d., consisting of the following items:—Commissions on insurances, £92 8s. 1d.; working expenses, including secretary's salary, £194 1s. 9d.; 20 per cent. written off formation expenses, £80; 10 per cent. written off office furniture, £4; reserve for unexpired risks, £300. A balance is carried to the balance sheet of £273 7s. 8d. A dividend of 5 per cent. on the paid-up capital was declared.

In rising to move the formal adoption of the report, Mr. H, J, Veitch commented upon the satisfactory conditon of affairs generally. The sum that they had carried forward would enable them to have declared an additional 5 per cent., but they thought it wiser to form a substantial reserve fund, for the company was not formed with a view to making large profits. They had issued 346 policies, covering 13,885,875 sq. ft. of glass, valued at £179,338 16s. 1d. The increase for the year of insured property represented a value of £47,000. Mr. Veitch touched upon the necessity for agents to seek business, and deprecated the practice of waiting until business came to them. With regard to the directors' fees, he assured them that no fees were desired by the directors.

Mr. Coblay seconded the report, which, on being put to the meeting, was carried with unanimity.

Mr. H. B. May proposed Mr. Henry Estill Tillman, of Covent Garden, as successor as trustee to Mr. James Webber, deceased. Mr. Piper seconded, and no other nomination being made, Mr. Tillman wes duly elected. The six retiring directors were re-elected on the motion of Mr. Cull, seconded by Mr. Kay. On the proposal of the last-named gentleman, the auditors, Messrs. Baker and Haward were reinstated. Votes of thanks to "the working members of the corporation," proposed by Mr. Piper; "the Press," by Mr. A. J Monro; and the "Chairman," by Mr, G. Monro, were dealt with, all of them being carried with the full assent of those present.

SOCIETIES.

ROYAL BOTANIC, *March 31st.*

The spring show of this society was held on the above named date in the corridor and part of the conservatory in the society's gardens at Regent's Park. Some excellent material was forthcoming on this occasion, but with the usual luck attending the society's shows the proceedings were somewhat marred by showery weather. The competition was very small, many of the classes not calling forth any exhibits, and no really keen competition apparent throughout. Consequently the miscellaneous exhibits were by far the more important and interesting portion of the show.

In the classes according to the schedule Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, received a first prize for a very nice collection of hardy herbaceous plants, which included Primulas, Anemones, and Saxifragas in strong force. Mr. W. Rumsey, Waltham Cross, was the only exhibitor of six pot Roses, and was therefore awarded the first prize. His plants were in meritorious condition. Twelve pots of Cyclamen were best shown by the St. George's Nursery Co., Hanwell, W., who had large and finely flowered specimens. Mr. Thos. Pestridge, Boston Park Road Nursery, Brentford, was second. Mr. J. G. Mowbray, gardener to Major the Hon. H. C. Legge was the only exhibitor of six Chinese Primulas; and Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames, the solitary exhibitor of twelve Amaryllis. Both received first prizes. Messrs. Morle & Co., Finchley Road, sent twelve good Hyacinths, and also obtained the first award.

Messrs. Barr & Sons, King Street, Covent Garden, had announced their gift of a Silver Daffodil Vase, specially designed, for the finest display of cut Daffodils, forced or otherwise, of the three groups, Magni-coronati, Media-coronati, and Parvi-coronati. This fell to the lot of K. Maitland, Esq., Wardour Lodge, Sunningdale, who staged a very comprehensive collection.

The greater part of the corridor was filled with the miscellaneous exhibits. Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway, N., had a fine display of Orchids, Amaryllis, Boronias, Clivias, Azaleas, Staphyleas, and forced Guelder Roses (Small Silver Medal). Mr. T. S. Ware sent a very comprehensive lot of cut Daffodils. The Leedsii and poeticus types were in fine form here, and Sir Watkin was surpassingly rich (Large Bronze Medal). A very showy group of mixed flowering and foliage plants was contributed by Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E. Some grandly flowered

specimens of Boronia heterophylla were very noteworthy (Large Bronze Medal).

Messrs. John Laing & Sons occupied about 200 sq. ft. of space with a very showy miscellaneous exhibit of stove and greenhouse flowering and foliage plants, for which a Silver Medal was awarded. Clivias especially were in grand condition. Messrs. Wm. Cutbush & Son, Highgate, N., were likewise large contributors. A Small Silver Medal was awarded them for a fine array of miscellaneous plants, in which Magnolia Alexandrina, Ericas, Acacias, and Rose Crimson Rambler played an important part.

A Small Silver Medal also went to Messrs. Barr & Sons for a collection of cut Daffodils, that fully illustrated the variability and horticultural value of the handsome flower with which their name is so closely associated.

Mr. R. Scott, gardener to Campbell Newington, Esq., The Holme, Regent's Park, set up a showy, although somewhat crowded group of mixed plants, the flowering and foliage elements being in about equal proportions (Small Silver Medal). The St. George's Nursery Co. also had an area of about 24 sq. ft. filled with Cyclamen. The plants were all full of flower, and the individual flowers of large size (Large Bronze Medal). Mr. Thomas Pestridge received a Bronze Medal for a smaller collection of the same charming flower. Messrs. Wm. Paul & Son, Waltham Cross, showed well-flowered Camellias in pots, although, curiously enough, no award was given. In a secluded corner Messrs. Jas. Veitch & Sons, Ltd., Chelsea, showed Amaryllis, a few Dendrobes and various other plants. A Small Silver Medal also rewarded Mr. W. Rumsey, Joyning's Nurseries, for a nice lot of pot Roses, and a considerable number of fine cut blooms, including such varieties as Marechal Niel and Niphetos.

BY TELEGRAM.

ROYAL CALEDONIAN HORTICULTURAL.—

Edinburgh, April 7th.

In spite of the intensely cold climatic conditions which have prevailed in Scotland the show in the Waverley Market this morning presents a lovely scene, the bright Daffodils, the gorgeous Liliums, the various hued Azaleas, combined with the masses of healthy green foliage plants, make one almost disbelieve the general tale about 12 and 13 degrees of frost.

The Judges have just started the round; they include Messrs. Lindsay, Mungo, Temple, Smith, of Hopetoun; Cook, of Gosford; Boyd, of Callender; and Henderson of Balbirnie. The awards for Deutzia gracilis are, first, Mr. Malcolm McIntyre; second, Mr. Alex. Brown; third, Mr. C. Sutherland. For one Deutzia gracilis, Mr. Alex. Brown took the lead; second, Mr. Wm. Bennett; third, Mr. Malcolm McIntyre. For four Azalea indica, Mr. John Downie was first; Messrs. R. B. Laird & Sons were second.

There are fine collections for ten forced plants in bloom. Mr. Malcolm McIntyre was first; Mr. Wm. Bennett was second; and the third place was taken by Mr. James Bald. These collections included splendid specimens of Azaleas, Spiraeas, and Rhododendrons. For six forced plants Mr. Malcolm McIntyre is again first; and Mr. Alex. Brown second.

In the class for six stove or greenhouse plants Mr. Malcolm McIntyre still leads the way; Mr. Bald was third.

For four stove or greenhouse plants first comes Mr. Malcolm McIntyre, followed by Mr. G. Wood.

Mr. Napier took an easy first for three Adiantums, with gigantic specimens of A. pentadactylon A. signatum and A. decorum. Mr. Nairn Craig, Cook Castle, was second; and Mr. Henderson, of Lindurn, third. Mr. Malcolm McIntyre secured first, and Mr. Kead, of Carberly, second for two greenhouse Rhodendrons. The prizes for twelve Hyacinths, distinct varieties, were well awarded to Mr. McDougal, of Dudley; Mr. Ray, of Sunlaws; and Mr. Lawrie, of Crammond, in the order named. Mr. Ray took first for six Hyacinths, Mr. McDougal was second, and Mr. Wyllans, Cramlinton, was third.

In the amateurs' class for six Hyacinths, Mr. Wyllans, Cramlinton, was first: Mr. Boydon, of Innerleithen, second; and Mr. Collinson, New Den Well, third. Mr. Boydon took first for six pot Tulips; Mr. Wood was second; and Mr. Pearson, of Beechwood, was third. For six pots of Polyanthus Narcissus, first came Mr. A. Wood; Mr. J. Pearson was second. For garden Narcissus, Mr. Shillington, Valleyfield, Penicuick, was first; and Mr. James Bald was second. For six pots of spring bulbs, Mr. Napiler of Rockville was first; and Mr. McInnes, of Irvine, was second. For Tree Roses in pots, Mr. P. Cumming, of Liberton, and Mr. S. Abbot, of Prestonfield, secured first and second. For six Roses in pots, first, Mr. A Mackay, Kingston Grange; second, Mr. S. Abbott.

Mr. McIntyre takes the lead for three hardy Rhododendrons, Mr. G. Chaplin being next. For three Azalea indica, Mr. McIntyre was second; and Mr. W. Murray, of Restalbrig House, was third. For two Azaleas, Mr. D. Mackay was first; and Mr. Cammond was second.

Prizes for one tree Fern go to Mr. James Bald, first; Mr. G. Wood, second; and W. Cookers, of Chestars Hall, was third. For two Lilacs, Mr. W. Bennett, of Gogar, was first; and Mr. J. Pearson, was second. For two Guelder Roses, Mr. A. Laing, of Salisbury, was first; Mr. Green was second. Mr. Malcolm McIntyre had the best Dielytra spectabilis.

Mr. G. McDougal took precedence of Mr. J. Gilchrist, of Ratho; whilst Mr. Cossar, of Eskgrove, came third. Mr. J. Mackay took the ribbon for two fine plants of Dielytra spectabilis; and was followed by Mr. G. McDongal and Mr. W. Cossar, respectively. The awards for six stage Auriculas from nurserymen were taken by Mr. John Downie and Messrs. R. B. Laird & Sons, the same order being established for six Alpine Auriculas.

For a hand bouquet, Mr Downie came first; Mr. J. Lawson was second. Messrs. R. B. Laird & Sons take the only prize for twelve Camelias; whilst Mr. Goodson, of Coltbridge carried the only awards for twelve Marechal Neil Roses, the same exhibitor taking first for six buttonholes. Mr. J. Lawson was a close second. The premier prize for twelve hardy Rhododendrons, distinct, has been secured by Messrs. R. B. Laird & Sons with an exceedingly fine collection, Mr. John Downie coming second. The same firm took first and second in order for twelve Japanese Maples.

The first prize for six well-grown Palms was taken by Mr. G. Wood. Mr. W. Armstrong, gardener to Dr. Scott, takes first for twelve Roses; Mr. A. Grydon was second; and Mr. Genanson, of Bathgate, was third. Mr. J. Pearson runs first for two pans of Lily of the Valley, very fine specimens; second, Mr. J. Shearer, of Ratho Lodge; third, Mr. S. Abbott. Mr. J. Pearson, again, leads with one pot. Mr. A. Farquhar, was second; and Mr. Jas. Ball was third. For two pots of Mignonette, first, Mr. D. Kind, of Mussellburgh; second, Mr. R. Laurie; and third, Mr. Malcolm McIntyre. Mr. Alec. Brown is first with grand plants for two Standard Mignonettes; Mr. J. Cumming was second. Mr. R. Cossar comes first for four Spiraeas; Mr. G. Wood, second; and Mr. G. Balms is third. Mr. J. Cocker is first for Spiraeas, all exceptionally good, particularly S. astilboides; Mr. David Plenderleith is second; and Mr. G. Chaplin is third.

Mr. Lunt, of Chrysanthemum fame, stages a grand collection of twelve Cyclamens, of which we hope to give a picture next week. He was a very easy first. Some of his plants carry over 100 flowers. Mr. McIntyre comes second, and he also has to follow Mr. Lunt in the class for six Cyclamens. Mr. J. Cumming, Mr. W. Armstrong, and Mr. David Plenderleith take awards for two Pelargoniums. For Amaryllis the first prize goes to Mr. W. Galloway; Mr. McIntyre was second. For six pots of spring flowering bulbs, Mr. S. Napier is first; Mr. R. McInnes is second; and Mr. J. Pearson is third. For six pots Daffodils, Mr. R. J. Shillington is a good first; Mr. James Bald is second; and Mr. A. Farquhar is third. The Rev. G. P. Hamden, of Hatfield, Doncaster, secures the coveted prize of a silver vase, given by Messrs. Barr and Sons for a collection of Daffodils.

Mr. McIntyre gets first for four very good Orchids. Mr. F. Nicoll, of Perth, is second; and Mr. J. Mitchell, of Falkirk, is third. Mr. McIntyre also leads for two Dracaenas; Mr. D. Mackay is second; and Mr. J. Cocker is third. Mr. J. McCartney is first for two Crotons; Mr. Mackay is second. Messrs. R. B. Laird and Sons well deserve the first they secured for twelve hardy Azaleas. Mr. Downie gets the prize in Class XIV. The judges evidently have a very big task, and it is with a sigh of relief that the labels go up, showing Mr. F. Nicoll first; Mr. McIntyre second; and Mr. W. Murray third for a circular table of plants 12 ft. ft. diameter for effect. Mr. McIntyre makes a grand show, the yellow Genista and the vartety andreana intermixed with Orchids, Crotons, Amaryllis, and Clivias, bordered with Tradescantia and Ficus repens. Mr. G. Wood gets second prize with a really good exhibit of Liliums Anthuriums and Orchids, with a groundwork of Adiantums and a lacing of Tradescantia Zebrina. Messrs. R. B. Laird & Sons get a special award for twelve hybrid Azalea Mollis, excellently well grown; but Mr. John Downie takes first prize for this class. Mr. David Wilson gets first for a good box of twelve bunches of cut stove or greenhouse flowers.

For the collection of vegetables, twelve distinct kinds, Mr. W. Harper, of Perth, secured first; his Golden Ball Turnips being very fine. There is no second prize, but Mr. D. Logan takes third. Miss Russell, of Ashiestiel, sends a number of pots of Primula vulgaris platypetala plena, excellently well grown, receiving special award. Messrs. Dickson & Sons secured first for twelve Conifers, which were arranged with pleasing effect round the band stand. Mr. A. McMillan, of Trinity Cottage, Edinburgh, is highly commended for a very fine seedling, greenhouse Rhododendron, larger than Countess of Haddington, and snow white. The further report must stand over till next issue.

Trade Exhibits.

Messrs. R. B. Laird & Sons of the old-established firm, as usual come well to the front at this show, their large Rhododendrons and forced plants carrying off leading honours in competitive classes. They also have a large circular group, 18 ft. in diameter, in the centre of the market. Circular groups were adopted last year in place of the usual tables. The innovation has proved a distinct success. A grand Kentia belmoreana, 10 ft. high, forms the centre. Bold and striking Clivias, Amaryllis, Indian Azaleas, Ghent Azaleas, Lilacs, standard and dwarf hybrid Azalea Mollis, Genistas, standards with fine heads full of flower, Acer Negundo variegatum, and Lilium Harrisii, lighten up the mass of flower. Probably the most striking group ever seen at a spring show, whether looked at as a whole or individual plants. They also exhibit two groups of Conifers and Japanese Maples.

Messrs. Barr & Sons, King Street, Covent Garden, London, exhibit a splendid group of Daffodils, occupying a space of 150 sq. ft. to 200 sq. ft., the flowers, being arranged in bold masses. There are about 75 of the most striking varieties. The flowers look grand, and their slow development during the late cold weather has added to their beauty, the colouring being richer than usual. Specially striking and fine are Emperor, William Goldring, M. J. Berkeley, J. B. M. Camm (of delicate beauty), Incomparabilis Gloria Mundi (a large flower. with a huge cup of a brilliant orange red), I. Sir Watkin, I. Beauty (handsome and showy), I. Goliath (a noble flower, as yet insufficiently known), Barii Conspicuus (rich in colour), Barri B. S. Love (of which there is an immense breadth at their Long Ditton Nurseries, and for this alone worthy of a visit), B. Flora Wilson, Maurice Vilmorin, Leedsii Duchess of Westminster (one of the handsomest for spring bedding), and Leedsii Katherine Spurrel. Besides the Daffodils, Messrs. Barr and Sons have some splendid specimens of single Tulips, such as Ophir d' Or (golden yellow), White Van Vondel (the largest white), and Koh-i-noor (dark maroon), all of which do well every year at Long Ditton.

Messrs. Dobbie & Co., the Queen's Seedsmen, Rothesay, exhibited 50 varieties of Tulips, 50 spikes of Hyacinths, and a large number of Narcissus, all as cut flowers in vases, a dozen pots of new Violas, and a few choice herbaceous plants in pans. The whole was tastefully staged on a ground work of Ferns.

Messrs. Jas. Grieve & Sons, Redbraes Nurseries, Edinburgh, have a table showing a fine collection of Palms, Ferns, Araucaria excelsa, Aspidistras, Ficus, Dracaenas, Pandanus Veitchii and other plants suitable for table decorations. Among the Ferns are several well-grown specimens of Pteris tremula, P. Cretica cristata, P. Maryi, P. nobilis, P. Wimsettii, P. serrulata cristata compacta, P. plumosa, Pteris Straminea, Asplenium pumilum laxum, A. biforme, Adiantum Williamsii, A. gracillimum, A. grandiceps,

Platycerium alcicorne, etc. They also had plants in flower of Spiraea, Azalea mollis, Rhododendrons, Doronicum, and Primula cashmeriana, vases of cut Tulips, Narcissus, etc. They showed a tasteful floral design in form of an anchor, showing a chaste and artistic combination of colour.

Mr. John Downie, Nurseryman, 144, Princes Street, Edinburgh, has made his circular table a most impressive display, as usual. It contained standard and dwarf Azalea mollis, A. indica, double and single Ghent Azaleas, standard and dwarf Lilacs, Staphyleas, Kalmias, Boronias, Genista andreana, G. praecox, and Acer Negundo variegata. The whole were most effectively arranged, and attracted close attention.

A plate of 18 specimens of the Fungus Gyromitra esculenta from John B. Boyd, Esq., Cherry-tree, Kelso, attracted considerable attention, owing to their most peculiar construction.

Messrs. Ford & Co., Princes Street, Edinburgh, again show a most choice assortment of decorative art pottery, in pedestals and pots; also a new coloured glass for cut flowers, styled "Clovergreen," in all shapes and sizes. This is a pleasing change from the monotonous dark green, so long in use.

Messrs. Thos. Methven & Sons take one of the four big circular tables for a collection of Kalmias, Lilacs, Acers, and Azaleas (mollis and indica), with a very fine lot of flowering Lilium Harrisii. These are prettily staged, and interspersed with Ferns, Palms, and other foliage plants.

THYRSACANTHUS RUTILANS.

Among what may be called soft-wooded stove plants adapted for general decorative purposes during the winter months, this is certainly worthy of a wider cultivation. It is a really beautiful, easily grown plant, yet seldom met with in good condition. Plants from twelve to eighteen inches in height, grown in five inch pots, will carry about a dozen racemes of flower, eighteen inches in length, of a beautiful scarlet colour. To show it off to the best advantage it requires elevating, otherwise the racemes of flower which are slender and pendant will not be seen. In conjunction with Poinsettias, winter-flowering Begonias and Aphelandras, a most tasteful and beautiful arrangement may be made. Plants are easily raised by rooting cuttings taken from the old plants in spring, on a brisk bottom heat, potted off and grown on into 4 in. and 6 in. pots by June. Harden them off during that month, and keep in a cold frame, giving abundance of air and sunshine till early autumn, so that the wood gets well-ripened; for upon this depends that through ripening of the wood, which is essential for the production of flowers. A peaty soil, with some loam and coarse silver sand will make a suitable compost.—*W. B. G.*

OBITUARY.

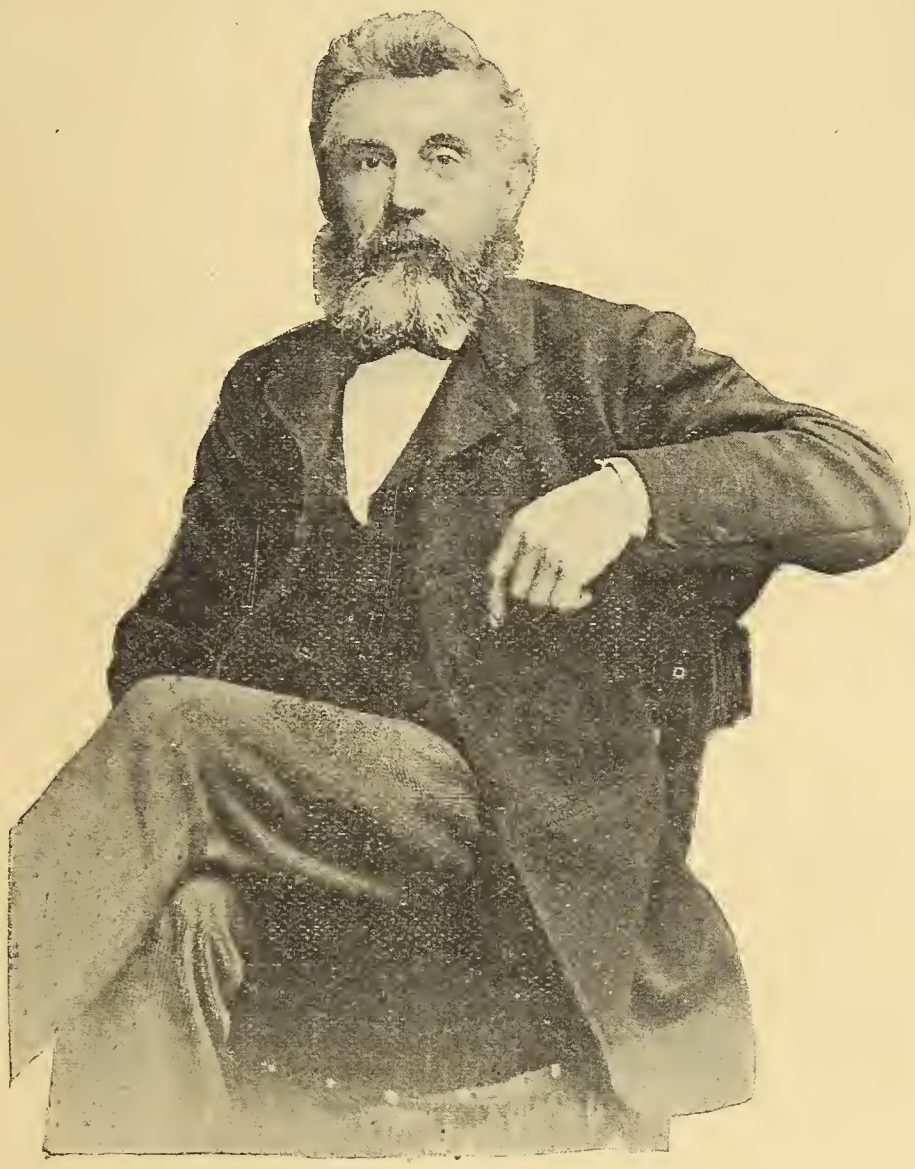
Mr. W. G. Head.

It is with much regret that we have to announce the death of Mr. W. G. Head, the chief of the Crystal Palace Company's garden staff, and superintendent of the flower shows. He has been afflicted with a grievous ailment for some months past, being entirely under medical care; and passed away on Saturday morning last at ten minutes past five o'clock.

Mr. Head was born in the Worthing Nursery, where his grandfather, about sixty-six years ago, erected the first glasshouse in the neighbourhood for grape culture. The subject of these notes was sent to Arundel Castle as a young man under Mr. McEwan in 1853. In 1856 he went to Shrubland Park, Suffolk, in the wake of Mr. A. F. Barron of Chiswick. Here it may be noted that Mr. Head's old master, Mr. McEwan, preceded Mr. Barron at Chiswick. The former sent Mr. Head to Mr. J. McIntosh, at Drumlanrig Castle, in 1857, to act as foreman in the glass department. After a stay of four years, he was appointed head gardener at Castle Dykes, in Dumfries, where he put up a great quantity of glass.

While at Castle Dykes his health failed him, and giving up his situation, he returned to the south in the spring of 1863, and accepted a foreman's place at Abernant in South Wales. From thence he moved to Arundel as foreman to the late Mr. J. Wilson. In 1867 we find him on the staff of the Royal Horticultural Society at Chiswick. When the late Mr. Woodbridge moved from Kew to Syon House, Mr. Head took his place as foreman in the greenhouse and plant furnishing department in the Royal Gardens at Kew. Not being very strong, his medical adviser recommended him to go to Calcutta for the benefit of his health. Here he laid out a garden and nursery for the Agri-Horticultural Society of India. After a period of six years he returned to England in 1878, having regained his wonted health and energy.

About 1879 or 1880 he was appointed garden superintendent at the Crystal Palace, where he continued the management of the extensive gardens and dressed grounds till laid up by the illness which carried him off last week. Here he made a large number of personal friends and acquaintances. The garden staff at the Palace was a small one considering the extent of the place, but Mr. Head, by untiring industry and energy, managed to keep the gardens in a beautifully neat and enjoyable condition. Notwithstanding the great crowds of people continually frequenting the place, the turf was always in excellent order, well upholding this country's reputation for the maintenance of a green sward that has always been the envy of foreigners. The flower beds on the green slopes of the Palace grounds at Sydenham were also kept in excellent trim notwithstanding the limited number of workers. As carpet bedding became less fashionable, tuberous and other Begonias largely took the place of it. Mr. Head was laid to rest in Chiswick churchyard on Wednesday last at two o'clock.



Mr. W. G. Head.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Moss on the Lawn Tennis Green.—*D. W. D.*: We should imagine your lawn is wet below, if not above. In that case it would be well to drain it. The next thing you should do is to give it a good harrowing with an iron rake to remove the moss. Then make up a compost of good soil from underneath the potting benches, or anywhere you can get it, mixing the same with wood ashes, lime, some bone meal and some nitrate of soda. Failing the latter, or any of the other manures, you might chop up some well rotted farmyard manure, and mix with the soil. Spread the compost over the lawn, scatter it about with a birch broom to break the knots, and then scatter some grass seed over the bare places. Give the ground a raking to settle the grass seeds, and then go over the whole once or twice with the garden roller to make the whole surface even and firm. The principal things necessary to prevent moss are to see that the ground is properly drained naturally or artificially, and then to feed the grass to get it to make good growth.

Hot Lime for the Kitchen Garden.—*D. W. D.* We consider your peaty soil would derive considerable advantage by a top-dressing of lime. In the case of Potatos we should do the planting first and then scatter the lime over the surface, giving it a scuffle with the rake, merely for appearance sake, the object being to keep the lime near the surface as it soon gets deeply enough into the soil. In the case of Onions, Carrots, Beet, &c., you may give the ground a dressing in the first place, then rake it over, take out the trenches or drills, and sow immediately. It is immaterial, however, for you might even scatter the lime on the ground some time after the sowing was made, if you liked; but it looks better to have the lime raked in to make the ground appear of its usual colour. The lime will do no harm if there is nothing growing on the ground at the time of applying it.

Insect amongst Roses.—*A. Robb*: It is one of the Ichneumon-flies belonging to the great family of Hymenoptera, and not likely to do your Roses any harm. The fact of its being seen amongst Roses in the perfect or winged form does not imply very much, as it might simply be wandering about or resting in the position where you found it. It is moderately common.

Fruit to name.—*Kenton, Louth*: On p. 441, in the issue for March 13th, you will find that an Apple was named Dutch Mignonne to a correspondent under the *nom de plume* of "Subscriber." There were three Apples sent on that occasion, which may have been yours; otherwise your consignment did not reach us. We have a recollection, however, that those Apples came from Gloucestershire; but it is too long ago to be certain.

Water Lilies.—*M. M'L.*: We have written to make enquiries concerning the plants you mention, and should feel very much annoyed if it is otherwise than a mistake. As it is we cannot understand it but will let you know the result of our enquiries. The address you supplied us with is quite correct.

Freak of Chinese Primula.—*Primula.*: It is a case of synanthy. We do not at the moment remember a case amongst Chinese Primulas; but we have frequently seen it amongst Orchids, Dahlias, Pansies, and various other subjects. It is simply a case of two flowers being united together from the bud state onwards, and failing to get separate when they reach the flowering stage. It would be difficult to offer an explanation of the phenomenon; but it occurs more frequently amongst cultivated than wild flowers, or at least is more often noticed. We generally, therefore, attribute it to a more vigorous growth, brought about by the plentiful supply of food. It is very much akin to fasciation, that is, the union of two or more stems into one large and more or less flattened piece, such as may be met with in Lilium auratum, Cockscombs, Hyacinths, sometimes in the Scots Fir and Asparagus, and constantly in Fraxinus excelsior monstrosa.

Water Lilies.—*M. M'L.*: The Water Lilies must have soil in which to grow. We presume you speak of a tank in the open air, in which you intend growing the plants. If so, use pots or boxes, and make up a compost of good turfy loam, leaf mould and some well rotted manure. The pots must be plunged some depth below the surface, so that the leaves of the Lilies will float on the water. If you tell us the size of the tank we can give you more precise particulars.

Names of Plants.—*J. S.*: 1, Salix Caprea; 2, Spiraea Thumbergii; 3, Choisya ternata; 4, Prunus cerasifera Pissardi; 5, the female catkin of Populus balsamifera candicans; 6, Vinca minor.—*Sigma*: The broad-leaved Holly (Ilex Aquifolium platyphylla).—*W. G.*: 1, Dendrobium transparens; 2, Dendrobium findlayanum; 3, Odontoglossum wilckeanum; 4, Miltonia Roezlii; 5, Oncidium maculatum.—*Alex. Wood*: 1, Narcissus poeticus ornatus; 2, Scilla sibirica; 3, Pulmonaria saccharata; 4, Fritillaria Meleagris; 5, Arabis albida; 6, Caltha palustris flore pleno; 7, Cardamine trifolia.

Communications Received—B. L.—M. M'L.—A. W.—J. W.—J. Carter & Co.—J. Laing & Sons.—P. M.—T. E. Henwood.—S. C.—T. R.—J. M.—A. H.—W. Soundy—B. Mayer.—R. S. M.—T. G.—Gerard S.—Aylesbury A. Froud.

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 17th, 1897.

THE PERSIAN CYCLAMEN.—Gardeners like those of other professions and avocations, are every now and again being upset by the sweeping away of old landmarks, particularly in the nomenclature of plants. The inroads of science upon the various records of the past are chiefly responsible for this; and to keep abreast of the times it is necessary to be on the alert from day to day and week to week. With all our progress, however, it takes many years for the correct or original names of plants to find their way into gardens in different parts of the country. It will be news, and probably disquieting news, to many gardeners that the Persian Cyclamen is a mere legend, nay more, a myth; for the so-called Cyclamen persicum of gardens is not a native of Persia at all. The name has been given to two distinct species, that recorded by Philip Miller in his *Gardeners' Dictionary* under the name of Cyclamen *foliis cordatis angulosis integris*, and called Persian Cyclamen, being really C. latifolium, a native of Greece, Asia Minor and neighbouring islands. The Cyclamen persicum of Sibthorp and Smith is C. graecum, a native of Greece.

To return to the C. persicum of gardens, it may be remembered by our readers that about the end of January last we recorded noting some specimes of the wild plant in the nurseries of Messrs. Sutton & Sons, Reading. These had been collected in Palestine, and on the spur of the moment we thought it a curious locality for the Persian Cyclamen. The pale purple flowers with a dark purple base agree exactly with Miller's description. The same writer mentions the fact that the species varied considerably in gardens, but chiefly in the colour of flowers, and that there was a pure white variety with sweet scented flowers, but which he considered an accidental variation. Now the wild type at Reading is distinctly and deliciously fragrant. Other scented flowers have been recorded from time to time, and we much regret that this desirable quality has not been developed nor perpetuated in the highly evolved modern progeny. Some plants may occasionly be found in collections emitting a faint fragrance, but, certainly, we have found none so powerfully sweet as the wild plants we have just mentioned.

We have for many years been decidedly of opinion that the highly evolved forms of the so-called Persian Cyclamen in gardens, both of the persicum and giganteum types, have been evolved from one species unaided by any hybridisation whatever. These facts have been recalled to mind by the remarks made at the recent meeting of the Linnean Society by Mr. W. T. Thiselton Dyer, C.M.G, who placed it under its original and correct name of C. latifolium, of Sibthorp and Smith, who described it in their *Flora Graeca, II.*, 71, *t.* 185. It was introduced from Cyprus to this country in 1731, together with the varieties albiflorum (white-flowered), inodorum (scentless), and odoratum (scented). The latter had red flowers with a white base, so that white and coloured varieties with sweet-scented flowers have been recorded. We cannot imagine why it should have been called C. persicum, and we are even more astonished that the misnomer should have been perpetuated so long. When will gardeners label it C. latifolium?

ORANGES ARE NOW IN SEASON.—Our markets have been abundantly supplied with Oranges since December, and which will continue with us in greater or less abundance till June. The first arrivals are tempting to the eyesight, but they are very sour and not half so palatable or agreeable as they become in spring and towards the end of it. The cultivation of Oranges is extending from year to year and wonderful improvements are being effected from time to time. For some years past the Jaffa Oranges, on account of their magnificent size and fine flavour, have been enjoying great popularity in this country, but their reputation bids fair to be eclipsed by the seedless Washington Navel Orange, now being imported in moderate quantity from California, we say in moderate quantity because it does not meet the demand which has sprung up. These Oranges are of peculiar form, being deformed at the apex of the fruit and giving rise to the name navel as applied by the American growers. Though the fruits lose in appearance they are of fine quality and rich in sugar. The fruits are worth 2½d. a-piece on the trees, and all the best of them are secured by dealers in Chicago, New York, and San Francisco. In London the public has been buying the samples that reach our markets, at the rate of 2d. to 4d. each. The exceptional quality of the fruit and the absence of seeds have given these Oranges a boom; but in spite of this they must become cheaper as the plantations extend. The Californian growers ought to endeavour to raise seedless varieties of better shape; and this might be accomplished, provided they know the history and origin of the Washington Navel. In the meantime, the Jaffa Orange will find a good market for years to come, because of its large size, rich and delicate flesh, and tempting appearance generally. Home growers do not complain of the immense imports of Oranges, for they can hardly be said to compete with

home grown fruits. They are so different in character from Apples, that the demand for either may continue to increase annually.

Garden Superintendent, Crystal Palace.—The late Mr. William Head is succeeded by Mr. George Caselton, who has discharged the duties of the office for the last two months.

A severe hailstorm with terrific thunder and lightning passed over Dropmore, Maidenhead and surrounding districts on the 7th inst., the hail doing much damage to fruit trees in bloom.

National Chrysanthemum Society.—The annual report and financial statement, as well as the schedule of prizes of this society are now to hand. We shall give fuller particulars at an early date.

The Isle of Rhodes, situated off the coast of Asia Minor is named after the Rose, we suppose on account of the number and beauty of the Roses growing there. At all events old writers tell us that when Jupiter Pluvius poured down a shower upon the island, the drops turned into Roses.

Worcester and District Branch of the Gardeners' Royal Benevolent Institution.—The noble president has given permission for this society to make a fête day in the grounds of Madresfield Court, on April 22nd. The beautiful gardens should be in a blaze of spring colour at this time, and together with the well known maze and rockery will be the means of attracting many shillings to the coffers of this deserving institution.

Archerfield Gardens, Drem.—On page 505 of your last issue, when speaking of Archerfield Gardens, Drem, you are made to say that :—He has well maintained the high reputation which Archerfield enjoyed in the days of the late Mr. Lees and Mr. D. Thomson. Mr. Lees never was gardener at Archerfield. Mr. Morrison succeeded the late Mr. Kettles. I'm afraid your correspondent never was at Archerfield, else he would see a great difference since then. —*J. McKelvie.*

Ealing Gardeners' Society.—The annual dinner of this progressive society was held at the Drayton Court Hotel, Ealing, on the 7th inst., Chas. Jones, Esq., M.I.C.E., presiding. There was a large attendance of members and friends, some really interesting speeches, interspered with good music, and a wholesome tone generally, which augurs well for the future success of this society. Amidst the satisfaction and enthusiam which the hon. secretary's (Mr. W. Roberts) report created, there was, however, one regret ; and that was concerning the chairman of committee, S. A. Sewell, Esq., F.R.H.S., who, in consequence of removal to another neighbourhood, will be unable to act in his old capacity. Mr. Sewell was a regular attendant at the meetings, and, as he always brought urbanity and geniality to the chair, his absence is sure to be felt, Apart from this retirement the meeting was a great success. Thus ends the ninth session of the Ealing Gardeners' Mutual Improvement Society.

Chiswick Gardener's Mutual Improvement Association —This association has resolved to organise a Chrysanthemum show to be held at Chiswick in the autumn provided that sufficient local support can be obtained to warrant the carrying out of this resolution. There has been no local society for some years past, and although the summer show was sometimes a failure financially, owing to bad weather, when such a society did exist, yet their autumn show was usually a great success. The Royal Horticultural Society has never attempted a Chrysanthemum show at Chiswick, so that any effort by the gardener's association would not compete in any way with that body. The object of the gardeners is to apply any surplus of cash, after paying expenses, for the benefit of one or other of the gardening charities as may be determined after the holding of the show. In such a popular suburb as Chiswick there should be no difficulty in getting sufficient local support to carry out this unambitious and laudable scheme. With a little prize money to excite competition, there would be no difficulty in getting the local and other gardeners to support the show by bringing forward exhibits. Some of them have already expressed their willingness to give their assistance in every way possible.

A Wood Pigeon has built her nest in a Poplar tree overhanging the pavement of the footpath by the side of a leading thoroughfare at Onslow Crescent, South Kensington, where 'buses and various other vehicles as well as foot passengers are constantly moving to and fro.

The Forest Gate Chrysanthemum Society held concert at the Town Hall, West Ham, on the 30th ult., in aid of the West Ham Hospital. The first part of the programme was taken up by the juvenile operetta, "King Arthur," capably performed by the boys of Farrance Street Board School, Limehouse, their singing and acting giving great satisfaction. About £20 will be handed over to the West Ham Hospital as a result of the concert.

Dundee Chrysanthemum Society.—We learn that the balance sheet for 1896 shows a favourable balance amounting to £20 16s. 3d. The arrangements this year are for a grand Chrysanthemum Carnival to take place on November 25th, 26th, and 27th, at which Mr. Norman Davis has agreed to act as judge for the cut blooms and plants. The special prizes already announced consist of four challenge cups, two gold and three silver medals, six money prizes, and three works of art. Mr. W. P. Laird, of 73, Nethergate, again acts as hon. secretary.

Vegetables and Flowers for Competition.—Under the auspices of the members of the Broughty Ferry Horticultural Society a lecture was delivered in the Courtroom on Wednesday evening by Mr. J. Machar, Corona, Broughty Ferry. There was a good attendance, and Dean of Guild, George A. Scott occupied the chair. Mr. Machar who took as his subject "Vegetables and Flowers as Staged for Competition," delivered an address full of valuable hints and information, which was listened to with close attention.

The Acanthus and Greek Architecture.—The original idea of the capital of the Corinthian order of architecture was derived from an architect observing the leaves of Acanthus mollis under peculiar circumstances. Vitruvius states that a basket containing some relics covered with a tile was placed by friends over a young girl's grave. An Acanthus plant grew up beneath the basket, and the latter so far obstructed the progress of the leaves that they spread out all round it and recurved gracefully. Callimachus observed the plant under these circumstances, and was struck by the beauty of the untrained decoration. Having some columns to design for a building in Corinth, he imitated the basket and the Acanthus leaves, the latter adorning the capitals. The Greeks quickly availed themselves of the idea when building other houses, and even applied similar ornaments to their clothes.

Shirley Gardeners' Mutual Improvement Association. —The first meeting of the fourth year of the above Society, was held at the Parish Room, Shirley, Southampton, on Wednesday, the 7th inst., the President, Mr. W. F. G. Spranger, in the chair, there being a fair attendance of the members. The society had been most fortunate in securing the services of the Rev. G. H. Engleheart, M.A., Applesbaw, Andover, to give a lecture on the "Narcissi," and his address was listened to with the greatest attention, and secured many marks of applause. Taking the flower he showed how the classes were divided, the time and soil for planting, and touched slightly on the diseases. Then he spoke of the pleasure derived from growing them from seed, and showed how by cross-fertilisation and seed selection the classes had been made to merge one into the other, resulting in some splendid hybrids, some of which he exhibited at the meeting, and four of these were awarded an extra special certificate. A brief discussion ensued, and the Rev. lecturer replied to several questions, in one case showing how to fertilise the flowers. A very hearty vote of thanks was accorded to the Rev. lecturer, who also brought a grand collection of his seedlings. There was also a splendid collection of 35 varieties of blooms from Messrs. Barr & Sons, of Long Ditton, Surrey, 30 odd varieties from Mr. B. Ladham's Nurseries, and hardy flowering shrubs and American plants from Mr. W. H. Rogers, Red Lodge, making altogether a very interesting exhibition, for which the exhibitors were accorded a hearty vote of thanks, as was also the president for his kindness in presiding.

Phlox Paul Kruger.—This name has been given to a heavily variegated form of P. paniculata or rather a garden hybrid of which that species was one of the parents. The flowers are of a rich carmine, but the foliage is evidently considered the most valuable portion of it. The leaves have broad, pale yellow, and creamy-yellow margins, and sometimes the green portion along the centre is reduced to very small limits. A full page and coloured illustration of it is given in *Tijdschrift voor Tuinbouw*, Plate 4, 1897.

Horticultural Exhibition at Hamburg.—The spring exhibition (1st to 9th May) will be of capital importance, both on account of the number of classes scheduled, the value of the prizes offered, and in the assured participation of the principal German and foreign firms. The awards will consist of large gold medals together with 500 marks in money, small gold medals with 300 marks, and large silver medals together with 150, 100, 75, or 50 marks, or of medals alone according to the value of the exhibits. Independently of these prizes there will be at the disposition of the jury prizes of honour consisting of 1,000 marks (£50) for the best exhibit of a group of plants, whether flowering or foliage; 200 marks for the best lot of Orchids at the spring exhibition; 1,000 marks for the best lot of Azaleas at the same show; 600 marks for the best lot of Orchids shown by amateurs; and 1,000 marks for the best exhibit of Palms of recent introduction.

The Poet's Narcissus at Kew.—A very charming effect produced by Narcissus poeticus ornatus may just now be seen in the wilderness in the Royal Gardens, Kew. Broad patches of this handsome and early flowering variety may be seen skirting a wide grass walk or vista, amongst the tall Beech and other trees in this part of the pleasure grounds. Visitors passing along the Syon vista, towards the Bamboo garden, Rhododendron dell and the Thames banks, cannot fail to see these broad masses of the Poet's Narcissus, for the snowy purity of the flowers attracts the eye from a great distance. Additional plantations of these, and other species of Narcissi, as well as bulbs of various kinds, are annually made in the gardens, and though the general public has free access to them in the majority of cases, it is with pleasure that we note the general good behaviour of the visitors. Only the most thoughtless would molest such flowers, knowing well that they have been planted.

Bulletin of the French Horticultural Society of London.—The society itself was established in London on January 1st, 1889, and is something of the nature of a mutual improvement society as understood in this country, but it goes much further in assisting its members to get into situations where they can learn gardening in this country while carrying on their studies. Monthly meetings are held at 19, Old Compton Street, W.C., and the proceedings that take place, together with the papers read at the meetings are recorded in the annual *Bulletin*, now before us, and in which we note that the society continues to grow in importance and popularity on both sides of the Channel. The membership now consists of 315, made up of three founders, one president of honour, 20 honorary perpetual members, 152 honorary, 48 titulary, and 51 corresponding members. The balance sheet shows that the total receipts of the society for last year were £59 1s. 5d., and the expenses £20 16s. 0½d., leaving a balance of £38 5s. 4½d., which has been placed in the bank in London. A small sum also stands to the credit of the society in the bank at Paris. A commemorative banquet (the eighth) was held on January 9th last, under the presidency of Mr. George Nicholson, curator of the Royal Gardens, Kew. Forty-seven members and invited friends sat down to dinner, being twice the number on a similar occasion the previous year. The library of the society increases in size every year by the number of books presented by various donors. Amongst the essays and papers printed in the *Bulletin* are Veitch's Hybrid Cypripediums (John Jaques), species of Asparagus (E. Tack), Chrysanthemums in the establishment of Thomas Rochford (Leon Lemoine), Davalias (Jean Heinzl) the Horticultural establishments of Messrs. J. Veitch & Sons, London (Léon Pynaert and Louis Genti) and various others. The *Bulletin* runs to 140 pages and contains several illustrations.

International Horticultural Exhibition at Berlin.—Roses and Orchids will be the principal feature of the exhibition to be held from the 28th April to the 9th May inclusive. For the 100 most beautiful Orchids a prize of 1,000 marks (£50) is offered.

Frost and Rhubarb.—Surely there is some mistake about the report from Newcastle, which says that plantations of Rhubarb in the vicinity have been almost entirely destroyed, though the thermometer showed only 7° of frost. There have been 10° to 12° of frost in the suburbs of London yet the plantations of Rhubarb do not seem to have been injured.

His Grandmother was ill.—An enthusiastic Professor of Botany in Edinburgh University had arranged Saturday botanical excursions for his class. One Saturday Corstorphine Hill had been selected as the rendezvous. One of the students asked to be excused as his grandmother had been taken seriously ill, and he, being the only living relative, thought it his duty to go to her at once. The Professor thought so too. At the last moment the destination of the botanical party was altered, and Arthur's seat substituted. To the surprise of the party, upon reaching the summit of the hill, they found, comfortably seated in the hollow of a rock, the "absent" student and his "grandmother" (who by the way was younger than the student himself). The student sprang to his feet, blushing and stammering, but his "grandmother" scampered down the hill with amazing agility for a grandmother. "How's your grandmother?" was the catchword of the class for many a day.—C. GRANT, Portobello, in *The People's Journal.*

Watercress and Flower Girl's Christian Mission.—This is the name of a charitable institution for the benefit and care of crippled orphan girls, the waif, and the destitute of East London slums and poverty-stricken localities. It was inaugurated in 1866 by the late Earl of Shaftesbury, K.G.; and the home is situated at 8, Sekforde Street, Clerkenwell, London, E.C. The institution has carried on its work for the last thirty-one years amongst poor women, girls, and children engaged in the streets selling flowers. The committee consists of ladies, and we are informed that the institution has received, trained, and placed in situations over 1,200 of such girls. Those unfitted for service or hard work are being taught fancy box making and artificial flower making. Last year their labour added £1,300 to the funds. A bouquet of artificial flowers sent us consisted of Buttercups, Sweet Sultan, scarlet Pelargoniums, Chrysanthemum leaves, Snowdrops, Daisies in bud, and something with violet flowers which our botanical acumen did not enable us to determine. Those desirous of helping the institution should send such help to Mr. John A. Groom, at the above given address.

Victoria Diamond Jubilee Prizes.—The Royal Caledonian Horticultural Society has resolved to be up-to-date in offering prizes at their September show, to be specially applicable to the sixtieth year of Her Majesty's reign. The prizes for plants and cut flowers are open to all; but for fruits and vegetables to gardeners and amateurs only. For the best group of plants 39 guineas in three prizes, together with a Victoria Diamond Jubilee Silver Medal, and a bronze one with the same title, are offered. For a table of cut flowers of hardy plants, 21 gs. and two medals are offered. In the case of fruit, 39 gs. and two medals are offered for 16 dishes, the kinds from which they are to be selected being specified. For 25 dishes of vegetables in 16 kinds, prizes to the value of 21 gs., and two medals are offered. The Victoria Diamond Jubilee Silver Medal is to accompany the first prize in each of the above classes, and the bronze one goes with the second prize. The table is to be 12 ft. long and 5 ft. wide. Twenty-six kinds of vegetables are tabulated from which to make the selection, but we should think it rather unseasonable for Asparagus to be in good heart by the 8th and 9th September, unless the beds are punished by persistently cutting them down till late in the season. Surely a somewhat loose translation must be placed upon the definition of kinds, if Cabbages, Cauliflower, Curled Kale, and Savoys are to be admitted as distinct kinds of vegetables. The gardeners must give strict heed to the wording of the circular sent out concerning these prizes, and the regulations that hedge them about, otherwise they may lay themselves liable to be disqualified.

A Greek Girl, in order to be fluent in speech and pleasant in utterance, offered gifts of flowers to Peitho.

Dartmoor and the Diamond Jubilee Celebration.—Mr. W. F. Collier, of Woodtown, Yelverton, has recently been lecturing upon the utility and beauty of Dartmoor, to the members of the Torquay Natural History Society. For some years past Dartmoor had been under the heel of the destroyer, and would ere now have been taken to London, if it had not been for the efforts of the Dartmoor Preservation Society. Mr. Collier gave a graphic description of the various features of beauty, interest, and utility of Dartmoor, including the river Dart and 24 other rivers which have their origin on the moor, the great watershed of Devon. To prevent the destruction of all these, it was absolutely necessary that the County Council of Devon should acquire the property in order to preserve its glories and advantages for the people of Devon. To acquire Dartmoor for Devon would make the sixtieth year of Her Majesty's reign celebrated for ever in the hearts of the people of Devon.

Essex County Council.—The Technical Instruction Committee of this body have issued a "Report and Handbook" of their operations and transactions for 1895—96. In it we note that the committee have given considerable attention to secondary education, as far as the means at their command will permit. This they have done by giving grants in aid to ten of the endowed schools in the county, either to enable such schools to secure additional teaching staff, or to build or fit up laboratories. They have also settled a scheme of scholarships for children under thirteen years of age passing from elementary to secondary schools, to places of higher instruction. At the Central County Laboratories at Chelmsford, they have day classes for systematic instruction in biology and chemistry; and on Saturdays there are normal classes in chemistry and horticulture for elementary school teachers. These classes are attended by fifteen pupils for chemistry and fifteen for horticulture; and they undertake when qualified to give instruction in their own districts as the committee may require. The staff instructors at the laboratories are also engaged in pioneer lecturing and teaching in various centres in connection with the schemes of local committees. An instructor in horticulture having been engaged, the committee were able to establish a County school of Horticulture at Chelmsford. The school is arranged for several short courses, of three weeks duration, in the course of the year. Candidates must be engaged in gardens, fruit farms, or seeking such employment.

Tomatos, Cucumbers and Mushrooms. — The monthly meeting of the Dundee Horticultural Association was held in the Technical Institute, on the 6th inst., Mr. J. Simpson presiding, when Mr. P. W. Fairgrieve, F.R.H.S., F.B.S., gardener to Her Grace the Dowager Duchess of Athole, Dunkeld, read a paper on "Tomatos, Cucumbers, and Mushrooms." No fruit had attained more popularity in so short a time as the Tomato, the reader stated, and he heartily congratulated the taste and wisdom of the public in using so largely one of the most wholesome of fruits. The Tomato, coming as it did from a warm climate, required artificial heat to bring it to perfection, and to attempt its cultivation in the open air in that part of the country was very precarious work. The best style of house to produce the largest quantity of fruit, and most economically, was one which would be span-roofed, about 12 ft. wide and 9 ft. or 10 ft. high, with perpendicular glass in front of sufficient height to give a desirable angle. Houses of this description were what they required for market work. He had grown Tomatos in pots with considerable success, but did not approve of it except under certain circumstances. Seeds of Cucumbers should be started in a bottom heat of 90°, and near the glass, either singly in pots, or three seeds in a 4½ in. pot. Mushrooms were not so largely grown as they ought to be, though in some parts of the kingdom they were known as "the poor man's chop." One reason of its unpopularity was that it was closely allied to the unpalatable and even highly poisonous fungi. He believed it was possible for the uninitiated to present it in a most injurious form. An interesting discussion followed the reading of Mr. Fairgrieve's paper.

The Ivy may often be seen clinging to trees that have died at a very old age. Though it may be younger than the tree, it is stated to live for 450 years.

Torquay District Gardeners' Association.—The annual meeting of this association was held on the 2nd, under the presidency of Dr. R. Hamilton, Ramsay. About forty members were present. The report of Mr. F. C. Smale, the hon. secretary, showed that the membership was the same as last year, but that the credit balance had increased from £5 4s. 9d. to £8 17s. 9d. The balance of the recent spring show had increased from £29 in 1896 to £44. Officers and a committee were elected, Dr. Ramsay being re-elected president as usual. It was decided to hold the annual outing at Kingsbridge.

Syndical Chamber of Belgian Horticulturists.—At the monthly meeting of this society on the 4th inst., in the Casino, Ghent, Certificates of Merit were awarded as follows:—To Miltonia vexillaria rubra, Randia maculata, and Cattleya luddemanniana, all presented by M. A. Van Imschoot; to Anthurium scherzerianum Madame De Smet-Duvivier, exhibited by M. L. De Smet-Duvivier; to Acacia latrobea shown by M. Ch. De Loore; to Odontoglossum wilckeanum var, and Oncidium sarcodes, var., presented by M. le Comte Joseph de Hemptinne; to Azalea M. E. Chantrier, shown by M. Oct. Van der Cruyssen; to Tremendra verticillata, and Yucca pendula (recurvifolia) med. aur. picta, both shown by M. E. Bedinghaus; to Laeliocattleya callistoglossa shown by M. Jules Hye (with acclamation and the congratulations of the jury); and to Livistona robusta nana, shown by M. H Millet. The award for the Yucca was also given with acclamation. A Botanical Certificate was accorded to Bryophyllum prodigiosum, shown by M. A. Van Imschoot. Some certificates were also awarded for culture, and some honourable mentions for various exhibits at the same meeting.

Dutch Horticultural and Botanical Society.—The various flowers, plants, fruits, and vegetables, which received certificates from this society have been recorded in a pamphlet, entitled "Acts of the Permanent Committees." Here we note that first and second-class certificates are awarded, as well as certificates of merit, botanical certificates, honourable mentions, and votes of thanks. The motives of these distinctions are that the plant receiving an award may be a new introduction, a new plant obtained from seeds, insufficiently known, of superior culture, or it may be a plant of importance. The name of the plant in this list is followed by the particular award it received, the date and object for giving it and the name of the exhibitor, in separate columns across the page. This list extends to six pages, but as few of them are very full, and because the type used in the text is large, it follows that the committees have not been over liberal in giving awards. Many of the plants recorded have already received certificates of some kind from the Royal Horticultural Society. Instructions and explanations intended for readers are given in Dutch and French, and the names of the plants if not in Latin, may be French or English, according to their place of origin, seldom Dutch.

MESSRS. VEITCHS' IMANTOPHYLLUMS.

THE Imantophyllums in the nursery of Messrs. J. Veitch & Sons, Limited, Chelsea, have never done better than they have this spring. The general absence of sunshine and bright skies does not seem to have been prejudicial to their welfare in any way. This may be accounted for by the fact that this class of spring flowering plants does well in partial shade as well as in sunshine. The collection has been divided into three batches, the first of which came into bloom six weeks ago, the third being now in perfection. The collection increases in size every year and in the number of handsome named varieties, of which we noted a few.

The rich orange flowers of Acquisition are notable for the breadth of their segments and the huge size of the trusses. Those of Excelsior are bell-shaped and of a rich shade of orange. The long funnel-shaped flowers of Admiration are strikingly distinct

in shape, and are borne in immense trusses. The blooms of Excellence on the contrary are of a rich shade of orange, short and campanulate. The flowers of President are funnel-shaped, with broad, overlapping segments of a deep orange. The clear orange flowers of Distinction are of great length and produced in huge trusses. Another choice and valuable variety is Madame Marie Reimer with broad segments and deeply bell-shaped flowers. Many unnamed seedlings are of superior merit, and amongst them we noted one of the palest varieties in cultivation. The flowers are creamy and tinted with flesh at the tips of the segments. Something good may, in time, be forthcoming from this variety. Yellow, white, purple and other varieties are still desiderata in this class of plants, which are of decorative value at all times, whether in flower or not on account of the handsome, leathery, dark green foliage, so easily kept in a clean and healthy condition.

DAFFODILS AT LONG DITTON.

A March stormy from beginning to end, and an April in an equally intractable mood in its early stages have both conspired against our friend the Daffodil. But buffeted by wind, sullied by mud mashed up by the heavy showers, and cruelly pinched by the frost, the golden flower of the west has yet asserted its superiority to mere untoward climatic conditions, and its beauty has been as ungrudgingly given as ever, despite the consistent malevolence of the "north winds and the cold." "Narciss, sweet Narciss" is the burden of a cry so prevalent at this time in the London streets, varied occasionally with such suggestive names as "Codlins and Cream," and "Butter and Eggs," both of which however, refer not to a feast of the body but to the sublimer repast of a feast for the eye and the soul of the lover of floral beauty.

Yes, the Narcissus is amongst us, and more, is amongst us to stay, thanks to the labours of those who have spared no pains or trouble in widening the range of its special type of beauty, and the scarcely less desirable lengthening of the flowering season. Of those whose names will ever be associated with the Daffodil, Messrs. Barr & Son hold a most prominent position. A visitor to their nurseries at Long Ditton sees Daffodils everywhere. Clumps of the flowers nod gracefully from nooks in the rockery, others are ranged side by side in small batches of each variety, and placed in specimen beds, constructed with a view to demonstrating the special characteristics of each, their relative habits and flowering seasons. From these the eye travels to huge breaks of special varieties that glint and shimmer at intervals as far as the eye can comfortably follow. No idea of grouping for effect is evident, but the unworked for is obtained, and it would be futile to deny the imposing character of the unstudied arrangement. Still, while studied art is sacrificed to utility one feature betrays the eye and hand of the artist. This is furnished by a large plantation of Muscari conicum, the huge spikes of which, in their serried array form a background of deep generous blue, and offer a magnificent contrast with the yellow of the Daffodils.

At the present time there is probably a greater number of Narcissi in flower than at any other part of the season. The trumpet and incomparabilis sections are in great force and the early flowering forms of N. poeticus are also putting in an appearance.

The Ajax or Trumpet flowered section contains many a fine form, the whole gamut of yellows from pale yellow-white to deep orange yellow being passed through. The section is usually subdivided into "selfs," and bicolor varieties for the sake of convenience. Of the yellow selfs, Emperor is one of the very finest varieties with its primrose perianth, and its huge full yellow trumpet. It is of sturdy constitution and a vigorous grower. Countess of Annesley is a long flower, with a very spreading orange yellow trumpet, and the perianth segments two shades lighter yellow. It usually runs to about eight inches in height. Than N. Johnstoni, Queen of Spain it would be difficult to find a more elegant and refined flower. Like the rest of the section it is a hybrid of N. Ajax, and N. triandrus. The colour is a uniform clear yellow with reflexing perianth, and rather narrow trumpet. Santa Maria, found by Mr. Peter Barr in Spain, has a rich orange-yellow corona and prettily twisted segments two shades lighter in colour.

Passing to the bicolor varieties we find a host of beautiful things. Perhaps it is unfair to particularise, but J. B. M. Camm seems unapproached by any of the others in refined beauty. This variety, we may mention by the way, has had a First-class Certificate granted it by the Royal Horticultural Society. Certainly it is a pretty flower with its pure white perianth and soft chrome-yellow trumpet. Empress is the counterpart of Emperor, with regard to size of flower and vigour of growth. The white segments, however, are very distinct. N. bicolor (of Haworth) is a late variety, but it is in flower rather earlier this year.

Of pure white varieties Snowflake is certainly one of the best. N. moschatus (of Haworth) is valuable on account of its dwarfness. The flower is of medium size and pure white. N. Cernuus has the perianth segments and trumpet of about the same length, and also pure white.

In the white trumpet section Madame de Graaff cannot be passed over. This also has been accorded a First-class Certificate by the R. H. S. When first opened the trumpet is a very pale yellow, but the yellow soon wears off, and leaves a pure white. N. m. tortuosus has a pure white perianth, somewhat shorter than the trumpet. The latter exhibits a very pale sulphur yellow at first, but as in the case of Madame de Graaff the yellow soon goes, leaving the trumpet a snow white. William Goldring, W. P. Milner, and F. W. Burbridge, are three more well-known sorts, which space forbids us to allude to in detail. All are of great beauty and distinct.

Varieties of N. incomparabilis are just now greatly in evidence. Sir Watkin is, of course, conspicuous by reason of the immense size of the flower, some of them measuring over four inches in diameter. The rich yellow perianth segments and the spreading cup stained with orange are most striking. N. Leedsii, and its varieties, have a kind of fragile beauty that is all their own. N. L. Beatrice has long white acutely pointed segments and flesh-coloured cup—a novel and distinct colour amongst Narcissi. N. L. Duchess of Westminster has large white perianth segments, and a canary yellow cup. N. L. Katharine Spurrell is a large and very distinct flower, the perianth segments being broad and overlapping, thus imparting a look of great solidity to the flower.

The Barii group is a great feature. Huge breadths of Barri conspicuous, containing many thousands of bulbs attest the popularity of this variety—one of the best of the Star Narcissi; indeed a glance at this glorious flower would be sufficient repayment for the journey. In addition to this, such forms as Golden Mary, Orphee, Maurice Vilmorin, and Sensation are much to be admired,

We might, indeed, go on to enumerate scores of other fine varieties, for the Long Ditton Nurseries seem to contain of them stores inexhaustible, but our notes have already reached the limit of respectability with regard to size, and our pen, for the time being, must cease to work amongst the Narcissi, although their memories, like the poor, are ever with us.

NOTICE OF BOOK.

Vegetable Culture.*

*The Culture of Vegetables for Prizes, Pleasure, and Profit.—By E. Kemp Toogood, F.R.H.S. Printed in 1897, by William Holmes, Ulverston, Horticultural Printing Specialist. Price 6d.

This small book runs to 127 pages, including an index, and includes a great number of vegetables and herbs, concerning each kind of which cultural directions are given. Owing to the exhaustive nature of the list of kinds and varieties of vegetables enumerated, but little space is left for details of culture, though they are brief and to the point Concerning Cabbages and some other vegetables there are notes relating to cooking, but we confess not being able to see what is meant by them in some cases. For instance, it is said that "Red Cabbages can be boiled in autumn or pickled in spring." Of course they can, but after a severe winter, or even an ordinary winter in some parts of the country, there would be few Cabbages left to pickle in the spring, unless means were taken to protect them in some way.

Then again, "Properly cooked Brussels Sprouts are very much more delicious than ordinary Cabbage, though their composition is similar." Most people, probably, know this, but not a hint as to the mode of cooking is given. Well, the book was evidently not intended to teach cooking, and the paragraph might have been omitted without detracting from the value of the book, which lies entirely in the practical details concerning culture, manuring, sowing, and the calendrial directions. Amateurs would also find some useful hints concerning what types of vegetables to select for exhibition, and the methods of preparing them for the same. The directions given concerning the fungi and insects that attack vegetables are sound and practical, though terse.

The short chapters on rotation and manures, both natural and artificial might also be followed with advantage by amateurs and cottagers generally. Some diagrams showing the economical and efficient methods of proceeding to dig or trench a piece of ground, might be studied by those who have never been put through this kind of drill by a professional gardener.

The vegetables enumerated and dealt with are arranged in alphabetical order throughout, and the index offers additional facilities for finding them as well as the other subjects mentioned in the book. No less than thirty-three kinds of herbs are recorded, so that most cultivators should find something to their taste. The growing of Maize is advocated, and the cobs are said to be cooked and served like Asparagus while the grains are soft and milky. The calendar for the times of sowing should also serve as a useful reminder to all concerned.

VEGETABLES AT STOKE BRUERNE PARK.

During the early period of last winter I happened to be in the neighbourhood of Northampton on a holiday and called at Stoke Bruerne Park, the residence of B. Wentworth-Vernon, Esq. Having heard much about this place I was anxious to see the gardens and have a chat with Mr. Dymock, the rising young head gardener, who is already making himself famous as an exhibitor at several of the leading shows in the country.

After being most heartily received, an adjournment was made to the gardens, and the first to receive notice was the winter vegetables. The kitchen garden has only recently been formed, the old one being quite inadequate to meet the demands of the kitchen. Here were noted the finest square of Brussels Sprouts that has ever come under my notice. Mr. Dymock having only been in the locality a short time, naturally was testing the merits of many varieties of most vegetables with a view to a more rigid selection later on, and in the Sprouts there was no question of the merits of Sutton's Dwarf Gem over several others. The plants were dwarf, well clothed with leaves, and splendidly studded with Sprouts of a fine dark colour. A more perfect lot would have been hard to find. Indeed, this would apply to the whole of the winter vegetables. The ground had been carefully trenched to a good depth the previous winter, and is a heavy loam of a holding character. Broccoli and Scotch Kale were alike good, and a fine batch of Celery will ere this have rendered good service. Late Cauliflowers still remained excellent. The only crop there seemed any scarcity of was Turnips, but the wet autumn and early winter rendered this crop a failure in most places, most particularly where the soil was heavy.

The Onion store was next visited, and here as in the other departments the crop had been enormous, many of the bulbs measuring 19 in. and weighing 2¾ lbs. each. A particularly fine sample of A1 was noticed and Ailsa Craig also very fine. A large portion of the kitchen garden is planted with all the best varieties of Apples and Pears, and Mr. Dymock has with much forethought planted them on the surface and mounded them up—a system which is bound to give good results on this heavy soil. The trees, although planted late in the spring, had done remarkably well considering the very dry season they had come through. Mr. Dymock manages other departments with equal success; his Chrysanthemums were alone worth going a long way to see.

There are many interesting sights about this place of which I will have something to say again, but it was, indeed, to me a specially pleasant visit and one that will long remain in the mind of *A London Visitor.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Cypripedium rubescens superbum.—*Nov. hyb. var.*—The raisers of hybrid Orchids, but particularly of Cypripediums, sometimes give their seedlings a very complicated parentage. That is so in the case of the plant under notice, and in spite of it the flowers are very distinct, and amongst the most beautiful of their particular ilk. It was raised by Mr. A. Wright, gardener to T. McMeekin, Esq., Falkland Park, South Norwood Hill, and is here described for the first time. The seed parent was C. villosum Boxallii atratum, which was crossed with the pollen of C. oenanthum superbum. The former may be regarded as a subvariety of C. villosum which looms largely in the progeny, being indeed a most potent parent in nearly every one of the hybrids with which it is connected. C. oenanthum is a hybrid between C. harrisianum (itself a hybrid) and C. insigne; but C. o. superbum was raised from C. harrisianum crossed with C. insigne Maulei. Even if the parentage is highly complicated, the name given to the plant under notice is relatively simple, though this could hardly have been the case if any attempt had been made to manufacture a name from those of the parents.

The flower is of large size, good substance, polished and glossy as if varnished. The dorsal sepal is broadly ovate, rich claret-purple, heavily lined with black veins, and of a clearer purple towards the margin, which is white and relatively narrow. Needless to say, C. oenanthum superbum is evident in this, but the black veins give the sepals a much darker aspect. The lower sepal is greenish-white, with dark green veins. The petals are of a rich reddish-brown on the upper longitudinal half, with a few brown spots at the edge near the base; the dark chestnut-brown midrib is well defined and prominent from base to apex; and the lower longitudinal half is yellowish, suffused with pale brown. In these respects, the potency of C. villosum Boxallii atratum is visible. The lip is of a dark purple-brown in front, and greenish-yellow with darker veins behind. The pale staminode is tinted with flesh and netted with green in the centre.—*J. Fraser.*

Epidendrum elegantulum.—This name has been given to a series of hybrids—we say a series because the flowers of the seedlings from the batch are very varied in colour—between E. Wallisii and E. Endresio-Wallisii, the latter being the pollen bearer and itself a hybrid, as the name would indicate. The ground colour of the sepals and petals is either creamy, pale yellow, golden yellow, or, in a dark variety, orange-brown. This ground, in some of its shades of colour, is also ornamented with dark eye-like spots in a ring of yellow. The lip is white, suffused, and often spotted or mottled with various shades of purple or violet. The plants are about a foot in height, very floriferous and highly ornamental. The flowers are moderate in size but very numerous, and offer a hint that large plants would prove most effective in a collection of Orchids. This batch of varieties of E. elegantulum has been flowering for weeks past in the Orchid rockery house of Messrs. J. Veitch & Sons, Ltd., Chelsea, who were the raisers.

Miltonia Phalaenopsis.—It is pleasing to note that some cultivators still care for and succeed with this beautiful Miltonia which some regard as a difficult subject to manage. The pseudobulbs are much smaller than those of the allied M. Roezlii and M. vexillaria; and the light green leaves are linear-lanceolate with a graceful and grassy appearance, when the plants are hung up close to the glass in line with the eye of the beholder. The flowers are large in proportion to the size of the plant, and hold their own well with those of their allies. The sepals and petals are white, and the lip is beautifully striped and blotched with violet-purple. A house with an intermediate temperature suits this species admirably, and the plant succeeds best when kept near the glass. It should in fact receive plenty of diffused light at all times, and not be exposed to hot and direct sunshine. If regularly attended to in the matter of watering so that the roots do not get deluged at one time and dried up at another, the species succeeds as well as its allies. We noted a fine plant recently in the nurseries of Messrs. J. Veitch & Sons, Ltd., Chelsea.

Cypripedium Morganiae burfordiense.—This splendid variety of one of the noblest of hybrid Cypripediums turned up in the collection of Sir Trevor Lawrence, Bart., Burford Lodge, Dorking. The flowers are larger than in the original C. Morganiae, darker and brighter in colour. The petals are also broader, and owing to the size and number of blotches with which they are adorned, they recall the famous C. Stonei platytaenium, which was established as the best Cypripedium extant by the plebiscite organised by the *Journal des Orchidées* recently. The long and broad recurved petals are blotched with dark crimson-purple, and the large lip is of a dark brownish-purple. A full page, coloured illustration of it is given in the *Lindenia Pl.* 541.

THE PLANT HOUSES.

Pits and Frames.

Throughout the spring months more particularly this department is very congested, and at the present time a great deal of the room is taken up with bedding plants of all descriptions. It will be at the least another month before much of the space occupied by this kind of material is available for other purposes, so in the meantime the utmost will have to made of every square foot of room.

Lachenalias and Freesias which have gone out of flower must not be neglected on that account. A place should be given them in a pit or frame facing north. Here they may be allowed to gradually ripen off. Curtail the water supply by degrees, and give plenty of air during the daytime.

Double Primulas.—It is not wise to defer the propagation of these until late for, in order to obtain good strong plants for flowering next winter a fairly long season of growth must be allowed. The method of earthing up the plants round the collars is to be strongly recommended. The old, lower leaves should be removed from the old plants and some light soil containing a large proportion of leaf soil and sand packed round until the bases of the remaining leaves are reached. Chopped sphagnum and sand is also a good medium, and roots are freely formed in it. Place the plants in a house having a temperature of about 60°. Here the syringe may be used without fear, and under such conditions it is astonishing how quickly and strongly the plants grow. All flowers should be pinched out as fast as they appear. The double white variety is a most continuous bloomer, but it must be induced to husband its strength against a time when the flowers will be of greater value.

Specimen Coleuses.—No matter whether large or small the Coleus, in its infinite variety of coloured and variegated foliage, is in great request for conservatory decoration throughout the summer months. Well-leaved plants in 48's and 32's come in very usefully for filling small vases and ornamental plant stands within the mansion. On the other hand large specimen plants will come in equally handily for making up groups of plants in suitable positions in fireplaces and window recesses in dwelling rooms as well as for furnishing material for the larger houses. Some of the strongest plants now in thirty-two pots should be shifted on into an eight or even a a ten inch size. Pot firmly, using a compost of two parts of good loam, and one part of dried cow manure or horse droppings rubbed through a half inch mesh sieve. Add plenty of sand to keep the soil thoroughly porous. Too much heat can scarcely be given the plants, as they really revel in it. Plenty of moisture, both in the atmosphere, and at the root, is also requisite. Consistent pinching must be given, and if this is done there will be little difficulty in obtaining fine plants with leaves right down to the pots. The water supply must not be stinted, however, for a single act of neglect in this direction will mean the loss of a great part of the lower leaves.

Tuberous Begonias for Baskets. — When plants with suitable habit are chosen tuberous Begonias will furnish some very showy baskets. It is necessary to pick out such plants the year previously, and mark them. If these selected basket plants have been started in pots or boxes with the rest, they may be transferred to the baskets without delay. Each shoot should be brought gradually down to the wires by a light ligature. Too much pressure must not be put on at once, of course. All that is needed is a slight coercion to be increased by degrees.

Pot plants that are just showing for flower will not want support just yet, if they are of good habit naturally and have not been forced too hard. Keep all carefully shaded from the sun rays, for burning of the leaves will now be in order unless care is taken to prevent it.

General Work.—Than the pricking out of seedlings there is no more pressing job than this at the present time, for every day is of importance if the young plants are to be prevented from becoming drawn. Celoslas and Cockscombs must be potted off as soon as they are about an inch and a half in height. Thumb pots will be quite large enough. Keep a sharp look out for greenfly among herbaceous Calceolarias, and show and regal Pelargoniums. A light fumigation may be given about every ten days, rather as prevention than cure.—*A. S. G.*

Gleanings from the World of Science.

Royal State Cloaks.—At the meeting of the Linnean Society of London on April 1st Mr. Miller Christy exhibited three royal state cloaks formerly worn by the Kings of the Hawaiian Islands, and made of the feathers of four species of birds, of which the exhibitor gave an account, referring to the coloured figures of them given in Mr. Scott Wilson's 'Birds of Hawaii,' namely, Vestiaria coccinea (red) Psittacirostra psittacea (green) Acrulocercus nobilis and Drepanis pacifica (black and yellow). The last-named, of which no specimen is to be found in the National Collection, was believed to be now extinct.

Evolution of Cyclamen latifolium.—At the same meeting as the above Mr. W. T. Thiselton-Dyer exhibited:—(i) A series of drawings (on the screen) to illustrate the "Cultural evolution of Cyclamen latifolium, Sibth." The species is a native of Greece and the Levant, and is believed to have been first introduced into European cultivation in 1731. In 1768 Miller described a form modified by cultivation under the name of Cyclamen persicum. This was erroneous, as according to Boissier neither the wild nor the garden form occur in Persia. The latter persisted in cultivation for about 150 years, and about 1860 became the starting-point of the modern races which were illustrated. Cyclamen latifolium has never been hybridised, and it was shown that the striking forms now in cultivation were the result of the patient accumulation of gradual variations. Drawings of the remarkable forms "Papilio," obtained by de Langhe-Vervaene, and of "The Bush-Hill Pioneer," by Messrs. Hugh Low & Co. were shown. It was pointed out that the tendency of the species under cultivation was to lose its distinctive generic characters, and to approximate to a more generalised type. The reflexion of the corolla-segments was often lost as in Lysimachia, the segments were sometimes multiplied as in Trientalis, and the margins were fringed as in Soldanella and cultivated forms of Primula sinensis. "The Bush-Hill pioneer" possessed, in the cresting of the petals, a remarkable character without parallel in any primulaceous plant occurring in a wild state.

Garden Cineraria:—(ii) A series of plants was exhibited to illustrate the origin of the garden "Cineraria." It was generally agreed that this had sprung from one or more species native of the Canaries. An extreme cultivated form was shown and compared with Senecio cruentus, which all internal evidence indicated as the sole original stock. S. Heritieri, another reputed parent, was exhibited. But it was pointed out that this has a shrubby habit and stems markedly zigzag between the internodes, while the leaves are clothed beneath with a dense white tomentum. These characters it transmits more or less to its hybrid offspring. In illustration of this point Mr. Poë's hybrid (S. super-Heritieri by cruentus) was exhibited (a similar one has occurred at Edinburgh); also the Cambridge hybrid (S. super-cruentus by Heritieri). S. cruentus crosses very freely with the garden Cineraria, and as the latter never exhibits any trace of the characters of S. Heritieri, it was concluded that that species had no part in its origin, and that, as in the case of the Cyclamen, the striking development of S. cruentus in cultivation was due to the continued accumulation of gradual variations.

HINTS FOR AMATEURS.

THE DOG'S-TOOTH VIOLETS.

The Erythroniums, or Dog's tooth Violets, as they are commonly called are amongst the prettiest and most useful bulbous plants that we have. They are hardy and easily suited for soil and position, and take very little looking after; indeed, they are ideal amateurs' plants. The number of ways in which they may be made use of is many and diverse. For little nooks in the rockery they are distinctly a success, although E. Dens-canis and its varieties are inclined to hug the earth pretty closely, and thus heavy rains mud-wash and disfigure the flowers—but this is the fault of the weather primarily. Possibly those who are "gone" on the naturalisation questions would stoutly aver that if you want to see Erythroniums at their best you must plant them in the grass upon lawns and mossy banks, and let them alone. No one will deny that the plants do well under such conditions. Certain it is also that plants growing in the grass are not nearly so liable to become sullied with mud-splashes as their friends in the tilled ground. Moreover, it seems that bulbs growing in the grass throw longer scapes, and thus lift their flowers more out of danger and more into notice.

Then again there is pot culture. It is a matter of congratulation that this so invariably turns out a success. Both rare and common forms do well in pots, and if grown on in an unheated frame will render a good account of themselves in spring in the conservatory and Alpine House. A potful or two of Erythroniums is a modest property that is within the reach of all interested in plant life, although it is, comparatively speaking, only the favoured few who are able to glory in lawns and banks besprinkled with the variously hued flowers and the handsomely-mottled foliage.

Generally speaking, when growing out-of-doors, Erythroniums love a moderately light fairly rich soil. For pot-work a mixture of peat and loam will afford all that is required.

The headquarters of the genus is North America, that is, if we reckon by the number of species that is indigenous to that part of the globe. The common species E. Dens-canis is, however, distributed pretty plentifully throughout Europe and Asiatic Russia to Japan, so that the genus may be said to belt the world, passing right round the north temperate zone. The following forms are well worthy of cultivation.

E. Dens-canis.—We will start with this because it is not only the commonest but the most useful form. It has varied under cultivation considerably, both in colour and size of flower. The "majus" section is certainly a showier form than, and thus an improvement upon the type. The prettily mottled foliage to be seen throughout is certainly not the least conspicuous feature. There are purple-rose and white varieties of the type, and these find their counterparts in colour in the larger size in E. D.-c. purpureum majus, E. D.-c. roseum majus, and E. D.-c. album majus the varietal names of which are sufficient indication of the colour. E. D.-c. sibiricum must not be lost sight of. This is slightly taller and more vigorous than the other before mentioned, and has large deep rose-purple flowers with a rather conspicuous yellow eye. Messrs. Barr & Sons have a splendid stock of these varieties at their nurseries at Long Ditton.

E. americanum is taller than any of the foregoing, its usual height being from 4 in. to 6 in. The flowers are large bright yellow, and slightly dotted with brown at the base of the segments. This species loves to be planted in grass in a moist and partially shaded nook when the full glory of its flowers is developed.

Erythronium grandiflorum.—There is a good deal of confusion as to what is the true E. grandiflorum. Occasionally we find E. giganteum under this name, and a variety of the type E. g. nuttallianum is sometimes given the same honour. The true E. grandiflorum has bright yellow flowers about 2 in. in diameter. In strong bulbs two flowers will usually be borne upon the one footstalk, but in the younger and smaller bulbs the flowers are solitary. The anthers are white, thus differing from E. g. nuttallianum in which they are deep purple. There are no mottlings on the foliage, which is of a lively green throughout.

E. giganteum.—As the name signifies this is the giant of the genus. The plant is vigorous, and grows to a height of about 9 in. The flowers are large, and exhibit a light shade of straw-yellow. The foliage is very handsomely mottled.

E. citrinum bears some resemblance to E. giganteum, but the flowers are scarcely so large, and the segments are rather narrower. Two flowers are borne on each footstalk or scape thrown up by the stronger bulbs as in the case of E. grandiflorum. The leaves are from 4 in. to 5 in. in length.

E. Hartwegi is remarkable for the width of the leaves which are nearly elliptic in shape, and very nicely mottled as in the case of E. Dens-canis. These broad leaves look very conspicuous, for they are naturally spread flat upon the soil, the plant in common with the rest of its congenors being stemless. The flowers are pale yellow-white with a deeper colour towards the base when they first expand, but after they have been open for a day or two a good deal of the yellow goes, and they become nearly white, especially towards the tips of the segments.

E. revolutum is not infrequently met with under the name of E. Smithii, which name is, however, erroneous. The plant is about 6 in. in height, and the flower, which is flesh-coloured upon first expanding turns to a bright rose as it developes. This like the rest with the exception of E. Dens-canis is of American extraction.

E. Johnsonii.—This is a rare form of great beauty that was accorded a Floricultural Certificate of Merit at the spring show held in the gardens of the Royal Botanic Society at Regent's Park on the 31st of March last. The flowers are borne singly on footstalks (scapes) from 4 in. to 5 in. in length. The flowers are of medium size, and bright rose in colour. The foliage is also nicely mottled so that it is attractive all round. Once this plant is better known it will without doubt become very popular. Messrs. Barr & Sons showed it on the occasion of its being certificated.—*Rex.*

CANNAS FOR BEDDING.

Seeing that the bedding season will soon be here I thought it would not be inopportune to draw the attention of your amateur readers to the value of Cannas as bedding plants. I did not put them to this purpose until last year, but I was so delighted with the result that I shall certainly have some more of them in my flower garden in this, and future seasons should I be spared to see them. The foliage has such a tropical look about it, is very handsome, and effective by contrast with other plants. This is particularly the case I think with the dark-leaved varieties. And then the flowers have to be thought about; how gorgeous they are! I find that they like a deep rich soil and plenty of water. Last autumn, therefore, I decided upon the places which the Cannas were to have this year, manured them heavily and dug them deeply. A friend of mine who is a gardener came and showed me the way to divide the rootstocks (I believe that is the proper term) in March, and the plants are growing away nicely now. They are at present placed closely together in shallow boxes, but I must soon have them out of this. I intend potting them up into 6 in. pots, which will be large enough for them until they are planted out in the beds at the end of May or beginning of June.—*T., Wilts.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Shrubbery Border.—In my garden there is a large clump of the common Laurel. I had this cut back at the beginning of March in order to give me room to have a border 2 ft. wide all round it. This has been deeply dug and all the large roots and stumps taken out, but the soil seems rather poor. Will it be good enough for bedding plants without further preparation? If it needs any manure will you kindly tell me what sort to use and the quantity.—*B. Mayer.*

Ordinary bedding plants do not require the soil to be very rich, for this conduces to rank growth, and the flowers are then not produced so freely; but on the other hand the Laurels will have left the soil too poor to be of use without some addition. We do not advise, however, to dress with rank manure now, as in about another six weeks, bedding out will be in full swing. Decidedly the best plan will be to take out some of the old soil and fill in with some good mellow loam, mixing the old soil and the new well up together.

Pond for Water Lilies.—This need not be an expensive arrangement, *Aylesbury.* You seem to imagine that Water Lilies require expensive tanks to grow them in. If you want a Lily pond on a small scale, get a large wooden barrel, saw it in half and sink the halves in the ground so that their tops are about level with the surface of the latter. You may then grow Lilies to your heart's content. For soil, nothing beats loam and cow manure. Three parts of the latter to one of the former will suffice. It does not at all matter about the cow manure being fresh, and it (the manure) is not rank as some other manures are.

Disbudding Camellias.—*A. Froud* wishes to know whether any advantage is derived from disbudding Camellias. Says he, growers advise the disbudding of Carnations, Chrysanthemums, etc., but say never a word on this subject with regard to Camellias.

This is not wonderful, for in removing some of the buds from Carnations and Chrysanthemums, the the flowers that remain are vastly increased in size. but in Camellias this advantage is not so apparent. Of course, the flowers left are a little larger, but the increase in size is not nearly so evident as in the case of Chrysanthemums, for instance. Again, the small side buds on Camellias make capital buttonholes. Nature has not provided them with a stalk, it is true, but that is a matter quickly remedied by a skilful florist who will very soon set them up in this respect.

Stocks for Conservatory Decoration.—Stocks will answer quite well for pot culture, *T. G.* Your plants may be potted up at once, seeing that they are so forward, into large 60-pots, and another shift given them into 32's when they require it, or they may be put straight into the latter size. If you elect to do this, however, you must be extra careful with the watering. Keep the plants cool, and give them plenty of air. Coddling is not to be thought of or they will degenerate into weaklings.

Erica hyemalis.—*W. Soundy*—The plant of which you speak is evidently quite dead. When Heaths begin to turn colour as yours did, there is very little hope for them; for the foliage keeps green for some time after the actual death blow has been given, and thus when the effects of the mischief are observed, it is usually too late to do anything. You must not be discouraged, however, because you have failed with the plant, for there are many people that cannot grow Heaths properly. Try again!

Ornamental Vases. — By all means use the Fuchsias for these, *O. T. O.* We think you will be satisfied with the result. The shallowness of the vases is certainly a disadvantage, but by feeding pretty liberally you may make up for this.

Frames.—We think you will find the ordinary type of garden frame suit you best, *Wilhelm*, that is the one sloping downwards from back to front, and from which the lights pull off. The span-roofed frames have this to be said in their favour, that they will contain more tall plants; but they are also more expensive, and this is an item that will weigh with not a few. The frame should certainly be placed so that it slopes to the south.

Asparagus plumosus nanus.—*R. S. M.* writes in sad plaint. He has an Asparagus, a pot plant by the way, that is full of mealy bug; and he wishes to know how to clean it. He has tried syringing but that seems not to have had the slightest effect. It is not at all likely that syringing would perform the requisite cleansing as the fineness of the foliage precludes the possibility of getting the water through properly. The same remarks would apply to insecticides of all kinds. We think the best remedy after all will be the knife. Cut out all the worst fronds

and only leave a few of the cleanest. New shoots will then be thrown up from the bottom. These you must watch and not allow them to become so infested with bug as the old ones have been.

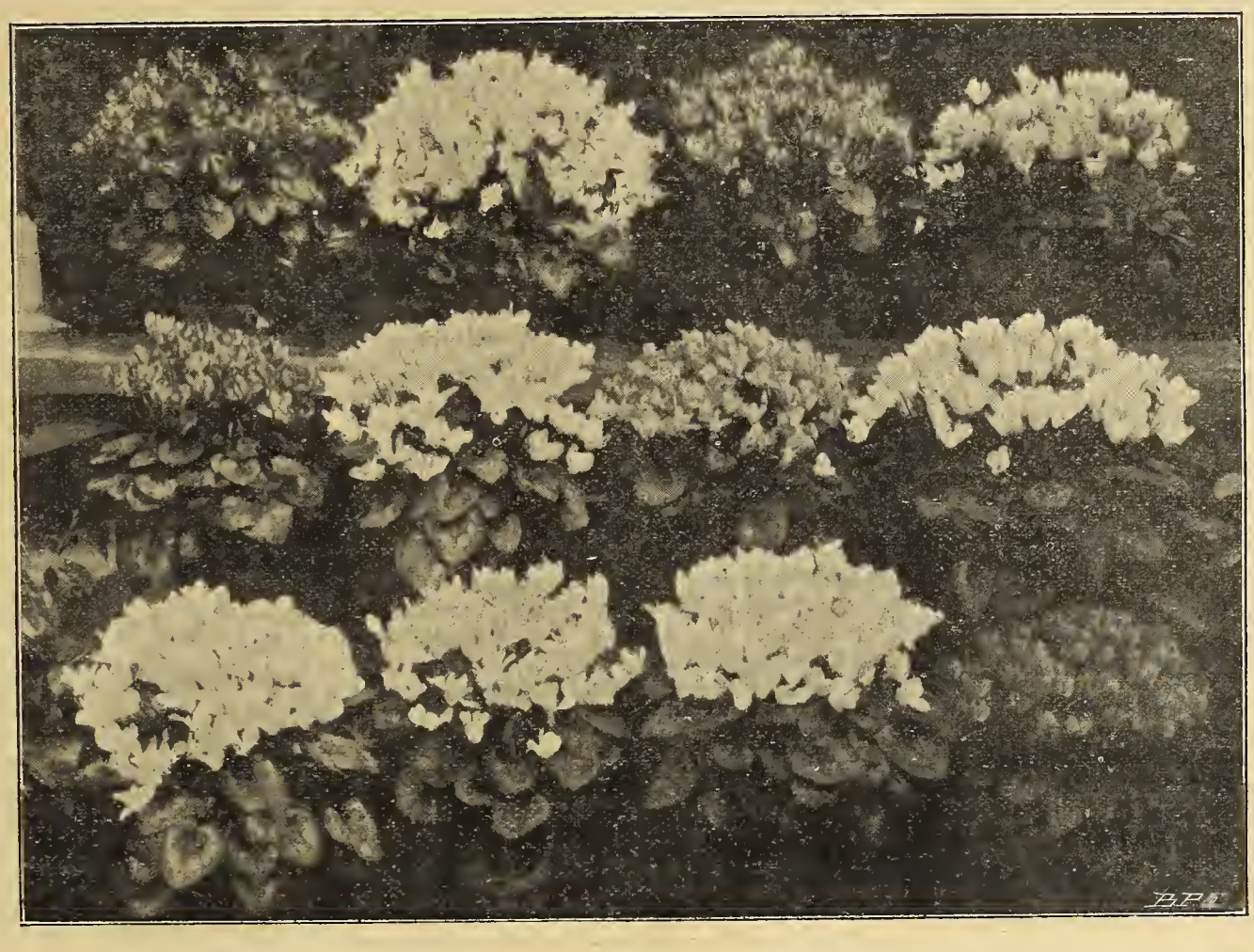
Wireworms in Loam.—*P. G.* has found to his dismay that some turf that he intended to use for potting Chrysanthemums is full of wireworms. He naturally wishes to get rid of them and asks how he is to proceed.

The only plan is handpicking. Take the turf and lay it one layer thick over the floor of a shed or other dry place. By continually looking it over and killing any of the intruders that appear they will soon be exterminated. We may take this opportunity of advising all who use loam to look it over well previous to using to make sure that wireworms are not present.

MR. LUNT'S CYCLAMEN AT EDINBURGH.

As promised in our last issue, we now reproduce a photograph of the twelve magnificent plants of Cyclamen exhibited at Edinburgh on the 7th and 8th inst., by Mr. Thomas Lunt, gardener to A. Stirling, Esq., Keir, Dunblane, Perthshire. Our readers will be able at a glance to see that Mr. Lunt well deserved the first prize awarded to him by the judges at the spring show of the Royal Caledonian Horticultural Society. We are now in a position to state that, in addition to the first prize, Mr. Lunt has been made the recipient of a Silver Medal by the said society in recognition of the meritorious character of his exhibit, which proved to be one of the leading attractions of the show. The twelve plants bore in the aggregate about 1,500 flowers, or an average of 125, though some of them bore 200 blooms each. There were several varieties differing in the colour of the flowers as may be seen by reference to the illustration. The six plants shown by him in another class, also secured the leading award.

We are accustomed to see well-grown Cyclamen in the south, particularly by nurserymen, seedsmen, and market growers, who cultivate them in quantity and devote whole houses to them so that the proper and special treatment necessary for their welfare can be accorded them. Private gardeners also succeed admirably in some cases, when they have the proper convenience as well as the will to cultivate them. But various cultures have to be carried on under greater difficulties north of the Tweed than in the sunny south. Latitude and climate have a deal to do with the successful cultivation of many garden subjects that come from warm countries originally. Nor must one forget that the greater the distance from the great horticultural centres of the country, there is less chance of profiting by the example proffered by the large growers. In any case we congratulate Mr. Lunt on his success and the example he is setting other growers in his district.



Cyclamen at Edinburgh.

DOVER HOUSE, ROEHAMPTON.

This, the English home of J. P. Morgan, Esq., a wealthy American gentleman who pays periodical visits to this country, is situated at Roehampton, a beautiful part of Surrey. Being so easily reached from London, one can hardly imagine when within the boundary of the estate, that they are really so near the city. The place is well kept, and the various branches of gardening are carried out in a thoroughly practical manner by Mr. Jas. McLeod, who has had the entire charge of the estate for some years, and who is constantly adding some feature of interest to improve the attractiveness of the place. It must have been an agreeable surprise to the liberal owner who recently came here, after an absence of some time, to find so many new ideas introduced and practically carried out. New flower beds and borders have been introduced, and new walks have been completed, quite remodelling the gardens to great advantage.

The plant department is a very important one, for great demands are made for decorative purposes, both for plants and cut flowers. The stoves contain a grand, clean, well-grown collection of Palms, Crotons, Dracaenas, &c., well coloured, and of the very best varieties suitable for decorative work. Flowering plants are equally well done, such as Anthuriums, Ixoras, Allamandas, and Gardenias. Grand Caladiums of all the leading and distinct sorts form a special feature, and shortly will be a grand sight, for here they are well grown. Tuberous Begonias are also favourites; some hundreds are grown of all the best sorts, both double and single; and judging from the strong growth they are already showing, will give a good account of themselves at the proper time, as will a grand batch of Gloxinias. Greenhouse plants are extensively done, and here is to be seen one of the grandest houses of specimen and half specimen Carnations of the Malmaison sections, the most fastidious could wish for. Plants with from four to five dozen strong, healthy, vigorous growths, clean and free from any disease will shortly supply enormous quantities of these most popular flowers. I notice dozens of plants in 32 and 24-sized pots with two to three dozen shoots, furnished with grand foliage quite to the rim of the pot. They are certainly marvellous examples of cultural skill, and such a lot any gardener should be proud of.

The flowering houses are a sight not to be forgotten. Dozens in flower of the following are beautifully and artistically arranged, the blending of the colours producing a grand effect. Azalea mollis, in its many bright colours, is interspersed with Lilacs, Viburnums, Staphyleas, Cytisus andreanus, Rhododendrons, Ericas (various), Azalea indica in its various colours, Cytisus racemosus, Cinerarias, Cyclamen, Mignonette, Freesias, Hyacinths, Tulips, Lily of the Valley, Narcissus, and Jonquils. All this kind of thing is here in great quantities. Some grand plants of the lovely yellow Calla elliottiana stood out most conspicuously with their grand, bright, golden flowers. Some dozen or more of that brightest of blue flowers, viz., Leschenaultia biloba were arranged at intervals amongst the former mentioned, and had a most pleasing and telling effect. After these flowering plants are over, a succession of other plants will take their place, as large batches are grown for that purpose; so a continuation of a floral display is kept up all the year round.

The fruit houses show signs of activity, and are everything that could be desired. The early vineries are showing a fine crop of fruit; the Vines in the later ones are breaking strongly. The Peaches and Nectarines are well set, and the houses present a most satisfactory appearance. In the forcing department fine crops of Figs are already ripe, and grand fruits of Strawberries are plentiful. Royal Sovereign is the favourite, and grand crops of large fruit look most tempting. This is a grand Strawberry as seen here. Cucumbers and Beans are plentiful; Tomatos and Melons are most promising, and a succession of these is kept up through the season. The demand is great; but Mr. McLeod is equal at all times to the occasion.

The kitchen garden is a model of cleanliness, and is well stocked with grand fruit trees of all the leading kinds. A grand feature of this place is cleanliness; every department is a perfect model of this. The place all round is in splendid order and good keeping. The various branches of gardening are carried out in a thoroughly practical manner by Mr. James

McLeod, upon whom rests the responsible duties of managing the whole of the estate, and which stamps him as being the very man to fill this important post with satisfaction to his employer and credit to himself.—*Urbanus.*

PRIMULA SINENSIS CHELSEA ROSE.

Now the time is with us that most cultivators are ordering their seeds, and no doubt there are many who are thinking of flower seeds, and what to grow; and at this season are reminded of the value of good ornamental pot plants for winter blooming as they look on plants of Primula sinensis. Few plants have the value for pots and vases for amateurs as the Primulas have.

At the present time there are so many good strains and types of this; and during the last few years I have made a point of growing a goodly number of kinds. Last year I obtained a packet of the one above named, as I was under the impression it would prove a distinct kind. The seed was sown in April, grown on in cold frames, and potted as they needed it, till they reached 6-in. pots. In the autumn the seedlings were placed on a shelf close to the glass, in a vinery, where the grapes had been cut. Here they soon came into bloom, and threw up strong, big trusses, well above the foliage. The leaves attained a good size, and being a Fern-leaved kind they almost covered the pot, which increased their value.

When these were well in bloom we used them for placing in single vases in rooms in the Abbey. In some cases these vases are standing on high pedestals. Here this Primula had a fine effect as the foliage set off the large head of rose-coloured blooms by hanging over the vase. I consider this an excellent kind for house furnishing. It is distinct in colour from any I know.—*J.C., Chard.*

ENGLISH ORCHARDS.

(*Concluded from page* 506).

REMEDIAL MEASURES.

In formulating a scheme for the improvement of English orchards it will be convenient to divide them into three groups——the first to comprise those consisting of trees so old and exhausted that their restoration to vigorous health and productiveness is impossible; the second, orchards in which the trees are in robust health but represent inferior varieties; and the third, those orchards which contain moderately young trees of good varieties that have been allowed to become unproductive through neglect. There is but one way of dealing with the orchards belonging to the first category, and that is to sweep them wholly away and replace them with new orchards formed on some other part of the farm. To attempt to renew worn-out orchards by planting young trees in the positions that were occupied by those which have died out, as is so generally done, is worse than useless, for it is a rare occurence for trees so planted to be of any value as fruit producers.

In dealing with orchards containing healthy trees of inferior varieties, the obvious remedy is to graft them with varieties that are well known for their productiveness, and the high quality and good appearance of their fruit. In the western counties, where Pears can be most successfully cultivated in orchards, as proved by the remarkable development of the trees of perry varieties, I would suggest that a considerable proportion of the healthy trees now bearing fruit only suitable for the perry press, should be grafted with such excellent varieties as Louise Bonne of Jersey, Beurré Clairgeau, Williams' Bon Chrêtien, Pitmaston Duchess, Beurré Hardy, Doyenné du Comice, Marie Louise d'Uccle, and Josephine de Malines, care being first taken to ascertain by inquiries made in gardens which of the varieties will succeed in the district. Stewing Pears are not less profitable than dessert varieties, for Catillac, Uvedale's St Germain, and Verulam, which are the best of them, are good bearers, and the fruit is available for the market during a period of six months, commencing with October, and can be sent long distances without special difficulty.

From the Apple orchards the hundreds of inferior varieties, whether belonging to the table, cooking, or cider sections, should be swept away and replaced with others that are sure bearers and produce fruit of good appearance and high quality, and of these there is an abundance. I would advise also that the area of many cider orchards, which, in the western counties form, it is computed, about four-fifths of the whole, be reduced by grafting the trees occupying many thousand acres with dessert or cooking varieties. Cider is an excellent beverage when properly made, but we are now concerned with making the orchards as profitable as possible, and it is obvious that Apples worth from £10 to £20 per ton are more profitable to grow than those which will not realise more than from £1 to £5 per ton. It is also evident that to obtain a full return from their orchards farmers must grow both late and early varieties, and adopt some inexpensive method of storing the fruit of the former until after the early supplies have become exhausted.

The most profitable of the cooking varieties are Bismarck, Ecklinville, Dumelow's Seedling, Gascoyne's Scarlet, Golden Spire, Lane's Prince Albert, Lord Suffield, Newton Wonder, Pott's Seedling, Tower of Glamis and Warner's King. Then of the dessert varieties I would recommend Blenheim Pippin, which is slow in coming into bearing when planted as an orchard standard, but grafted on large trees it quickly becomes productive, and the fruit, by reason of its handsome appearance and high quality, invariably commands a good price; Cox's Orange Pippin, one of the most profitable of dessert Apples in districts favourable to it, and when the fruit is properly marketed; Duchess of Oldenburg, an early variety which has a short season; Devonshire Quarrenden, useful for planting within a short distance of the market; King of the Pippins and Worcester Pearmain. These form but a small proportion of the Apples in the catalogues, but before we can make our orchards profitable we must follow the example of the American growers, and instead of planting two or three trees each of a hundred varieties we must plant a hundred trees each of a few varieties, and these of the very best.

Better selections of Plums are also much needed, and owners of orchards will be wise in making an endeavour to extend the season as far as it is possible to do so by growing more early and late varieties. A good selection for orchards would comprise Rivers' Early Prolific, The Czar, Green Gage, Pond's Seedling, Victoria, and Monarch. I do not propose discussing the details of grafting, but I would strongly advise that instead of the trees being headed back to the trunk or to the base of branches with a diameter of six or seven inches, in accordance with the practice that largely obtains, they should be simply cut back to the smaller branches not exceeding two or three inches in diameter, and a graft placed on each shoot. Not only will the union be more perfect when the smaller branches are grafted, but there will be a considerable saving in time, as fruitful heads will be obtained in two or three years.

In the renovation of orchards that have become unproductive through bad usage, attention should first be directed to the restoration of the vigour of the trees. The heads should be thinned by the removal of useless spurs, and the cutting back of weakly branches; and when this has been done, spray the trees with warm water, in which has been dissolved caustic soda and commercial potash at the rate of 2½ lbs. each to twenty five gallons. This mixture, applied in the form of a spray during the winter season when the trees are dormant, will clear them from moss and lichen, and destroy the eggs and larvæ of some of the insect pests. If the trees are infested with American blight, as unhappily many of them are, means must be adopted for the eradication of the pest, and there is not a better method than to dress the infested parts with a mixture prepared by dissolving ½ lb. of carbolic soft-soap in a gallon of hot water, and then adding one pint of petroleum, and well incorporating it while hot.

As the starved condition of the trees is necessarily due to the impoverished state of the soil, it follows as a matter of course that the soil be enriched, and that the admission of air to the roots be increased for the purpose of stimulating them into activity. There is no better course of procedure than to break up the surface of the soil to a depth of three or four inches in the autumn, and dress with lime; and early in the spring apply a liberal dresssng of natural or artificial manure. Farmyard or stable manure should be used where available, and if this is not at command use artifical fertilisers. An excellent mixture of these would be one consisting of three parts by weight of muriate of potash to five parts of superphosphate of lime, and 8 cwt. per acre will be a good rate at which to use it. A liberal dressing of soot will also be beneficial, as would a dressing of nitrate of soda at the rate of 1 cwt. per acre, after the trees have commenced to make new growth. The breaking up of the surface soil as here advised will have a highly beneficial effect upon the trees; and I would mention that while excellent crops may be obtained from grass orchards, it is only by cultivating the spaces between the trees that the finest fruit can be obtained.

I might speak at length on grading, packing, and marketing, for the owners of orchards have much to learn before they can achieve success in carrying out these important details, but I am anxious to avoid unduly taxing your time. The question of storage is also of pressing importance, and I would strongly advise that in connection with all orchards of any considerable extent there should be a spacious store room. This need not be elaborate in detail nor costly in construction, but it should be substantial and so designed that a low and uniform temperature can be maintained throughout the winter. It ought, in fact, to be heat-proof and frost-proof. A span-roof structure about 12 ft. in width and 10 ft. or so in height, and fitted with open shelves on either side will perhaps be the best form of structure, and if it be provided with double walls, double windows, and double doors, and a thick roof of thatch, the fruit will have the advantage of a cool and equable temperature. It is not without considerable regret that I have to dismiss the question of storage thus briefly, for it has an important bearing upon the profitableness of our orchards. In conclusion, then, the owners of orchards have, generally speaking, not only to learn how to restore their orchards to fruitfulness and maintain them in that condition, but they must learn also to store the produce until such times as they can place it upon the market with most profit to themselves. The owners of English orchards have certainly much to learn and much to accomplish before the 212,000 acres devoted to fruit can be brought into so fertile a condition as to enable them to compete successfully in their own market with foreign and colonial produce, as they should assuredly be able to do, for in no other part of the world do growers of similar kinds of fruit to those discussed, viz., Apples, Pears, and Plums, enjoy greater natural advantages.—*George Gordon.*

CINERARIAS AT READING.

FOR many weeks past the fine and varied strain of Cinerarias to be seen in the Portland Road Nurseries of Messrs. Sutton & Sons, Reading, have been flowering freely. The range of colour is bright and varied, supplying tints and hues that no other class of greenhouse subjects can furnish at this, or practically any other season of the year. The broad rays of the flowers of the modern strain are certainly seen to best advantage in the single varieties. No special names are given to the latter beyond those indicative of the colours.

The selfs are highly refined types and when coupled with broad, overlapping rays, must be regarded as a triumph of horticultural skill. The violet disk of Sutton's white affords a marked contrast in the matter of colour. The pink, purple, red, crimson and blue selfs in a variety of shades produce a display from a single packet of mixed seed, that is truly marvellous. The bicoloured flowers in our opinion produce a sparkling and brightening effect in a collection, and their absence would be a distinct loss to gardens, whatever the taste and opinions of cultivators might be regarding the value of self colours. We might justly speak of them as tricoloured varieties; for the outer zone may be of some dark colour, surrounding a white zone, in the centre of which the disk usually shows a third colour. Several of the more distinct colours have their seeds harvested separatedly, but the mixed packets are pregnant with the greater number of surprises. All the plants are dwarf in habit, broad-topped and in every way up-to-date in that respect.

While the most highly evolved strain of Cinerarias is kept up to high water mark in the Portland Road Nurseries, yet Messrs. Sutton & Sons have not, we think gone out of their way in crossing or shall we say hybridising the modern strain with the wild type, Cineraria cruenta from the Canary Islands. The progeny represents the first remove from the wild type, but while we say this, we also remember that when the first improvements were effected in what we now look upon as the garden Cineraria, there were no advanced forms with which to cross the

wild one. The hybridist had to plod along slowly with very small-flowered parents so that rapid improvements must have been impossible in those days. The hybrid plants at Reading are more graceful than the improved garden forms with their dwarf stems and massive blooms; and in this respect they may be compared to Sutton's Star Primula in relation to the best modern types of Primula sinensis. The Star Primula is already a great favourite on both sides of the Atlantic. A light and graceful strain of Cinerarias may be received with the same favour by the general public presently.

RAID OF VOLES ON SCOTS FIRS.

SOME four or five years ago, the grazing lands in Roxburgshire, Dumfriesshire, and adjoining counties were ravaged by a plague of voles. More recently a band of these ruthless rodents have made a raid on the Scots Firs in a well-known Border nursery, namely that of Messrs. Laing & Mather, Kelso. Just after the last brief spell of frost and snow was disappearing in the end of last month, these gentlemen, on examining a large break of two-year transplanted Scots Fir growing in their nurseries, were surprised to find that the points of the plants were completely eaten away. Knowing that this damage could not have been caused by squirrels, as none of these bushy-tailed denizens of the forest haunted that neighbourhood, Messrs. Laing & Mather were somewhat puzzled to know the right cause. The suspicion that any kind of game could have done the damage was very remote, as the land on which the firs were growing is far from any game resort, and is close to a public and much-frequented highway. In their dilemma they sought counsel from Mr. Malcolm Dunn, who with his usual courtesy and promptitude, replied to their inquiries as follows:—

DALKEITH GARDENS,
February 27th, 1897.

DEAR SIRS,—I duly received your favour of the 25th ult., and the parcel of samples of your injured Scots Fir also came to hand. I have examined them carefully, and I believe it is the work of field mice or "voles," as it is exactly like what I have seen done by them on one or two occasions. On one of these I watched and saw scores of voles nibbling the buds out of the points of young Scots Fir, three years planted out, and about 4 ft. high. They quite ruined an acre or two of the plantation, which had been formed on rough grass land.

About a quarter of a mile from the plantation there was a small home nursery enclosed with hedges, and a hedge ran from one corner of it direct to the Scots Fir plantation (it was a "mixed" plantation, but Scots Fir were three to one of all the others), and the Scots Fir, as well as some other trees, were attacked, and their buds badly pecked out one winter by the voles. It was at first thought to be the work of squirrels, but none were ever seen in the nursery, and there was no wood with large trees near to harbour them. On examining the hedge that ran across the grass fields to the infested plantation, it was found full of vole "runs" amongst the course herbage at the bottom. We cleaned out the hedge bottom, destroying the cover for the mice, and also their runs, and the voles troubled the nursery stock no more. This happened in Worcestershire in the early "sixties." I have only once seen a similar attack, about fourteen years ago in Nottinghamshire, but the forester in charge of the plantation had no doubt about the cause of the injury, as he had seen the "mice," as he called them, sitting on the trees nibbling at the buds.

If black game (muirfowl) were plentiful near also, there might be a suspicion of them, or of capercailzie, but neither are, I believe, seen in your neighbourhood. Moreover, I am quite sure it is not their work, which is much rougher done—the leaves as well as the buds are pecked off by them.

Have you any rough grass or similar cover near the Scots Fir in which the voles can harbour? Dirty bottoms of hedges are good shelter, and also rough grass and weeds.

Trusting the above may be of some interest to you, and that you may soon get rid of the vermin.

I am, &c.,
MALCOLM DUNN.

On receiving Mr. Dunn's diagnosis of the case, Messrs. Laing & Mather proceeded to act upon it by setting mice traps among the Scots Firs, and on the very first morning thereafter they secured a big "bag" of voles, which, without doubt, had been the depredators. An old hedge hanked up in front with loose stones, and here and there an old ash tree with immense spreading roots, had provided a good harbourage for the voles. In all Messrs. Laing & Mather's experience, however, they never had any Scots Fir, or in fact any other young trees attacked before by voles, and it would be interesting to know whether any other nurserymen had any damage done this winter by these destructive vermin. Of course, the damaged Scots Firs were burned at once: and, as the traps have been kept set ever since, the plague has been stayed, though not before a large number of voles had been captured. To all appearance, however, the pest has now been effectually stamped out.

GAS-LIME AND CLUBBING.

There are still many different opinions entertained amongst gardeners and horticulturists, respecting the feasibility in the use of gas-lime in effecting a cure for clubbing. Results are as varied in different soils and districts, and modes of application as man is himself, Yet on the whole it may be said that practical gardeners are decidedly favourable to its application.

Well, now, some mutual improvements apparently will have been effected upon the gardeners at that truly arboricultural name, Sevenoaks, who were fortunate in hearing the paper read by Mr. Buckland, upon, what you call it, Plasmodiophora Brassicae—a formidable object certainly. The name is fearful and almost makes one afraid to approach it without grasping a rake or broom-handle, although so atomic as not to be readily discerned by the microscope, whether the thing is an animal or a fungus.

In the discussion which followed the reading, Mr. Outram dared to approach this strange Russian object which causes clubs to grow on Cabbage roots. Amongst more than half a dozen remedies suggested (which I thoroughly agree with), he also advocated gas-lime in combating the disease.

Sulphur and sulphates, to be sure, when rightly applied, are good for destroying the fungus tribes. You get it in your plant houses, vineries, and Rose houses. You besmear the hot-water pipes with sulphur; uniform diffusion ensues after the application of heat. The whole of the leaves and stems are enveloped, causing death to these low organisms, and leaves and stems go on their way rejoicing. Previous to this, the air in the houses was fungus-charged, sour, stale, low in tone, stagnant.

So with soils and solids; gas-lime is heavily charged with sulphates, and when it comes fresh from the purifying chambers, it has a greenish colour and depends upon the strength of these tints, how it should be applied. No special quantity can always be laid down per acre. We have had it so slightly charged, that I have used it at the rate of one ton to thirty square yards, with no bad results to after vegetation.

I am a thorough believer in two combatants having it to themselves. Keep the ring clear, that is, of all vegetable crops. The time to apply a good dressing is when the ground has been roughly dug in autumn, viz., November and December. There is then from December to April, and May, a ring or margin of three months before sowing or planting takes place, after which all injurious effects to the well-being of vegetables has ceased. I have used gas-lime more or less for well nigh thirty years, with creditable results, and feel no inclination to write *in memoriam*. On the other hand, in committing this fungicide to the soil in its due season, I am content to wait for its action after many days.—*B. Lockwood.*

GARDENING MISCELLANY.

PEA ALDERMAN.

I HAVE grown this Pea since it was first sent out, and was rather dubious about it, thinking it was really a selected stock of the Duke of Albany; but these last two seasons it has superseded that well known variety. Many pods contain twelve regular and highly developed Peas of the very best colour and quality, so that it is one of the best culinary and exhibition Peas that I am acquainted with. No Mayor's civic summer banquet would be complete without "Alderman P. Savitum" gracing the table. —*B. L.*

BEGONIA BIJOU.

A DWARF and free flowering form of Begonia sempervirens has been raised on the Continent, and is figured in *Nord-Horticole* for April. Its raisers have furnished it with rather a lengthy name, the equivalent of which would be Begonia semperflorens nana compacta Bijou. The plant is very dwarf, compact, and extremely floriferous. It will make a beautiful companion to, and contrast with, Lobelia Erinus, Golden Feather, and dwarf Ageratum, so much used for bedding purposes. From the month of July till the plants are cut down by frost, this miniature subject keeps on flowering, so that it should prove serviceable for carpet as well as summer bedding. The flowers are of the usual type for that species, and of a lively red. Seeds are sown in March or April, in heat, and pricked out a month afterwards. It comes true from seed, and has been obtained from B. s. Vernon, by repeated sowing and selection, in the establishment of Messrs. Vilmorin-Andrieux and Cie, Paris.

HYBRID RHODODENDRONS.

THE seedling Rhododendrons which we noticed last week in our report by telegram, exhibited at the Royal Caledonian Horticultural Society, Edinburgh, by Mr. A. McMillan, Trinity Cottage, of Chrysanthemum fame, were quite a new departure from what we already know. Of the six seedlings shown, one was remarkable for its beautifully frilled or wavy edges and was pure white, whilst it emitted a delightful perfume. It had, moreover, an extremely large and well-formed flower. We also noticed a large one with the upper segments of a deep primrose, the rest being white and sweet scented. Another was a hybrid from R. veitchianum crossed with Countess of Haddington, with a fresh maiden's blush like pink on the outer part of the segments, whilst the inner portion was pure white. The flowers are very large and sweet scented. Mr. McMillan is a large grower of these beautiful plants and some 200 seedlings of his own crosses he hopes will be in flower next season, when he intends to surprise the London authorities with them.

CINERARIA KEWENSIS.

FOR some years past batches of the wild Cineraria cruenta might have been seen in the greenhouse No. 4, at Kew; and the practice has been continued to the present day. The plants are tall with slender much branched stems, bearing a profusion of small flower heads, which give the whole a graceful appearance. This wild plant from the Canary Islands has been crossed with the highly evolved modern garden Cineraria. The result is numerous seedlings of an intermediate character, and which have been flowering for some time past. The best of them will be perpetuated under the name of C. kewensis. The blooms vary greatly in colour, being of a glowing purple, light purple, mauve, porcelain blue, and purple with a white centre. They are intermediate in size between those of the parents, as are the plants in stature and general features. The plants are therefore, more graceful than the prim, but rather rigid and formal, types after which cultivators have been hankering for many years past. The decorative value of these seedlings is indisputable.

SOCIETIES.

ROYAL HORTICULTURAL OF IRELAND.

April 1st.

THE spring exhibition and Daffodil show of this society was held in the Royal University Buildings, Dublin. The season has been a very favourable one for Daffodils in Ireland, and no better display of them, as well as Hyacinths, Tulips, and Polyanthus Narcissi, have been seen there for many years. The entries numbered 176 as against 142 last year. Table decorations and Roses were likewise special features.

Mr. R. T. Harris, of Killiney secured the premier award for 24 cut blooms of Tulips, showing a fresh and evenly good lot. Mr. Goff, gardener to Mrs. M'Cann, Simmonscourt Castle was second. There was keen competition for the prizes offered by Messrs. Drummond & Sons for Narcissi, and the premier award for 24 bunches, after much difficulty, was allotted to Mr. W. Rigg, gardener to Lord Cloncurry. Miss Curry, of Lismore came second, but secured the first prize for 12 bunches, with a charming lot. Mr. Carroll, gardener to Mrs. Burrows, Dornden, Merrion, had the best 12 bunches

of double Narcissi. J. Miller, Esq., Baggotrath House, Sandymount, took the lead for 12 pots of Hyacinths. W. F. Darley, Esq., Fern Hill, Kilgobhin, had the best nine Hyacinths. Mrs. Burrows, Dornden, Booterstown, had the best six pots of Tulips.

Roses were a special feature of the show, there being double the number of entries for last year, namely 16. Mr. Campbell, gardener to Lord Ardilaun, Clontarf, took the lead for 24 blooms, his stand consisting of Teas and hybrid perpetuals, beautifully set up. Mr. Goff took the lead for a stand of 12 Marechal Niel Roses.

Fruit and vegetables were fairly well shown considering the early season of the year. Mr. M'Kenna, gardener to Lady E. Bury, took the lead for Strawberries with Royal Sovereign and Noble. He also had the best dessert Apples, showing a fine lot of Cox's Orange Pippin. Mr. D'Olier, of Knocklin, Bray, had the best baking Apples. Mr. McLennon, gardener to Lord Carew, was the only exhibitor of ten kinds of vegetables, having a fine lot. Mr. Stringer, gardener to Sir R. Palmer, had the best six vegetables. Deutzias, Primulas, Cinerarias, Auriculas, and other subjects were shown.

Messrs. Barr & Sons, King Street, Covent Garden, London, exhibited a fine group of 60 varieties of Daffodils. A fine group of plants was shown from the Royal Botanic Gardens, Glasnevin. Messrs. J. Henderson & Sons had table decorations. Messrs. Hogg & Robertson, Dublin, exhibited Daffodils largely. Messrs. Dicksons, Limited, Chester, showed more than 100 vases, filled with the best varieties of Daffodils.

ROYAL CALEDONIAN HORTICULTURAL.—

April 7th and 8th.

The following is the completion of our report of the above society's show, continued from p. 509 :—

Mr. McIntyre, the most fortunate competitor at this show, was first for four Azalea indica ; Mr. J. Gilchrist came second ; and Mr. G. Chaplin third. For a single specimen of A. indica Mr. Jas. Bald was first ; Mr. J. Cumming second ; and Mr. W. Murray third. For six hardy Azaleas Mr. G. Chaplin took first ; Mr. M. McIntyre second ; and Mr. J. Shearer third. Mr. John Staward, of Belwood, was first for six distinct hardy dwarf British Ferns : second came Mr. J. Preston ; third, Mr. R. Staward (Glencorse). For three Lycopods, Mr. T. Gibb was first, with Mr. G. Chaplin second.

The vegetable classes were poorly patronised. Mr. A. Laing, of Salisbury Green, took first for four well-grown Japanese Maples ; Mr. R. J. Shillington was second ; and Mr. John F. Nairne third. Mr. J. Napier (Rockville) came first for three magnificent specimens of exotic Ferns ; Mr. G. Wood and Mr. J. Cocker took second and third respectively. In the class for six pots of single Primula vulgaris there were seven entries, all of good quality. Mr. A. Brydon led ; Mr. R. M. Reid followed ; and Mr. T. Shortreed came third. For double Primroses Mr. R. M. Reed took the only prize awarded. Mr. A. Brydon was first ; Mr. W. Galloway second ; and Mr. W. Henderson third for six Primula Sieboldi. Mr. T. Shortreed was the only exhibitor of six pots of Hepatica, and got first prize. For six Cinerarias Mr. D. Kidd, Mr. J. Cumming, and Mr. G. McDougal take awards in the order named. Mr. D. Kidd, Mr. Dan Syme, and Mr. J. Corser succeeded in the class for three Cinerarias. Mr. Alex. E. Campbell is first amongst the nurserymen for six fine pans of single and double Tulips. Messrs. Alexander Kerr and Sons are first for 24 pots of Hyacinths. For six Alpine Auriculas Mr. George Lee, of Newcastle, took first ; Mr. R. Staward second ; and Mr. D. Wylam (Cramlington), third. For stage Auriculas Mr. John Staward, Mr. Andrew Paterson, and Mr. R. Staward succeeded in the order named. Mr. Andrew Paterson (Potton House) was a good first for six Alpine plants ; Mr. T. M. Whitehead was second. Mr. M. McIntyre, Mr. W. Galloway, and Mr. D. Mackay took this order for two pots of Amaryllis. Mr. D. Mackay was first for six Roses, and Mr. S. Abbott second. For two Crotons the awards were :—First, Mr. J. McCartney ; second, Mr. D. Mackay.

In the fruit classes, Messrs. G. MacKinlay, J. Day, J. Cairns, J. McKinlay, and J. Cumming, were successful ; whilst Mr. Malcolm McIntyre was well to the front for Strawberries and a Pineapple. Mr. W. Smith (Oxenford Castle) was first for bunches of black and white Grapes ; Mr. D. Kidd following for black.

Messrs. R. B. Laird & Sons sustained their reputation for hardy evergreen shrubs ; and Mr. John Downie led for a floral design, his exhibit being in the form of a lyre made with silver Siberian moss and Roses. Mr. J. Lawson was second with a very neat cross composed of Orchids and Violets. Messrs. R. B. Laird & Sons beat Mr. John Downie for twelve table plants.

The whole arrangements of the show were successfully carried out by the council and officers, with the valuable practical assistance of Mr. James Moncur in the structural work. The weather unfortunately was not propitious for a large assemblage.

ROYAL HORTICULTURAL.—*April 13th.*

The Drill Hall was very crowded with exhibits on Tuesday last, the three long tables along the centre, and the side tables all round the hall being crowded with spring flowers from the open and under glass. Orchids were abundantly represented, as were stove and greenhouse hard and soft-wooded plants, Daffodils, Roses, and Primulas of various kinds.

Messrs. J. Veitch & Sons, Ltd., Chelsea, exhibited a large and well-flowered group of Orchids set off with Palms and Maidenhair Ferns. Pretty and interesting were the varieties of the hybrid Epidendrum elegantulum, the varieties of E. Wallisii, E. Endresio-Wallisii, Cymbidium eburneo-lowianum, Laelia Latona, and several other showy and interesting hybrids. Fine also were Masdevallia veitchiana, with enormous flowers, Miltonia Warscewiczii, Cattleya Trianaei in variety, and many others (Silver Flora Medal).

Messrs. F. Sander & Co., St. Albans, staged a fine group of Orchids, in which Miltonia vexillaria, and Lycaste Skinneri in variety were very conspicuous. A well-flowered piece of the striking and singular-looking Zygopetalum Burtii could hardly be overlooked. Other noticeable things were Dendrobium brymerianum, D. Harveyanum, Stenoglottis longifolia, and Cattleya Schroderae. Utricularia forgetiana is very handsome though not an Orchid (Silver Banksian Medal).

Messrs. Hugh Low & Co., Upper Clapton, staged a mixed group of Orchids in which Dendrobium thyrsiflorum, Odontoglossum cirrhosum, O. triumphans and varieties of O. luteo-purpureum were very prominent. These were mixed with various other Odontoglots, Cypripediums, Cattleyas, and Laelias. Here also was the rare Dendrobium gratiosissimum, and a magnificent variety of Oncidium krammerianum (Silver Banksian Medal).

Dendrobium thyrsiflorum, D. nobile, D. anosmum, and Odontoglossum polyxanthum were exhibited by Captain Holford (gardener, Mr. A. Chapman) Westonbirt, Tetbury, Gloucestershire. A pleasing group consisting of plants of Cattleya citrina, suspended, and cut flowers of C. Schroderae arising from a mass of Maidenhair Fern and Asparagus was exhibited by W. C. Walker, Esq. (gardener, Mr. Geo. Cragg) Percy Lodge, Winchmore Hill.

A bold group of Orchids, including three massive plants of Cymbidium lowianum, was exhibited by J. Bradshaw, Esq. (gardener, Mr. H. Whiffin), The Grange, Southgate. He also had fine pieces of Odontoglossum crispum, O. Pescatorei, O. Hallii, O. andersonianum, Lycaste Skinneri, and Dendrobium jamesianium, the latter being dwarf and free. (Silver Flora Medal.)

The Marquis of Camden (gardener, Mr. A. Methven), Lamberhurst, Kent, exhibited a showy group of Dendrobiums, including D. nobile, in great variety, D. wardianum, D. devonianum, D. crassinode, &c. Plants occupied the back of the group, and cut spikes in front. (Silver Banksian Medal).

J. T. Bennett, Poe, Esq. (gardener, Mr. Downes), Holmewood, Cheshunt, exhibited a fine lot of Cattleya citrina, splendidly grown upon rafts.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited a most interesting group of Orchids, including Miltonia cuneata, Dendrobium brymerianum, D. signatum, Phaius Marthae, Leptotes, bicolor, Cymbidium devonianum, Masdevallia shuttryana, and several others equally well-grown. He was accorded Cultural Commendations for Maxillaria grandiflora, Miltonia cuneata, and Cymbidium devonianum (Silver Banksian Medal).

A group of splendid varieties of Odontoglossum was exhibited by De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks. He had fine varieties of O. crispum, O. triumphans, O. andersonianum, O. ruckerianum, &c. (Silver Banksian Medal).

Messrs. B. S. Williams & Son, Upper Holloway, set up a good group of Orchids including Vanda suavis, V. tricolor insignis, Eulophiella Elizabethae, Calanthes, Dendrobium nobile, D. wardianum, &c.

Baron Schroder (gardener, Mr. H. Balantine), The Dell, Egham, exhibited the handsome Odontoglossum wilckeanum Queen Empress. Messrs. J. Veitch & Sons, Ltd., staged a grand piece of Cattleya Schroderae alba, C. S. amabilis, Zygopetalum Perrenondi superbum, and the magnificent Laeliocattleya Digbyana-Trianaei. Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Ascot, exhibited six well-grown and well-flowered plants of Epidendrum bicornutum. He had other Orchids but the Epidendrums were the centre of attraction (Silver Flora Medal).

A Silver Banksian Medal was accorded to F. W. Martin, Esq. (gardener, Mr. P. Bradley), Lake House, Byfleet, Surrey, for a huge and grandly flowered piece of Ansellia africana imported in 1892. C. J. Lucas, Esq. (gardener, Mr. Duncan) Warnham Court, Horsham, exhibited cut flowers of Odontoglossum in considerable variety (Silver Banksian Medal).

Messrs. Paul & Son, The Old Nurseries, Cheshunt, had a large and very showy exhibit of pot Roses and Alpines. Of the former there were some exceedingly well-grown and flowered specimens of such varieties as Madame Hoste, Madame de Joseph, Captain Hayward, Elsie Fugier, and L'Ideal. Amongst the Alpines a fine pan of Anemone Pulsatilla attracted a good deal of attention (Silver Flora Medal).

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, contributed a collection of Ferns and foliage plants in superb condition. Pandanus Veitchii, Dracaenas of sorts, Ananasa sativa variegata, and Croton Weismanni were especially gay and well coloured (Silver Banksian Medal).

As usual, Messrs. John Laing & Sons, Forest Hill, S.E., displayed a good deal of taste in their arrangement of a group of flowering and foliage plants. Some grand trusses of Clivias, Calla Pentlandi, Erica wilmoreana, were very showy, and a glass case containing a collection of Bertolonias was not the least deserving feature in a meritorious display (Silver Flora Medal).

A miscellaneous group set up by Messrs. Wm. Cuthush & Sons, Highgate, N., contained very showy clumps of Erica wilmoreana, E. Cavendishii, E. coccinea minor, Boronia heterophylla, B. megastigma, and Eriostemon intermedium. The plants were well-grown and full of flower. Magnolia Alexandrine was also very showy in this exhibit with its pretty pink-white and rose flowers (Bronze Flora Medal).

Messrs. Kelway & Son, Langport, Somerset, staged a quantity of double Cinerarias. A considerable range of colour, extending from white to deep purple and violet, was manifested, and the flowers were of extra large size throughout.

The Roses brought by Messrs. W. Rumsey made a brave display near to the entrance. In the background were a few plants of Mrs. Rumsey, which received an Award of Merit in the autumn of last year. In the front were ranged several boxes of very bright and well-formed blooms representing a considerable number of varieties. Ethel Brownslow, Alfred Colomb, Royal Standard, Jeanne Dickson, Niphetos, L'Ideal, Cleopatra, Catharine Mermet, and Ulrich Brunner were a few of the most striking of these (Silver Banksian Medal).

On the left hand side of the entrance, Mr. H. J. McLeod (gardener to J. P. Morgan, Esq., Dover House, Roehampton) set up an imposing group of flowering plants, interspersed with a few Caladiums and ferns. A Silver-gilt Flora Medal was awarded.

Messrs. Barr & Sons, of King Street, Covent Garden, and of Daffodil fame, likewise, made a grand show with a very representative group. Upwards of fifty varieties were on view, the incomparabilis, Leedsii and Barrii sections being very strong, and the blooms in magnificent condition. Duchess of Westminster, Mrs J. B. M. Camm, Gloria Mundi, Autocrat, Nelsonii, Mrs. Backhouse, Princess Mary, Barri Conspicuous, and P. R. Barr were a few of the many fine varieties that were to be seen (Silver-Gilt Flora Medal).

Mr. George Mount, the Nurseries, Canterbury sent a large and very notable lot of Roses. In the background were plants in pots of crimson Ramhler, and Lord Penzance's Sweet Brier. The cut flowers in the foreground, it would be difficult to over praise. Mrs. John Laing was in great quantity, and in magnificent condition. Other varieties that were in good form were The Bride, Catharine Mermet, and Ulrich Brunner. Mr. Mount evidently knows the way to grow Roses (Silver Flora Medal).

Cut Narcissi were shown in great quantity by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. Empress, Emperor, Poeticus poetarum, and Princeps were some of the best forms shown. A small group of Alpines came from the same firm and included five pans of Gentiana acaulis, and Primula Auricula, and its yellow form (Silver-Gilt Flora Medal).

Messrs. Jas. Veitch & Sons, had samples of Rhododendron racemosum, and Cydonia Maulei, both in full flower. The Rev. G. H. Engleheart, Appleshaw, Andover, sent a number of hybrid and seedling Narcissi, raised by him. This stand had always a crowd of Daffodil lovers round it, thus bearing testimony to the popularity of the reverend gentleman's efforts. Messrs. R. Wallace & Co., the Kilnfield Gardens, Colchester sent Erythronium revolutum E. Johnsonii, Iris caucasica, Fritillaria pudica.

Messrs. Jas. Veitch & Sons contributed a comprehensive collection of cut flowers of Narcissi in excellent condition, including such forms as Henry Irving, Mrs. J. B. M. Camm, Empress, Horsfieldii, and Barrii conspicuous. Not the least interesting here were a number of unnamed crosses between well-known varieties. At one end of the Daffodils were several fine flowers of the curious and distinct Iris Susiana (Silver Banksian Medal).

Cut Roses in quantity came from Mr. J. Walker, Thame, Oxon, consisting of Niphetos and Marechal Niel. The blooms of the Niphetos were in grand condition, but the Marechals looked rather journey worn (Silver Banksian Medal).

Mr. A. Chapman, gardener to Captain Holford, Westonbirt, Tethury, Gloucestershire, sent a large batch of Amaryllis. Some of the flowers were of great size, although they were not above a suspicion of coarseness, still they represented a very good strain, and their apparent vigour spoke well for the cultivation accorded them (Silver Flora Medal).

A Bronze Banksian Medal was awarded to Ed. Mawley, Esq., Berkhampstead, for a group of cut Roses made up tastefully in bouquets. Mr. Fyfe, gardener to Lord Wantage, Lockinge Park, Wantage, sent a fine lot of the showy Apricot-hued Rose Fortune's Yellow.

J. T. Bennett Poë, Esq., Holmewood, Cheshunt, was awarded the first prize for a collection of Daffodils. Of the large trumpet Daffodils Madame de Graaff was the most conspicuous here. The popular star section was decidedly the strong feature.

Mr. Divers, Belvoir Castle Gardens, sent a collection of Apples numbering upwards of thirty varieties in first-class preservation.

Mr. W. Farr, Spring Grove, Isleworth, sent Strawberries, Grapes, Mushrooms, and Beans.

Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, received a Silver Gilt Knightian Medal for a comprehensive collection of vegetables, including French Beans, Seakale, New Potatos, Asparagus, Mushrooms, and saladings; also some fine dishes of Strawberries, La Grosse Sucree.

A Silver Knightian Medal fell to the lot of Mr. Empson, gardener to Mrs. Wingfield, Ampthill House, Ampthill, for an exhibit of vegetables and fruit, the latter including Strawberries and Apples.

In the classes for the Veitch prizes for the best flavoured Apple and Pear, Mr. Charles Ross, Welford Park, Newbury, had the best Apple in Lord Burghley; Mr. C. Herrin, Dropmore, was second with Sturmer Pippin.

NATIONAL AURICULA AND PRIMULA.

April 13th.

The twenty-first annual exhibition of the National Auricula and Primula Society was held in the Drill Hall, in connection with the meeting of the Royal Horticultural Society. If there were few new varieties, the old fashioned varieties created a great amount of interest and helped to draw together a great concourse of people.

The Guildford Hardy Plant Nursery, Guildford, secured the leading award for fifty Auriculas. Amongst the selfs, Buttercup, Lord of Lorne, Heroine, Mrs. A. Potts, seedling (Douglas), and Rev. Chas. Kingsley were very fine indeed. The whole fifty were very even. Mr. J. Douglas, gardener to Mrs. Whitbourn, Great Gearies, Ilford, was a very good second but the flowers were less even in size. Mr. A. J. Sanders, gardener to Viscountess Chewton, Cobham, came third.

Mr. C. Turner, Slough, was well to the front for Alpine Auriculas, taking first as usual with a fine lot. Mr. C. Phillips, Bracknell, took second; Mr. J. Douglas was third with some fine flowers; and Mr. A. J. Sanders was fourth. Mr. C. Turner again came to the front for six Alpine Auriculas, which were beautiful; he was followed by Mr. C. Phillips; Mr. W. L. Walker, Reading; Mr. Jas. Douglas; and by Mr. J. J. Keen, Southampton, in the order named. For four Alpine Auriculas the prizes were taken by Mr. L. Walker; Mr. J. J. Keen; Mr. A. Fisk, Broxbourne; Mr. J. Gilbert, gardener to the Rev. L. R. Flood, Merrow Rectory; and J. T. Bennett-Poë, Esq., respectively.

For twelve Auriculas, dissimilar, the leading award was taken by Mr. A. J. Sanders, who had ten edged varieties and two selfs, all well grown. The second prize was taken by Mr. C. Phillips, who was further successful in securing the award for the premier Auricula in the show in Rev. F. D. Horner, a green-edged variety. Philip J. Worsley, Esq., Clifton, took the third place for twelve. J. T. Bennett Poë, Esq., came in fourth.

Mr. C. Phillips took the lead in the class for six Auriculas, dissimilar, having strongly grown plants. Mr. A. J. Sanders, J. T. Bennett Poë, Esq., and Philip Worsley, Esq., secured the rest of the prizes in the order named.

Mr. Wm. Smith, Bishop Stortford, had the best four Auriculas, in an even lot; he was followed by Mr. A. R. Brown, Birmingham, and Mr. J. Gilbert in this order. For two Auriculas the prizes were taken by Mr. A. R. Brown, Mr. Wm. Smith, Mr. J. Gilbert, Mr. A. Fisk, and Mr. Coulling (gardener to W. W. Palmer, Esq. Shortlands, Kent.

For a green-edged variety Mr. A. J. Sanders was first. Mr. J. Douglas had the best gray-edged variety, the best white-edged sort, and the best self in Mrs. Potts.

Mr. J. Douglas had the best twelve Primroses, in large pots of well-flowered and varied plants. Mr. A. J. Sanders was second with inferior varieties. He took the lead for twelve Polyanthus, which were good. Mr. J. Douglas was second, and Mr. George Dixon, Chelford, Cheshire, was third.

Mr. J. Douglas exhibited the best group of any species or varieties of Primulas, which were varied and pretty. The Hardy Plant Nursery was second, having Auriculas mostly. Mr. Douglas again came to the front for a basket of Primroses and Polyanthus; he was followed by the Hardy Plant Nursery, and Messrs. Paul & Son, Cheshunt, were third. The latter were first for six Primulas, distinct species. Mr. Jas. Douglas secured the first award for twelve Primulas, distinct species, showing considerable variety. Amongst others were P. mollis, P. Forbesi, P. Sieboldi vars., P. verticillata, &c.

A Silver Banksian Medal was accorded to the Hardy Plant Company for a group of Auriculas, of which there were four baskets, arranged on a groundwork of Herniaria, Antennaria, or Sedum, according as the flowers were of self colours, gray, or green-edged.

Presentation to Mr. Douglas.

In the afternoon the judges at the Auricula show, together with a number of friends assembled at luncheon at the Hotel Windsor. Mr. Martin Smith occupied the chair. After the viands had been discussed the chairman rose to address the meeting. After congratulating the members of the Auricula Society upon the good show of the day, a show which he learnt that if it had not surpassed any held in the past was at least equal to them, and passing to what he might term the second part of the proceedings viz., the presentation to Mr. Douglas, he could only say that both the Auricula and Primula Society, and the National Carnation, and Picotee Society owed much to the steady work of Mr. Douglas, who had, so to speak, nursed them through the diseases of childhood. There was only one thing to be said against the clock, and the cheque which was the medium of the presentation of their regard and that was their fugitive character. They all knew, said he, that time flies, and the old adage about time was equally true when applied to money. He could only hope that the clock would emulate its owner, he as accurate, and serve him as faithfully as he had served them. The presentation had been subscribed to by a list of 55 members, whose names were read over by Mr. Henwood.

In replying Mr. Douglas said that words failed him to express his sense of their kindness to him that day. He had done his work for the love he bore the flowers, and he had been well repaid by the pleasure that came to him in the pursuit. At that moment he could not refrain from making mention of various old friends who had aided greatly to give the societies the prosperity they now enjoyed. Foremost among these were Mr. Charles Turner, Mr. Jas. Cutbush, both of whom were gone, Mr. Mackintosh, Mr. Barlow, Mr. Brockbank and Mr. Dodwell, all of whom he knew and esteemed highly. In conclusion he wished that the societies with which he had been so closely connected, would continue to flourish for many years.

LIME.

This is one of the most common articles for which a use is found in gardens, and withal one of the most useful. In old gardens where the soil abounds in humus, resulting from the heavy dressings of manure and decayed vegetable matter, which have been applied to it for a long series of years, a good dressing of lime will release the humus, and make the plant food in them more valuable, and on heavy stiff soils more friable and workable. It will not do to apply it in any form to Rhododendron beds, nor should it be used with soot. A dressing of lime and common salt to vine borders is one of the most inexpensive and effective manures which can be used. Some good growers apply it annually.

One great point in connection with lime is that it supplies properties in which almost all natural manures are deficient. The use of slaked lime for the destruction of slugs and other insect pests is a practice almost universally followed, but often owing to the lime used not being freshly slaked it is not so effective as it should be. Lime water, made by putting several lumps of fresh lime in water, is a safe and effective agent with which to expel worms from pot plants. Allow the plants to become moderately dry before watering with it, and use it clear. The worms will soon come to the surface, and can then be easily dealt with. The question is often asked of what strength the lime water should be made. The answer to this is that water under the conditions the solution is made in gardens will only hold a certain amount of the caustic properties of the lime in solution, so it cannot be made above a certain strength, and that too, a safe one. Do not let the solid matter pass into the pots. It is, too, one of the best remedies for thrip on Azaleas, and best used when their growth is complete, before re-housing them, but have it free from any sediment or they will be whitewashed.

Again, lime water is the best agent for the destruction of the slimy slug-like caterpillar, which occasionally is abundant upon Pear trees on walls. We never saw much of it on trees standing out in the open; and frequently when one tree has been badly attacked by it two or three dozen others in the same garden have been exempt. One, or at the most, two syringings with lime water, have always with us sufficed to clear the trees of this certainly repulsive pest.—*W. B G.*

Protection of Wild Birds.—The Fifeshire County Council have taken the lead in Scotland in taking advantage of the new clause to the Wild Birds Protection Act of August last, to protect the wild birds in Fife, and particularly on a large area of land lying to the north of Leuchars and known as Tentsmuir.

QUESTIONS AND ANSWERS

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Insect injurious to the Pear Tree.—*W. B. G.*: You do not say to what kind of injury you refer. As far as we can see you have not referred anywhere to the matter. Could you describe the nature of the injury, whether relating to leaves, stems, or fruit?

By doing so we would endeavour to help you in the matter. State also at what season of the year the injury is caused. Specimens of the insect with leaves or other damaged parts of the tree would also help to a solution of the case.

Names of Plants.—*A. K.*: 1, Narcissus poeticus ornatus; 2, Pyrus Maulei; 3, Magnolia conspicua; 4, Pulmonaria saccharata; 5, Iris reticulata; 6, Spiraea Thunbergii; 7, Spiraea prunifolia.—*W. H. S.*: 1, Odontoglossum Coradinei; 2, Odontoglossum polyxanthum; 3, Odontoglossum luteo-purpureum sceptrum—*A. West.*: 1, Pteris tremula smithiana; 2, Pteris longifolia; 3, Nephrodium aristatum; 4, Nephrolepis davallioides furcans; 5, Adiantum decorum.—*A. L. G.*: 1, Corydalis solida; 2, Erythronium Dens-canis; 3, Narcissus Telamonius plenus; 4, Petasites fragrans; 5, Hedera Helix arborescens fructu luteo.

Propagating Gunnera scabra.—*Enquirer*: You can propagate this by division of the crowns, but it should be done very carefully, on account of the fleshy character of the rootstock which must not be too much cut about. Scrape away the soil from the crowns in order to see what you can remove with a sharp knife, without damaging those that remain. If you can get roots with the crowns you remove so much the better, you can then plant the rooted offsets in some good friable soil to which some leaf mould has been added. If there are no roots with the crowns cut off, then you should dust the cut portions with charcoal to prevent rotting, and pot them up in light sandy soil. Stand the pots in a cold frame, and if you can cover them with a hand light, so much the better. If not, you must keep the frame close to encourage the development of fresh roots.

Cattleya Fly.—*H. C.*: The roots sent show that the Cattleya Fly has been at work upon your plants, but the damage had been done last year. Keep a sharp look out as the young roots are being developed, and any that show unnatural and gouty swellings should be removed at once and burnt to prevent the grubs from changing into flies and being hatched out to continue the mischief in succeeding years. If you persevere in giving timely attention in this respect, you should have no difficulty in exterminating the pest. Look sharp after fresh importations before the plants are placed in the Orchid houses to prevent the introduction of any fresh specimens of the fly.

Lifting a Holly.—*W. Duguid*: What you have most to fear are dry cutting winds after the tree has been lifted and placed in its new position. Choose a time when you are likely to get a prevalence of moist or showery weather, so that the tree may partly recuperate, that is, begin to make fresh roots before it is subjected to very dry and trying weather. Of course, you can, and should keep the roots thoroughly moist, but it would be of great advantage to give the branches and foliage a thorough syringing every day to prevent too great loss of sap by evaporation or transpiration during the day. When young roots begin to push, the tree will be safe, but you must attend to watering and syringing till you have some evidence of this.

Hyacinths the second year.—*J. Mc. D.*: Plants that have been flowered in pots will flower fairly well in the open ground next year, provided you treat them fairly well. It would not be worth your while to grow them in pots a second year, if you have any desire to get good spikes of bloom. When they finish flowering you most not throw them under the stages nor huddle them together in some out of the way corner. Put them in a cold frame where they will be close to the glass, and attend them regularly in the matter of watering. You might even give them weak liquid manure twice a week, so long as the plants keep green. When the weather is sufficiently mild, the pots containing the bulbs may be stood in a sheltered and sunny position in the open air. Attend to them regularly as if they were valuable, until the foliage turns yellow. Shake out the bulbs, let them dry, and then put them in a dry cool place till autumn when they may be planted where you wish them to bloom.

Caterpillars on Goosebery bushes.—*G. C.*: They are those of the Gooseberry Moth, and may be recognised by their earliness and dark markings. They hatched out last autumn and not this spring. The caterpillar lays up in a dormant condition to wake up when the young leaves expand. Dust the bushes with Hellebore powder or hand-pick them. There is generally no difficulty in the latter operation, and it should be done at once.

Communications Received.—M. M'L.—A. P.—J. Gibson.—Omega, next week.—A. T.—H. J.—M. R. — Al. Hardy.—J. W.—H. C.—A. B.—C.—County Express, Stourbridge.—Hendry.—Westman.—Salus.—Catto.

TRADE CATALOGUES RECEIVED.

Toogood & Sons, Southampton.—Abridged List of Toogood's Royal Farm Seeds, 1897.

John Peed & Sons, The Nurseries, Streatham, S.W.—Select List of Hardy Ornamental Trees, Evergreen and Deciduous Shrubs; also Catalogue of Herbaceous, Alpine, and other Perennial Plants; also Select List of Carnations, Picotees, and Pinks; also List of Dahlias, Cannas, &c.

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COVENT GARDEN MARKET.

April 14th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples ..... per bushel	2 6	8 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100lbs.		
Grapes, per lb	3 0	4 0
Pine-apples. —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	2 6	4 0
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	3 0	6 0
Beans, French, per pound		1 3
Beet ..... per dozen		2 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers ..... doz.	2 0	3 0
Celery ..... per bundle	1 0	1 6
Cucumbers per doz.	3 0	6 0
Endive, French, doz.	1 6	2 0
Herbs ..... per bunch		0 2
Horse Radish, bundle	2 0	4 0
Lettuces ... per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions ..... per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes ... per dozen	1 0	1 3
Seakale ... per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos ..... per lb.	0 6	1 0
Turnips ..... per bun.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	3 0	6 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 6	0 9
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	3 0
Eucharis ... per doz	3 0	4 0
Freezia per doz. bunches	2 0	3 0
Gardenias ... per doz.	3 0	4 0
Geranium, scarlet, doz. bunches	4 0	6 0
Hyacinths (Roman) doz. sprays	0 6	1 0
Lilac, White (French) per bnch.	3 0	4 0
Lilium longiflorum per doz.	3 0	6 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Orchids, doz. blooms	1 6	12 0
Pelargoniums, 12 bun.	6 0	9 0
Pyrethrum doz. bun.	2 0	4 9
Roses (Indoor), doz.	9	1 6
" Tea, white, doz.	1 0	2 0
" Niels	1 6	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	3 6	6 0
Tuberoses, doz. blooms ...	1 0	1 6
Primula, double, doz sprays	0 6	0 9
Violets (French) per doz. bnches.	0 9	1 3
Violets (English) per doz. bnches.	0 9	1 0
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per bnch.	2 0	2 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Azaleas, each	2 0	3 6
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.	18 0	36 0
" specimen	3 0	5 0
Cinerarias, per doz. ...	6 0	10 0
Cyclamen, per doz. ...	9 0	12 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	10 0
Hyacinths, per doz. ...	9 0	12 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Spirea ..... per doz. ...	8 0	10 0
Roots for the garden in variety.		

SCALE OF CHARGES FOR ADVERTISEMENTS

Small Advertisements, solid type, 6d. per line of about nine words. Displayed Advertisements, per inch, 6s.; per column (12 ins. long), £3 5s.; per halfpage, £5; per page, £9. Special quotations given for a series. Gardeners and others Wanting Situations thirty words for 1s. 6d., prepaid.

BARR'S SEEDS

OF FINEST SELECTED STRAINS AND TESTED GROWTH

BARR'S "Lightning" Runner Bean.

A valuable acquisition, bearing in abundance clusters of pods, remarkably early, and of delicate flavour. **Per half-pint, 2/-.**

BARR'S Monstrous Long-Podded Broad Bean.

The earliest, largest, and most productive of long-podded Broad Beans, and of fine delicate flavour. **Per quart, 2/6; per pint, 1/6.**

BARR'S Lemon Globe Onion.

A grand exhibition Onion, handsome in form, of large size, mild in flavour, and a good keeper. **Per packet, 1/-; per oz., 2/6.**

FLOWER SEEDS.

BARR'S SPECIALTIES for 1897.

New large-flowered Crested Begonia.
A splendid novelty, the large handsome flowers having crested combs; colours brilliant and varied. **Per packet, 3/6 and 5/-.**

Barr's Superb Giant Fringed Petunias.
Flowers of immense size, and deeply fringed; colours rich and varied. **Per Packet, 2/6 and 3/6.**

Barr's Extra Selected Long-Spurred Columbines, Mixed.
Flowers of great beauty in form and colour. **Per packet, 2/6.**

BARR'S NEW SEED GUIDE for 1897 will be sent Free on application.

BARR & SONS,
12 & 13, King Street, Covent Garden.
Nurseries at LONG DITTON, SURREY,
(Near to Surbiton Station, S.W. Rly.).

Testimonial to Mr. David Thomson.

SINCE learning Mr. THOMSON's intention of retiring from Drumlanrig, many of his old pupils think this a fitting occasion for showing their esteem and appreciation of his many good qualities as a man, and abilities as a gardener, as also their gratitude for his interest in their welfare. With this object they purpose making him some suitable presentation, as may afterwards be decided upon.

SUBSCRIPTIONS CLOSE MAY 1st.

Subscriptions will be received by the following Members of Committee:—

Mr. M'Kenzie, Linton Park, Maidstone.
Mr. Allen, Gunton Park, Norwich.
Mr. Young, Zoological Gardens, London.
Mr. Melville, Finsbury Park, London.
Mr. Simpson, Stourton Court, Stourbridge.
Mr. Henderson, Thoresby Park, Ollerton.
Mr. Garrett, Whittinghame, East Linton.
Mr. Henderson, Balbirnie, Markinch, Fife.
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ORCHIDS of the highest quality, every plant guaranteed true to name, from 2/6 each. Please send for free list.—P. McARTHUR, The London Nurseries, 4, Maida Vale, London W.

LILIUM AURATUM.—The beautiful golden rayed Lily of Japan. Magnificent for pots in the greenhouse or for growing in the open garden. Deliciously scented, quite hardy. Planted now will bloom splendidly during the summer and autumn. Extra fine roots, 10 to 11 ins. circumference, per doz., 7/6, six for 4/-, or 25 for 14/-; grand selected roots, 11 to 13 in. circumference, per doz., 12/-, six for 6/6, or 25 for 21/-. All post or carriage free for cash with order.
DANIELS BROS., Town Close Nurseries, Norwich.

CARNATIONS. — CLEARANCE SALE.—A grand collection of choice named double-flowered, in beautiful variety, including all the finest sorts. Strong plants from single pots, correctly named, per doz., 4/6, six for 2/6, or 25 for 8/-. Double crimson clove, deliciously scented, per doz., 3/6, six for 2/, or 25 for 6/6. Packing and carriage free for cash with order.
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CHRYSANTHEMUMS. — CLEARANCE SALE.—A splendid collection, including all the most beautiful and popular of the Japanese and incurved varieties. Strong, well-rooted cuttings, correctly named, per doz., 1/6, per 100, 10/6. Extra choice sorts, per doz., 2/6; per 100, 15/-. Six grand new exhibition varieties, splendid, the set, 3/6. All post free.
DANIELS BROS., Town Close Nurseries, Norwich.

FUCHSIAS.—CLEARANCE SALE.—A magnificent collection of superb double and single flowered varieties, including the newest and most beautiful sorts in cultivation. Splendid for pot culture or the garden. Strong young plants, from single pots, correctly named, per doz., 2/6, six for 1/6, or 25 for 4/6. Extra choice sorts, per doz., 3/6, six for 2/-, or 25 for 6/6, post free.
DANIELS BROS., Town Close Nurseries, Norwich.

HERBACEOUS & ALPINE PLANTS, &c., for the best collections of these extant, all hardy grown and grand, see FORBES' New Catalogue, 1897, over 140 pages, giving colour, height, time of flowering, and a mass of other useful information. Free on application.—JOHN FORBES, Nurseryman, Hawick, Scotland.

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, APRIL 24th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, April 26th.—Sale of hardy flowers by Messrs. Protheroe & Morris.
TUESDAY, April 27th.—Royal Horticultural Society; meeting of committees at 12 o'clock.
Sale of established Orchids by Messrs. Protheroe & Morris.
WEDNESDAY, April 28th.—Sale of herbaceous and hardy plants by Messrs. Protheroe & Morris.
FRIDAY, April 30th.—Sale of Orchids by Messrs. Protheroe & Morris.

THE SPRING-FLOWERING MAGNOLIAS.—There is no gainsaying the fact that those Magnolias which flower in spring before the development of their leaves, are productive of very distinct effects, and on that account worthy of well marked attention in every garden of any size. Their cultivation is of the easiest in any fairly good soil, and after being properly planted and established, they require only a minimum attention from one year's end to the other. The dwarf ones may or may not be planted in beds or borders, in which case the ground would have to be kept clear of weeds to make them look well; but that is a duty which few gardeners would grudge. The dwarfest of them, particularly the varieties of M. stellata would appear to best advantage in large beds or borders skirting the outline of other shrubbery plantations; but under no conditions do the taller species and garden forms look better than when planted on grass, which may be regularly mown or otherwise, according to position or proximity to mansions and well-dressed grounds. If the latter are extensive, a large bed or two of any desired shape might worthily be occupied with M. stellata or its pink variety, which was considered sufficiently distinct as to earn an Award of Merit from the Royal Horticultural Society in 1893. Such beds would present a snowy or pink appearance in spring, and could be rendered very interesting in summer by having them planted with Lilies which would enjoy the shade cast by the Magnolias, and keeping the ground cool.

Undoubtedly the prince of all spring-flowering Magnolias is M. conspicua, which has large cup-shaped white flowers with something of the massiveness of half-opened Water Lilies. Some may consider the comparison odd; but there are no other subjects in the open to which we may liken them at this period of the year. A bushy tree of this species about 12 ft. to 15 ft. high, and as far through, is a most conspicuous and telling object in the landscape as far as the eye can properly grasp it. Planters would do well to locate trees in positions that could be seen from the windows or from terraces in front of the mansion, so that when in bloom they would prove attractive whether from near or far. No Almonds, ornamental Peaches, Plums, nor Cherries are capable of producing a similar effect; for good sized trees are like little hills of snow. For this same reason M. conspicua is the most telling. The variety or garden hybrid (whichever it may be) M. c. soulangeana is a desirable addition to a collection, but it gives the best effect at a short distance. The purple shading of the sepals and petals has the effect of toning down the conspicuousness of the flowers at a distance, thereby assimilating them to some extent to the colour of the branches or the surroundings; so that the greater the distance between the beholder and such a tree, the less decided the effect.

Moreover, M. conspicua is well-named, for no other species we have seen in gardens better deserves the epithet of conspicuous. M. grandiflora has larger flowers, certainly; but the individual or aggregate effect of the flowers is greatly masked by the foliage. The same applies to the deciduous species which produce their flowers at the end of leafy shoots, so that the largest blooms are more or less hidden and rendered ineffective. Another garden hybrid, namely, M. Lennei also deserves notice at this period of the year. The flowers differ somewhat in shape from any of the above mentioned in being more globular, notwithstanding the fact that M. conspicua and M. obovata discolor were its parents. It has the early flowering habit of the former and borrows its rich purple colour from the latter. It forms a small, slow-growing tree, and is well adapted for planting singly or in groups upon the grass. Its handsome flowers will bear close inspection, but their colour prevents them from being conspicuous at a distance. M. obovata discolor flowers later, upon leafy shoots, and is less ornamental.

Daffodils and manure.—Rank stable manure should never be placed near the roots of the bulbs, as it is positively injurious. Some varieties, including the Tenby Daffodil, and various wild forms, seem to dislike the application of farmyard manure in any state. Others again take no harm by it, but make excellent growth and flower well. Probably no better plan could be adopted than manuring the ground heavily for some previous crop, so that the new plantation of Daffodils in the succeeding autumn would find what they require without a fresh application of farmyard manure. The previous crops should also be such that they can be removed in time for the planting of the Daffodils. Analysis of the bulbs shows that potash and phosphates are required in some quantity. The former could be supplied in the form of kainit or wood ashes, at planting time or during winter. Phosphates could be applied in the form of bone meal or dissolved bones and given at the same time as the potash.

Mr. J. T. Stoney, previously foreman at Powis Castle, has been appointed gardener to H. B. Gilmour, Esq., "Underlea," Aigburth, Liverpool.

South African Pinapples were recently selling in the East London Market at 6d. per dozen, or ½d. each. One farmer has a crop of 50,000 this year.

The Kenilworth Horticultural Society has decided to hold no show this year on account of the numerous calls to be made on the public for the Diamond Jubilee Celebration, and Indian Famine Fund. Subscribers to the show regret this step.

May in April.—The Hawthorn, popularly known as May, has been in bloom at Tullimaar for the last fortnight or more; also the Broom or "Bannell," as it is locally called, whilst the bloom of the Blackthorn is practically over.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, April 27th, in the Drill Hall, James Street, Westminster, one to five p.m. A lecture on "Winter and Spring Bedding" will be given by Mr. A. Dean at three o'clock.

Daffodil and Spring Flower Show at Truro.—Subscribers to the recent and first show held at Truro, met on the 14th inst., and resolved that their show should be held annually. J. C. Williams, Esqr., was elected president; T. A. Dorrien Smith, Esqr., as vice-president; the Hon. John Boscawen as secretary and treasurer; and A. Blenkinsop, Esqr., as assistant to the latter. The recent show was a financial success.

The Royal Gardeners' Orphan Fund.—We have the pleasure to announce that Mr. Leonard Sutton (Sutton & Sons) has most generously sent a donation of £100 to The Royal Gardeners' Orphan Fund, whilst his brother, Mr. A. W. Sutton, has sent a similar amount to the Royal Benevolent Institution. We are requested to remind our readers that the annual festival dinner of this most deserving charity will take place on Friday, April 30th, at the Hotel Cecil, Charing Cross. Gentlemen who may wish to attend the dinner should communicate with the secretary, Mr. A. F. Barron, Chiswick. Donations are still thankfully received, and gratefully acknowledged.

Archerfield Gardens, Drem.—In reference to these gardens, on p. 516, Mr. J. McKelvie calls in question a statement made in the same issue which contained the report of the Royal Caledonian Horticultural Society's show. It was an excusable slip of the pen saying that Mr. Lees was at Archerfield, while it should have been remembered that he was at the adjoining gardens of Tynninghame. It is the belief of one of our correspondents that, after leaving Tynningham, Mr. Lees took what was known as Archerfield Home Farm In face of this it was easy to make the slip complained of. Another correspondent says, "It is quite true that no place in East Lothian is exactly the same as it was in the "sixties," but not one of them has been maintained all through the bad times in better order than Archerfield and Dirleton, both at Drem." He also asserts that our informant who supplied the information about Archerfield *has* seen the place, "and found it in tolerably good keeping in recent times."

Bumble Bees Intoxicated.—In a late issue of the "Journal of Botany" are details of Mr. T. L. Williams' experiments on bees. He says that these insects often get drunk. Their intoxicating tipple is the honey produced by the crowded flowers of the capitulate heads of certain Compositae and Dipsaceae. When the stage of intoxication is reached, it is indicated by rolling on the back, striking the legs wildly in the air, and general helplessnes. The bees rapidly recovered from the effects, and in most cases were eager to repeat the debauch; but one individual which had been shut up in a vasculum with copious supplies of Centaurea scabiosa manifested the next morning a disgust, raising its head and forelegs as high as it could above the plants, then hurrying away as soon as released. The most dissolute is the neuter of Bombus lapidarius It is suggested that the rolling consequent on the intoxication is a means of distributing the pollen to other florets of the same head.—*American Gardening.*

Mr. Gladstone in acknowledging the receipt of the Worcestershire Technical Committee's Manual, *Gardening for All* remarks:—"I view with cordial satisfaction each new step taken for extending the knowledge of practical gardening among the people of this country."

Addington Park, belonging to the see of Canterbury, will only be sold provided the ecclesiastical commissioners can get a fair price for it. Some future Archbishop of Canterbury may yet chance to find himself master of a country residence within easy distance of London, and where he may be able to enjoy the green fields, trees, and Rhododendrons in the park.

Edinburgh Botanical Gardens.—Several of the Edinburgh residents are complaining of the new order of things that prevails in the Botanical Gardens, and the general absence of seats for visitors, in the more sunny, attractive and accessible spots in the gardens. It appears that the seats are generally crowded with visitors, yet some of the seats that used to exist have been removed. The changes that have been effected are not considered improvements.

Spring Flowers.—The Hyacinths, Tulips, and other bulbs now in flower in the following public parks and gardens were supplied by Messrs. W. Cutbush & Sons, Highgate Nurseries, N.:—Peckhamrye, Victoria Park, Finsbury Park, Chelsea Embankment Gardens, Battersea Park, Brockwell Park, Southwark Park, Dulwich Park, Clissold Park, Ravenscourt Park, Kennington Park, Myatt's Fields, Victoria Embankment, Leicester Square, Bethnal Green, Waterlow Park, Victoria Gardens, North Woolwich, Maryon, Meath Gardens, Island Gardens.

Mr. C. Sprenger, for many years, and until recently, a partner and technical manager in the establishment of Messrs. Dammann & Co., San Giovanni a Teduccio, Naples, has given up his connection with that firm, and has established himself as a landscape gardener, garden artist, and florist in the same neighbourhood. He was formerly occupied in the cultivation and perfecting of flowering plants and vegetables, and the production of new varieties and hybrids. Mr. Ernst Dammann has undertaken all the obligations both debit and credit of the firm Dammann & Co.

The name Richardia has been given to two different plants. Linnaeus applied it to a genus of plants belonging to Rubiaceae; but Kunth substituted Richardsonia for it. The latter botanist also gives the name Richardia to the genus of the Aroideae, which in popular language is spoken of as Lily of the Nile, Trumpet Lily, Arum, or Calla, indifferently. The four latter names are entirely wrong. All the species come from South Africa, and therefore a long way from the Nile. They are not Lilies at all. Arum, Calla, and Richardia are so remotely connected that all three are placed in different tribes of the natural order.

Technical Lectures at Liverpool.—A course of lectures on the "Principles of Gardening and Horticulture," by Mr. R. J. Harvey Gibson, M.A., F.L.S., professor of botany in the University College, Liverpool, under the auspices of the City of Liverpool, is now being delivered at the University College, Liverpool. The object of the course is to provide the fundamental knowledge of plant life and structure for the understanding of the life-histories of garden and field plants, and of the general principles which underlie the more familiar operations associated with their cultivation. The lectures are fully illustrated with lime-light views and specimens. The two first lectures have been delivered and embrace the general characteristics of a higher plant; the vegetative and reproductive organs; the structure, germination, and vitality of seeds; general functions of the root and root hairs; the analysis of plants and determination of their essential constituents; the chemical elements in every green plant, and the parts played by them in the plant economy. This is the first attempt of the Technical Committee of the City of Liverpool to give instruction in the higher principles of horticulture, and the course promises a successful issue, the attendance proving most satisfactory; and in addition to an able lecturer the views are excellent, so that the information can be readily grasped.

The Blossom of the Cherry Tree enjoys the reputation of being one of the national flowers of Japan.

The spring course of instruction in horticulture held at Chelmsford under the auspices of the Essex County Council, was commenced on the 22nd of March and brought to a termination on the 10th inst. The Technical Instruction Committee again offered 15 scholarships for competition amongst the gardening youths of the county.

Didn't "Keep" Them.—"Faulkner, the florist," was practically an unknown man in London until he happened to be a witness in a celebrated criminal trial, and, in answer to the learned counsel's query, "Do you keep flowers?" replied, "No, sir, I sell them." This same remark, with variations, has been used by numerous advertisers during the last eighteen years, but it built Faulkner's business up from a small to a large one.—*Daily Press.*

Concentrated Manures.—A gentleman who was a great believer in the efficacy of concentrated chemical manures was chatting one day with his bailiff. "Ah, Jones," he said, "it's my firm opinion that the day will come when a man will be able to carry all the manure necessary for a ten-acre field in one of his waistcoat pockets." "Maybe, sir, maybe," responded the bailiff, "and no doubt he'd be able to carry all the crops he'd raise off it then in the other."

Eelworms and Nitrate of Soda.—Some plant-growers in America have found the use of nitrate of soda very serviceable in checking the ravages of eelworms at the roots of plants. It must not be applied to plants in pots, tubs, or narrow borders under glass, because the nitrate of soda, if sufficiently strong to kill the eelworms, would also destroy the roots of the plants. Roses and Chrysanthemums are particularly liable to attack, but it is useless to apply this remedy when the eelworms have got inside the roots. Dressings of nitrate of soda at the rate of 2 oz. to the gallon of water should be applied to the soil to be used for potting or growing plants before it is taken under glass.

Royal Botanic Society.—At the meeting of this society on the 10th inst., the secretary, Mr. J. B. Sowerby, gave an interesting account of the cultivation of Esparto-grass, and of its manufacture into paper. He illustrated his remarks with dried and living specimens as grown in the gardens. Stipa tenacissima is a wiry grass that can live in sandy, desert places where only vegetation of a similar character could exist, such as is the Marrem-grass (Psamma arenaria) inhabiting our sandy sea shores. The lecturer suggested that Esparto-grass would be a most suitable subject by means of which the desert of Sahara might not only be reclaimed, but turned to profitable account. The gardens were open to the general public on Easter Monday, a band playing at intervals from 11 to 1 o'clock and from 3 to 6 p.m.

Newcastle-on-Tyne Horticultural Society.—The report and financial statement for 1896, of the Durham, Northumberland, and Newcastle-on-Tyne Incorporated Botanical and Horticultural Society, is now to hand, and shows that the society paid accounts to the amount of £1,786 7s. 3d., but that this exceeded the receipts of the year's working by £371 2s. 8d. The society holds a spring, summer, and Chrysanthemum show, the summer show bringing the greatest amount in receipts, but undoubtedly costing most, while unfavourable weather has been responsible for a great deficiency in gate money which the society might reasonably expect from the fine display they get up. Prize money is the heaviest item of expenses, accounting for £436 18s. 3d. Hire of tents, premises, and fitting up make the second largest item on the bill. Owing to bad weather, &c., there was a deficiency on the spring show of £100; on the summer show of £170; and on the Chrysanthemum show of £100. After prolonged consideration it was unanimously resolved to hold only one show during 1897, and that the summer one, on the 8th, 9th, and 10th July. The surplus on hand from the previous year prevented the society from being indebted to a greater extent than £26 12s. 11d., and surely by careful working, this can be wiped out during the present season. At all events that is the aim of the society.

Tobacco is probably a native of tropical America, but its place of origin is unknown, because it has not been found really wild in any part of the world.

Violet Mrs. J. J. Astor.—The flowers of this new variety are large, perfectly double, and of a red-heliotrope colour, a somewhat strange combination. It is, nevertheless, very distinct in its way, a vigorous grower, and the flowers are borne upon long stems. It was introduced by Mr. George Saltford, Rhinebeck, N.Y.

Value of large sets of Potatos.—Some experiments were carried out on the Technical Instruction plot at Callington, Plymouth, last year. A row of Potatos planted with large or market-sized tubers gave a return of 256lbs. when harvested. Another row was planted with medium-sized, but uncut tubers, under precisely similar conditions, and the return when dug up was only 185 lbs.

Japanese Chrysanthemum gardens are stated by the author of "In the Track of the Sun," to be very curious objects. Abutting on the narrow streets of some of their cities are numerous gardens containing grottoes, and theatrical stages, some of which revolve like those of the Japanese theatres. Fabulous scenes figures and animals are represented by strange arrangements and combinations of Chrysanthemum plants.

Mustard for Wireworm.—The refuse of Mustard seed from which the oil has been expressed is exported to Holland where it is largely used for dusting the land at seed-time in order to check the ravages of wireworm. It is said to be effectual According to the experiments made in America some years ago by the growing of Mustard on land, it had no effect whatever upon wireworm. Experiences must surely differ in this respect.

A Daisy Story.—From "Caledonia, stern and wild," to the flowery fields of fair Arcadia, we may find the Daisy with "its golden bosom fringed with snow," but it will not grow in the climate of Australia. The Australian children are always eager to be told about the Daisy, our own dear "constellated flower that never sets." Once a bird was taken to Australia. A sod, in which was growing a Daisy, had been put into the cage. Shortly after the arrival in Australia, the owner of the bird carelessly threw the sod on a great waste, and thought no more about it. A wanderer from home, who had gone down, down until he was now hurrying on his way to take his own life, was arrested by the sight of this solitary Daisy. A Daisy in Australia! could it be real? A thousand thoughts surged through his aching head, and there arose visions of his innocent childhood in "flower-loved England" when he and his little sister had made Daisy chains. It came upon him like the memory of a dream, and fed and awakened his purest and highest emotions. He knelt on the great dreary, Australian waste, and kissed the little wilding flower, and the good that had been sleeping deep down in his heart, awoke. That day he set out on the great highway of right, and became a good and great man. Despise not then, the wild flower, but "win the secret of a weed's plain heart."—*R.H.B.S., in The Vegetarian Messenger.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Dendrobium wardianum Marquis of Camden's var., *Nov. var.*—A beautiful variety, for which the above name has been proposed, was exhibited at the meeting of the Royal Horticultural Society, on the 13th inst., by Mr. A. Methven, gardener to the Marquis of Camden, Bayham Abbey, Lamberhurst, Kent. It belongs to the type known amongst gardeners as D. w. candidum, which differs from D. w. album by having two small crimson spots at the base. These spots vary both in size and intensity of colour, and in the variety under notice they are moderately large compared to those of the typical D. w. candidum, but they are of a very faint tint of crimson, in fact almost obscured by the orange disc. This disc is peculiarly rich in colour, and occupying as it does about three-fourths of the area of the large lip, it is one of the most striking features of the flower. The rest of the lip and the whole of the sepals and petals are pure white. The plant turned up amongst a recent importation, and is flowering for the first time. The flowers measure over 4 in. across the petals, and the latter have a diameter of 1¼ in. Altogether it is a variety that any Orchid grower might be proud to possess. Theoretically it possesses a fault in the eyes of some, because the spots which are just discernible on close inspection, prevent it from being called D. w. album. For the same reason it is a different variety and a beautiful one. When the small plant has been grown to some size it must even be more handsome and effective than at present.

PLANTS RECENTLY CERTIFICATED.

The undermentioned subjects received awards from the Royal Horticultural Society, on the 13th inst.

Orchid Committee.

Laeliocattleya digbyano-Trianaei. *Nov. hyb. bigen.*—Another triumph in hybridisation has been effected by Messrs. J. Veitch & Sons, Limited, Chelsea, between the genera and species indicated by the name. It may be remembered that the first hybrid, in which Laelia digbyana was concerned, was Laeliocattleya digbyano-Mossiae. The striking features of the deeply fringed lip in that case is here reproduced, though the colours are different. The lip of that under notice is rosy lilac, deeply fringed, cut, wavy and revolute; there is also a large deep yellow blotch on the disc, extending into the throat. The sepals and petals are rosy purple, and the latter finely fringed above the middle. It is a handsome acquisition. First-class Certificate.

Zygopetalum Perrenoudi superbum. *Nov. hyb. var.*—The sepals and petals of this handsome hybrid variety are of a rich chestnut-red, with a few small yellow streaks across them. The lip is obovate, large, expanded, and of a rich violet. The plant is vigorous and similar in habit to Z. intermedium. First-class Certificate. Messrs. J. Veitch & Sons, Limited.

Odontoglossum wilckeanum Queen Empress. *Nov. var.*—In this we have a magnificent variety, with large and showy flowers. The sepals are of a rich chestnut-red, and of a bright yellow at the base, apex, and edges. The petals are jagged at the edges with a large blotch on the middle, and some smaller ones lower down. The lip is furnished with a large curved blotch in front of the crest. The rich yellow ground sets off the chestnut-red blotches admirably. First-class Certificate. Baron Schroder (gardener, Mr. Hy. Ballantine), The Dell, Egham.

Dendrobium albo-sanguineum. — The whole flower of this uncommon species is creamy-white, with two intense red blotches at the base. It is of dwarf habit, and was first described by Lindley in 1851-52. The species is a native of Burma. Award of Merit. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

Ansellia africana.—A well-flowered plant of this African Orchid is highly ornamental, but takes up a considerable amount of space, as it generally grows from 2½ ft. to 3 ft. high. The sepals and petals are barred with brown on a pale yellow ground. A plant bearing eight huge, drooping panicles was exhibited by F. W. Martin, Esq. (gardener, Mr. P. Bradley), Lake House, Byfleet, Surrey. Botanical Certificate.

Maxillaria houtteana.—The pseudobulbs of this species are produced on lengthened rhizomes. The sepals and petals are reddish-crimson on the inner face, and the lip is creamy with a few black blotches. Botanical Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

Coelogyne elata.—The flowers of this species are moderate in size, and white, with a yellow blotch and some orange streaks in the throat. The scapes are densely covered with bracts. Botanical Certificate. Sir Trevor Lawrence, Bart.

Floral Committee.

Amaryllis Brenda.—The funnel-shaped flowers of this variety are crimson-scarlet, with a greenish star at the base. Award of Merit. Messrs. J. Veitch & Sons, Limited.

Amaryllis Topaz.—The bright scarlet flowers of this variety have pure white edges, and are variously variegated or blotched with white in the throat. In shape they are similar to those of the variety named above, but altogether brighter in colour. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

Amaryllis Thunberg.—This is a large, wide open flower, with scarcely any tube, and of a bright red, with short green rays. It is a highly meritorious sort. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

Amaryllis Ignacite.—In this case the flowers are white with numerous red lines radiating from the midrib of most of the segments. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

Ornithogalum lacteum grandiflorum.—The flowers of this variety are large, and white with a creamy centre, instead of the black centre characteristic of O. arabicum. They are also produced in a dense raceme of many blooms surmounting the scape. The plant is useful for greenhouse decoration. Award of Merit. Messrs. J. Laing & Sons, Forest Hill, S.E.

Erythronium grandiflorum.—The flowers of this beautiful species vary from yellow to rose pink, blush and white, with a more or less evident orange zone in the centre. They are of large size, and produced on scapes 6 in. to 9 in high. First-class Certificate. Messrs. R. Wallace & Co., Colchester.

Muscari conicum.—The oval flowers of this species are of a rich dark blue, and produced in long, dense racemes. For bedding purposes it is one of the best in cultivation, conspicuous and handsome. Award of Merit. Messrs. Barr and Sons, King Street, Covent Garden.

Fuchsia Addington.—This is a hybrid between F. fulgens and F. cordifolia, intermediate in character, but having the leaves of the former. The plant forms a wide bush, with numerous corymbs of drooping, tubular, scarlet flowers, that are very effective for greenhouse and conservatory decoration. Award of Merit. Messrs. H. Cannell & Sons, Swanley, Kent.

Tropaeolum Phoebe.—The flowers of this variety are golden yellow, with a scarlet blotch at the base of each petal, and very abundantly produced. The petals are jagged at the apex, and therefore very distinctive as well as ornamental. Award of Merit. Messrs. H. Cannell & Sons.

Amaryllis The Czar. — The funnel-shaped flowers of this variety have very broad, overlapping segments of an intense crimson. Award of Merit. Captain Holford (gardener, Mr. Chapman), Westonbirt, Tetbury.

Amaryllis Duke of York.—Here we have crimson-scarlet flowers that are much brighter than those of The Czar. Award of Merit. Captain Holford.

Amaryllis Chimborazo.—This is a widely open flower of great merit, and of a fiery-crimson to the base. Award of Merit. Captain Holford.

Solanum tuberosum variegatum.—The leaves of this variety of the common Potato are gray, with a creamy-white margin of varying width. As a rule the greenish-gray is very much reduced by the extent of the variegation, which is the dominant feature. The chief use of it will be to furnish a bit of bright variegation in pots in spring, and under glass. Award of Merit. Mr. E. Beckett, Aldenham House Gardens, Elstree, Herts.

Narcissus Committee.

Narcissus Beacon.—The segments of this variety are yellow, and the cup of an intense scarlet, about the size of Barrii or slightly longer. It is a charming type, and one of the numerous hybrids or crosses raised by the Rev. G. H. Engleheart, Appleshaw, Andover. First-class Certificate.

Narcissus Snowdrop.—This is a graceful and beautiful Daffodil, about the size and shape of N. Johnstoni, but wholly of a creamy-white. The trumpet is crenate. First-class Certificate. Rev. G. H. Engleheart.

The three following Auriculas were exhibited by Mr. James Douglas, gardener to Mrs. Whitbourn, Great Gearies, Ilford, on the 13th inst., and received First-class Certificates from the National Auricula and Primula Society.

Auricula Mrs. Markham.—This is an alpine variety, with a golden-yellow eye, and a maroon

ground shading into red. The combination is quaint, and the variety one of the best belonging to the section.

Auricula Duke of York.—Very handsome is this alpine variety, which has a golden-yellow eye, a blackish-maroon ground, and a crimson edge.

Auricula Greenfinch.—Here we have a green-edged, show Auricula, with a white paste, a black ground and a green edge. The whole flower is very flat.

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

Having dealt with the genera, Aerides, Calanthe, Cattleya, Coelogyne, Cymbldium and Cypripedium, the subject brings us to that of Dendrobium of which there is a great number of species, all of more or less beauty, so that it makes the selection somewhat difficult. But without further ado, I shall advocate the claims of that grand old species, D. nobile, as being one of the best for all purposes in cultivation.

If any evidence of its popularity were wanting you only have to visit one of those mammoth sales organised by the "Orchid King" at the auction rooms, situated close to Bennett's clock in Cheapside, where Messrs Protheroe & Morris astonish the uninitiated by the enormous quantity they dispose of in lots to suit all buyers of this variety.

It is not everyone that would have pluck enough to send a collector out for it. But that the enterprise was justified is amply proved by the splendid average prices they realise under the hammer, Probably they have found a new district, for amongst those that have already flowered some very choice varieties have turned up.

Their culture is simplicity itself, always of course provided you can give them the requisite amount of heat when they are making their growth. Without this essential it is impossible to grow them to perfection. Assuming the reader has been a purchaser of a bundle or two of the newly imported plants, we would recommend their being potted up without delay, using pots just large enough to admit of a small quantity of peat and sphagnum moss being pressed in around them. The drainage must be ample, as having very few, if any roots, the compost would, if not used sparingly, become sour before the new roots would have time to get hold of it.

When potted place in a temperature of about 65° at night with a rise of 10° by day, or more with sun-heat. Keep the syringe freely going between the pots, but do not keep the compost too wet or the young growths are liable to damp off. When the young growths are well up and rooting freely they must receive copious supplies. This treatment must be followed until it is seen that the pseudobulbs are nearly made up, when the watering should be done less frequently and the atmosphere kept drier. This will prevent them starting again into growth, which is undesirable. A little later they should be transferred to a cool greenhouse, which is I think about the best place in which to rest them. Here they should be kept close and shaded until the plants become accustomed to the altered conditions, or they would suffer. Whilst resting they will require but very little water, just sufficient only to prevent their shrivelling.

Old established plants may be treated in precisely the same manner. With a dozen plants it is possible to have them in bloom six months out of twelve if treated successionally.—*C.*

BULBS IN THE LONDON PARKS.

The spring has been a cold one, and vegetation has progressed but slowly since the cold spell set in. As far as spring-flowering bulbs in the open are concerned, we consider that the cold weather has been advantageous rather than otherwise by retarding vegetation and prolonging the flowering season. The rain that has fallen has also been advantageous, particularly to the Daffodils, which require a considerable amount of moisture when in bloom to bring the flowers to their wonted perfection and make them durable either on the plants or in the cut state. Hyacinths also rejoice in an abundance of moisture, which we may take it for granted is usually abundant under natural conditions in the flowering season. A fortnight ago we passed through Regent's Park and Hyde Park when Daffodils and Hyacinths were in perfection, and they have lost but little of their beauty except in the case of the earliest varieties.

Regent's Park.

Not far from the main highway running through this park is a huge triangular bed of Wallflower alternating with Emperor Daffodil, which is very effective in its massiveness. A huge oblong bed of Hyacinth Czar Peter (light blue), intermixed with the massive and often-fasciated flesh-coloured Gigantea presents a beautiful harmony and contrast of colour. Grandeur à Merveille (nearly white) and the red Robert Steiger have also given a good account of themselves.

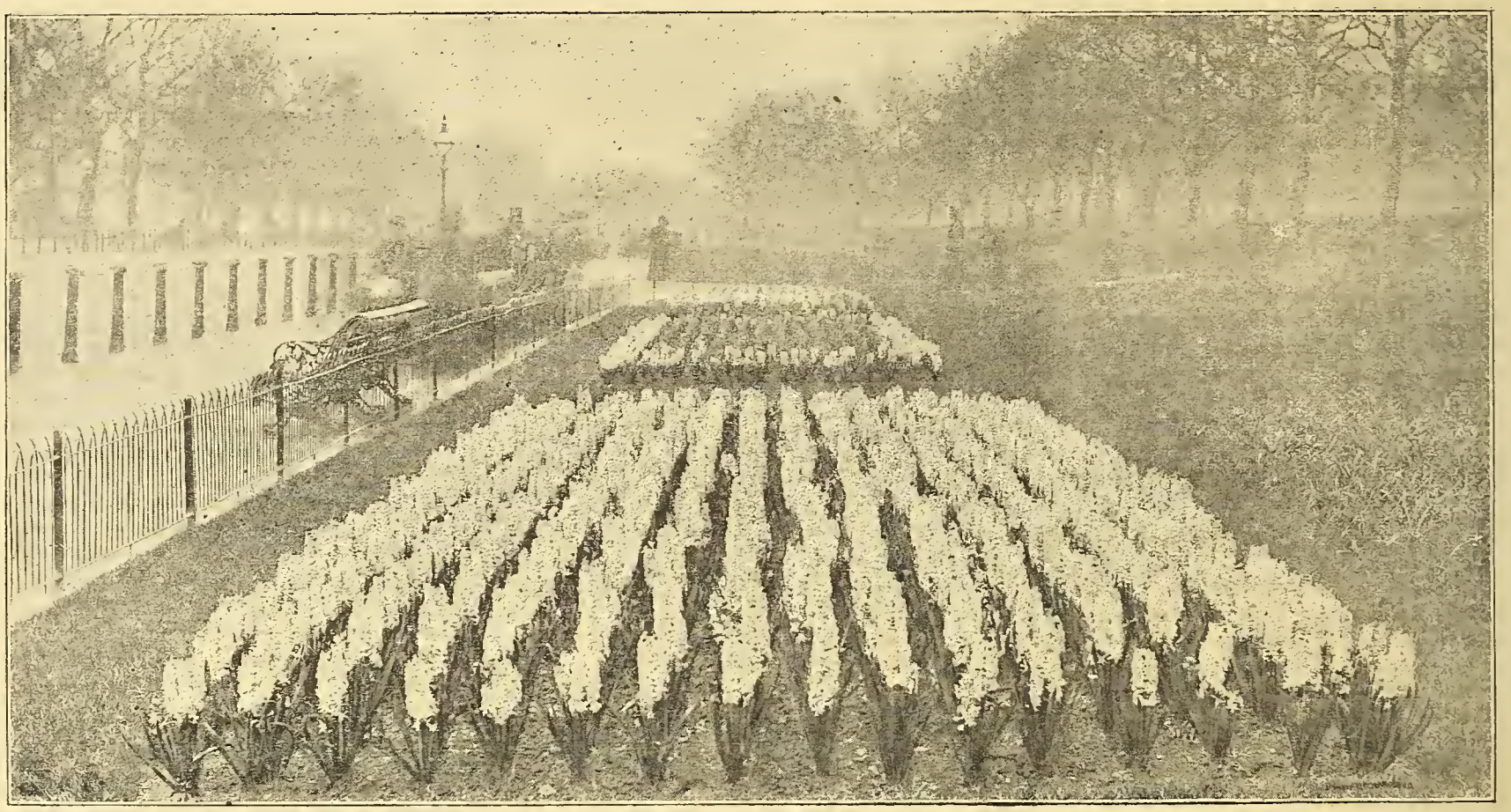
The massive beds about the middle of the western half of the park present a pleasing expanse of mixed colours in marked contrast to the more glaring hues of summer flower bedding. The wedge-shaped end beds are elevated in three series of slight mounds, which vary the monotony of what would otherwise be a flat surface of various colours. In one we have a mixture of Hyacinths consisting of Charles Dickens, deep blue, Czar Peter, light blue, Gigantea, flesh, and the nearly white Grandeur à Merveille. In the other bed we get Robert Steiger, red, Gertrude, pink, Grandeur à Merveille, and a few plants of Charles Dickens. The massiveness of these beds should help to give an idea of a Dutch bulb farm when the Hyacinths are in flower. Between the two large beds is a circular one planted with Hyacinth Czar Peter and the deep blue form of Charles Dickens. A long narrow bed is brightened with Grandeur á Merveille and Gertrude.

The Tulip beds gave good promise on the occasion of our visit, and Keizer Kroon, being amongst the most forward, is now in its glory. There is a huge bed of it besides smaller ones. Two circular beds of Daffodil Sir Watkin and Horsfieldi are very effective, but the golden yellow of Sir Watkin tells at the greatest distance.

Hyde Park.

There are plantations of bulbs in various parts of this Royal park, but the finest display is massed in the beds along the side of Park Lane. Proceeding eastwards from the Marble Arch we come upon a whole garden of large oblong beds in pairs between two paths. Some of the finest of these we note seriatim. The first pair of beds are filled with the white Hyacinth La Grandesse. Hyacinth General Havelock, intense violet, planted in diagonal lines alternating with Daffodil Horsfieldi, forms a striking contrast. A peculiarity of the rosy-red Hyacinth Queen Victoria Alexandrina is that each bulb throws two to four spikes in succession. The large pure white bells of Hyacinth Madame van der Hoop are produced on very dwarf scapes. The wide porcelain blue spikes of Hyacinth Lord Derby, in diagonal lines alternating with Narcissus maximus, produces a most pleasing effect; in fact, we look upon the two beds of these as amongst the finest in the park. Very pleasing are the large rosy flowers of Hyacinth Lord Macaulay. Hyacinth Alba maxima is after the style of Gigantea, but pure white. Two other of the finest beds we noted are filled with Hyacinth Sir H. Barkley, of a dark but bright blue, alternating with Narcissus rugilobus, sulphur with yellow trumpet.

Very singular are the large flowers of Hyacinth Lord Wellington, which are flesh-coloured with pink



Beds of Hyacinths in Hyde Park.

midribs, but have revolute segments reminding one of a Turk's-cap Lily. They are thinly arranged upon the scape, and therefore totally distinct from every other variety in the park. A very dwarf and pure white Hyacinth named Mina is pretty and highly distinct in its way, the two beds of it being charming. Golden Spur Daffodil and Hyacinth Czar Peter (light blue with massive spikes) form another of the very best beds in the park, in our opinion. The contrast is most pleasing to the eye, even at a considerable distance.

A series of single beds on the left of the path, proceeding eastward, offers much pleasing variation, and though less pretentious than the double set are none the less pleasing. The massive light blue flowers of Hyacinth Regulus are produced in good-sized spikes, The Tulip beds are full of promise. A pleasing mixture consists of Hyacinth Czar Peter mixed with Narcissus rugilobus and edged with the dwarf Hyacinth Madame van der Hoop. Another bed contains a similar mixture of other varities. The bright dark blue of Hyacinth Orondates is bold and handsome. The dark blue Charles Dickens on a groundwork of the dwarf Madame van der Hoop, and mixed with Narcissus rugilobus, and edged with the red Hyacinth King of the Belgians is effective on account of the different heights of the respective varieties. Hyacinth Couronne de Celle (light blue) is peculiar in throwing up two spikes, one after the other from a large proportion of the bulhs. Another pleasing mixture consists of the dwarf Hyacinth Madame van der Hoop, the taller Priestly (light blue), and the still taller Narcissus Emperor; the whole is edged with Hyacinth Lord Macaulay. A richly varied effect is also produced by a mixture of Hyacinth General Havelock (violet), Mont Blanc (white), and Narcissus rugilobus, all in diagonal lines, and edged with Hyacinth Gigantea. The effect is pleasing in its way, and has the effect of adding variety to the beds filled with one variety. The bulbs here, as well as in the other Royal London parks, were supplied by Messrs. J. Carter & Co., High Holborn, London. The accompanying illustration, lent by them, serves to show the massive character of the beds in Hyde Park.

VEGETABLE CALENDAR.

As the warmth from the sun increases daily, close attention must be given to the airing, thinning, and pricking out of Brussels Sprouts, Cauliflowers, and other crops that are being forwarded under glass. If such crops are allowed to become drawn and weakly, their value will be much decreased. Any watering required should be done in the early part of the day to allow the beds to become dry before closing the frames in the evening. Work multiplies rapidly at this season, and any arrears should be made up at once to start things fairly. Two enemies—weeds and insects—should be exterminated on their first appearance in spring. The former ought not to be allowed to reach the flowering stage, and the surroundings of the latter should be made as unpleasant as possihle.

Scarlet Runners.—An early sowing of these may be made in an open sunny position sheltered from north and east winds. The drills should run due north and south, drawing them early on a sunny morning and allowing them to remain open for a few hours before sowing, as the ground will gather considerable warmth in the meantime. A few dozen 48-sized pots may also be sown, filling them three-parts full of light sandy loam, and putting three seeds round the edges of each pot. These by placing them in warmth and gradually hardening them off will give the earliest supplies, as they can be transferred to a warm position without receiving any check.

Beet.—A piece of good ground that has been well manured for previous crops, and is not too much exhausted should be selected for this crop. Trenching to a depth of 18 in., and thoroughly pulverising the ground is necessary to obtain the finest roots. The seed should be soaked for a few hours previous to sowing it in drills 15 in. to 18 in. apart. When sowing on a small scale the seeds may be dropped three or four together every 8 in. in the rows. These can be thinned to a single plant, and the hoe can be more freely worked among them as soon as the seedlings appear. Two good kinds are Dell's Dwarf Red and Pragnell's Exhibition. For the earliest supplies the Egyptian Turnip-rooted can be recommended, especially for small gardens and shallow soils. It is also equally good in quality and keeping properties as the long-rooted kinds, and is a much handier root for cooking.

Salsafy and Scorzonera.—Too early sowing is not advisable with these roots as they are liable to run to seed, and become tough. A sowing of each at the present time will give ample time for full development of the roots. To obtain nice straight roots the ground should be trenched 2 ft. deep, and allowed to settle before sowing. Sow in drills 1 ft. apart, taking care not to cover the seeds too deeply. When the young plants are strong enough to handle, thin out to 6 in. or 8 in. in the rows.—*J. R.*

THE PLANT HOUSES.

The Stove.

The present time is what gardeners are apt to call a "catchy" one, for the sun pops in and out amongst the clouds with proverbial April fickleness, and the air sometimes warm and balmy blows chill and cold on occasion. As the majority of plants in the stove are now in the full flush of early growth it is most important that they should not he allowed to sustain a check from frequent fluctuations of temperature. The blinds also should not be suffered to remain down when the sky is obscured by clouds. The night temperature should not be suffered to decline below 70° Fahr., and as soon as it has risen to 75° in the morning air should be given, whilst 80° will be a fair maximum temperature for the day. Shut the house up not later than 3.30 p m., and earlier if it is so situated that the sun is off it, or if the day turns out to be dull. In addition to the syringing, which should be copious, the shingle on the side stages should be damped the last thing before leaving-off time. The shingle holds the moisture, and prevents the necessity for throwing so much water upon the paths.

Climbers.—The pressure of work up to the present time has been so great owing to the rush of potting that the borders in which the climbers are growing may well have been overlooked. This is a very good time to top dress them, and if this is thoroughly carried out the plants will be all the better for it. Previous to putting in the new soil some of the old should be taken out by means of a handfork, but the latter must be carefully used to avoid injury to roots, which may be near to the surface.

Cycads.—These are throwing up their new fronds with great vigour, and as it would be a thousand pities to see them disfigured by mealy bug and scale a sharp look out must be kept upon the movements of these insects. Syringing with clear water is not enough, as the bug chiefly finds a lodgement on the under side of the pinnae. Turn the plants over on their sides, and give them a good syringing with a reliable insecticide, afterwards washing this off with clear water. It is also necessary to see that the young fronds have room to develop, that is that their neighbours are not pressing upon or injuring them.

The Edges of the Stages.—In addition to growing dwarf plants in small pots for furnishing the front row of plants there is another way of covering up the edges of the stages adopted in not a few establishments with success. This is to push back the shingle all along the edge of the stage for a width of about four inches, and put in its place a small ridge of soil. Into this cuttings of Panicum and pieces of Selaginella may be dibbled. These soon take root and grow very freely, forming a capital edging, that by dint of judicious attention will last in condition through the summer until well on into the autumn.

Poinsettias.—Not infrequently these are left beneath the stage or some equally unfavourable place for too long, the first cuttings being thereby damaged. As the plants are now all breaking into growth they should be moved up nearer the glass and may now be kept supplied with water. The cuttings will then be sturdy and short jointed. It will scarcely be possible to obtain a sufficient quantity of cuttings to form next year's stock at one time, so several batches will have to be put in during the next six or eight weeks as they can be obtained. Plenty of bottom heat is necessary to strike Poinsettias readily, and we have always been most successful with them when they were plunged in a good hot bed in its early stages.

Hedychiums.—These beautiful plants do not receive the attention that they are entitled to. Possibly their large size is to blame for this, but where the stove is fairly roomy no plants could be better worth their place. They like a fair amount of heat and plenty of moisture, and indeed are never seen to greater advantage than they are when treated as sub-aquatics. Just now they will be all the better for liheral supplies of liquid cow manure.

Caladiums.—For the very large and heavy leaved varieties stakes will be required. Let these be as light and thin as is consistent with the strength required. Take care also that the leaves are not torn by clumsiness in syringing, for the young leaves are delicate and will not stand a great deal of knocking about.—*A. S. G.*

Gleanings from the World of Science.

Poisonous plants of Essex.—In Vol. III, at p. 77 of *The Journal of the Essex Technical Laboratories*, Mr. J. C. Shenstone continues his account of the "Poisonous Plants of Essex." The Solanum family, including the Potato, contains some of the most intensely poisonous of the British flora. Notwithstanding the wholesomeness of the tubers of the Potato, Mr. Shenstone notes a case of poisoning that was recorded in the *Lancet* in 1860. This can only occur when green tubers or sprouts of the same are boiled and eaten, and this could only be due to the carelessness of the cook in the first instance. The leaves of the Bittersweet (Solanum Dulcamara) are narcotic and the fruits deleterious, yet they cannot be deadly poisonous for we have seen schoolboys chewing the stems for the sake of their peculiar flavour and no harm resulted. Mr. Shenstone says that Solanum nigrum has proved fatal in many cases. The Deadly Night-shade (Atropa Belladonna), Thorn Apple (Datura Stramonium), and Henbane (Hyoscyamus Niger) are all regarded as the most deadly poisonous members of the family belonging to our native flora. Used medicinally, however, they may be regarded as valuable plants.

The Foxglove, Mezereon and Spurge Laurel are all highly poisonous plants, yet all are favourites in gardens and shrubberies, and are more or less used in medicine, or the two Daphnes for blistering purposes. Children, it is said, have died through eating the Sun Spurge and the Petty Spurge. Perennial Mercury is said to be poisonous to cattle. Frequent reports are given of cattle being poisoned through eating the leaves of the Yew, which are considered more deadly in a half-faded condition than when fresh. Mr. Shenstone says that fatal cases have occurred through eating the fruits of the Yew, and that some explain it by stating that the stone contains the poisonous principle. There are few we should think that would care to grind the hard stone; but Mr. Shenstone thinks it the wisest plan to leave the fruits untasted. Nevertheless, we have frequently been refreshed or gratified with the pulp of the fruits of the Yew when on botanising expeditions, and have seen others partaking of them freely without symptom of harmful effect.

The bulb of the English Bluebell is said to be very acrid, but there are few, we should think, that would be tempted to eat any part of this plant. Moreover, the bulhs of the Quamash (Camassia esculenta) a closely allied North American plant are eagerly collected by the Red Indians, and baked between hot stones when they assume the appearance of baked Pears, and have an agreeable, sweet taste,

It is interesting to learn that Herb Paris (Paris quadrifolia) still grows in Chaulkney Wood, Essex, where it was found by Gerard, of herbal fame, four hundred years ago. Mr. Shenstone has made a mistake in placing Meadow Saffron (Colchicum autumnale) in the Irideae, He must have been thinking of Crocus sativus. Deer and cattle have been poisoned by eating the leaves of the Colchicum in spring. Cases of poisoning have occurred with Arum maculatum. Portland Arrowroot used to be made from the corms, the poisonous properties being destroyed by heat. The Darnel (Lolium temulentum), is considered the only poisonous British grass.

HINTS FOR AMATEURS.

Chrysanthemums.—Those who take up Chrysanthemum culture soon find out that it gives them plenty to think about. Besides the regular every day attention with regard to watering, and airing in the first five months of the year, the various shifts from pot to pot mark off so many epocbs, as it were, in their history. It may seem to the beginner that no sooner are the plants in one lot of pots than tbey are calling out for a shift into larger ones. Certain it is that bealthy vigorous plants are not long in filling the new soil with roots. Add to this the fact that it imposes a great check upon the plants if they are allowed to become root bound to any degree, and the apparent mystery is explained.

The majority of fairly early and healthy plants are now in need of one of these shifts. Up to the present time the potting has not been at all heavy, as the plants are now in large sixties. The soil too has not needed much trouble to be taken with it, but this will have to undergo a slight alteration now. First of all the tyro wants to know if bis plants are in need of potting. To find this out, carefully knock the plant out of its pot, taking care not to disturb or break the ball in any way. If tbe roots have made their way to the sides of the ball so as to be in contact with the pot, a shift onwards is required.

Now for the soil!—Bearing in mind that rank growtb does not necessarily mean healthy growth, the cultivator must guard against making the soil too rich. For this season we would strongly advise him not to mix any chemical manure at all with the soil. A light sprinkling of soot will not do any harm, but even this is just as well left out, for its loss will not be felt. Use of good loam two parts, and one part of leaf soil. The latter should be picked over to see that it is free from fungoid growths, and may then be rubbed through a half inch mesh sieve. Add a fair quantity of river sand and mix the whole well up together. This soil will be quite good enough as the plants will be out of it, and into other larger pots before they have had a chance to take all the goodness out of it. It will thus be sufficiently rich to insure a short jointed and sturdy growth.

Clean pots are also of the first importance. They should measure from 5½ to 6in. in diameter, or the size usually known as 32's. The drainage must likewise be carefully looked after. Merely throwing a handful of crocks into the bottom of a pot, and allowing them to sort themselves, is not giving proper drainage. The hole in the bottom of the pot must first be covered with a crock placed concave side downwards, a few crocks a little smaller in size being placed on the top, and finished off with some small pieces. A handful of moss or of the rougber part of the compost must be put in next to the crocks. This precaution is necessary, otherwise the fine soil would be washed down in among the crocks, when the drainage would soon become choked and useless.

In potting see that the young plant is placed exactly in the centre of the new pot, but it may stand about half an inch deeper in the new quarters than in the old ones; that is the level of the old ball of soil will be covered by half an inch of the new compost. A potting stick or rammer is generally required to give the requisite firmness to the new soil, but this must not be taken as an invitation to ram until the soil is as hard as a brick, and half the young roots are bruised and injured, some of them nigh unto death. Pot with moderate firmness, and we must leave each amateur to construe this as his ideas prompt him.

After potting.—Up to the time of potting the plants have been given plenty of air, plenty of water, and plenty of light. All these conditions were good for them then, but they must be modified considerably for the next week at least. The plants should be returned to a cold frame, and placed on a bottom of ashes. Here they must be kept rather close for the first day or two, gradually increasing the amount of air given until they seem to have tided over the check consequent upon the shifting. The soil being fairly damp water must not be given directly after potting, as is far too frequently done, but instead give a gentle syringing morning and afternoon. This will serve to keep the foliage clean and brigbt, and by keeping the atmosphere in immediate contact with the leaves moist and kindly, will hinder and prevent tbat excessive transpiration of water from the leaves which is the cause of the flagging of newly potted plants. Plenty of light must be given as previously, but it must be diffused light, and not direct sunlight. For the first few days at least we should advise a light shading of tiffany if the weather prove bright; of course if it is dull there is no need to trouble, and the conditions of the light upon a cloudy day are exactly what is required, and what we give artificially during brigbt weather by means of shading.

If the above instructions are followed tbere should not be any difficulty in lifting the plants from the one stage to the other.

Spiraea confusa.—As this handsome shrubby Spiraea has been giving such a brilliant account of itself this season, it may be as well to point out that here amateurs have just the sort of plant to suit them. It is hardy, easily grown, free-flowering, and handsome, after which category of good qualities it may well be asked what is there left to wish for? For pot culture for blooming in the conservatory during spring it is a huge success, the more perhaps that it is naturally of dwarf and compact habit and does not soon become unwiedly witb regard to size. Tbe pretty white Hawthorn-like flowers are produced in dense clusters (corymbs), at the ends of the branches botb large and small. Tbe flowers last fairly well when cut, and placed in water but there is no disputting tbe fact that they look better in a state of nature on the plant itself. The great value of this Spiraea is that the plants can be left out of doors through the winter or as much of it as is deemed necessary, and may then be brought into a gentle heat as required. They do not like too mucb forcing, which tends, as with not a few otber things to make them drop their buds. Manure water may, of course, be given with great advantage in the spring when the flower buds are swelling, and also in the summer when the plants are making their growth; but at no time must the soil be allowed to get dry. Still it is astonishing how much vitality these plants have, for we remember seeing one that had been without water for two months, and was to all appearance at death's door if indeed it was not inside it. This plant was put out in the open ground, and soon threw up shoots from the bottom as gaily as ever, and seemingly none the worse for the experience. The top of course was all dead, and remained so.

The effects of the Frost.—It is quite possible that we may have to deplore the loss of most of our crops of hardy fruit, owing to the severity of the late frosts, but upon this point it will be impossible to speak definitely just yet. Wall trees that have had protection given them in addition to that afforded by the wall will be all right, but we tremble for the standard trees with their mantles of white, and pink blossoms. With us everything was pretty dry, however, and it may chance that we shall have to thank this for our prospective crops of fruit. Another grain of comfort and of hope lies in the fact that there was plenty of bloom, and some of it may have escaped by being sheltered by their more unfortunate relatives. Certainly we do not despair as yet, and especially when we see apparently delicate flowers, such as the Daffodil and Primrose, pass in triumph through the biting cold. Thus may it be with our fruit trees.

Hardy Fernery.—Where no bulbs for spring flowering have been planted amongst the hardy ferns, there will be nothing to hinder the giving of a top dressing. This should therefore be done at the earliest opportunity, sprinkling the soil evenly over the spaces between the plants, but keeping it off tbe actual crowns. There is nothing to beat well decayed leaf soil for the purpose, and if a supply of this is to be got hold of the ferns will prove themselves very grateful for it.

Paths across grass.—There is an old saying that no good gardener will cut a corner, but will go round it by the path in the proper way. If this be true there are very few good gardeners in existence, for it seems a mania with many people to make short cuts across the grass, or to set up equally unsightly tracts near the edges of the grass. Tbe present is a good season of the year to remedy these defects, for by sticking in a few wooden hoops or bushes along the worn places, the latter will be preserved from the feet of those who fear not law or order. A very few weeks of genial spring weather will strengthen the grass so that the obstacles may be removed, whereas if remedial measures were not taken now these self-same spots would be bare and unsightly throughout the whole of the summer.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write 'Amateurs' Page" on the top of their letters.

Ash Path.—Ashes make a very clean and serviceable path, *J. Wilkins*, provided a little care is taken to furnish a good substantial bottcm. From 4 in. to 6 in. of clinkers, brickbats, or similar rubbish will give a good bottom, over whicb about 4 in. of ashes should be laid. Tbe latter shonld be wet, in order to allow of them binding together. A heavy roller passed over all several times will give the requisite solidity. Such a path as this will need to be watered and rolled pretty frequently during tbe summer or it will "kick up," and the surface will be rougb and unpleasant to walk upon, but any way it will be far preferable to the dirty clay-gravel you refer to, which would be little better than a quagmire in wet weather.

Laying out a Garden.—It is not easy to gather from your letter, *Y. O.*, just exactly what sort of a piece of ground it is that you wish to make into a garden. The size (40 ft. by 60 ft.) is fairly good for the town, and you may be able to grow a lot of pretty things in it, but in this space it is not possible to do very much in tbe way of effect. Above all you do not say how it is situated with regard to shelter. You might bave a border about 4 ft. in width running all round it, whilst the rest could be laid down in grass. In addition to the border several small beds could be cut out of tbe grass, and these might be filled with such special subjects as Violas and Carnations, or if you wish to go a step higher, Cannas, tuberous Begonias, or Fuchsias. A border such as that suggested would hold a lot of stuff, and we think would please you. Your best plan will certainly be to call in the aid of some local jobbing gardener, who would be able to see literally "how the land lies." In any case we should advise you to steer clear of elaborate arrangements of cunningly devised beds, for they are never more out of place than in a small garden.

Gladiolus Colvillei alba.—*Jaspar* bas a number of potfuls of this Gladiolus. The plants are showing flower, but he wants tbem to flower later on, and not now. He accordingly writes to ask what he can do to keep them from flowering.

Put them in a frame or other place where they will get no direct sunlight, and keep them as cool as possible. This will retard the opening of the flowers for a fortnigbt or three weeks.

Forcing Hawthorns.—This is not, as you would seem to suggest, *Charles T.* at all a difficult matter, although we are agreed that it is not a common practice. We know at least of one large private garden where it is carried on, tbe plants being in full flower at the present time. In tbis case the "Mays" are forced, not because of their beauty, although they look very beautiful, but on account of family sentiment. The double scarlet form does exceptionally well. You must avoid giving the plants too much heat in the early stages or the buds will drop. Apart from tbis there is no difficulty.

Spiraea japonica.—*R. B.* and *W. Rackitt*: Plant the Spiraeas out in the open ground; they will be of no use until next autumn twelvemonth.

Azaleas do not want any pruning, *Tyro*, as they never make a lot of growth in one season, and after the earlier stages, that is the first three years of their life have been passed, growth is evenly made all round. It may be necessary to put in a few ties just to pull very strong growths into place; and dead sprigs may be cut out, altbough if you look after your plants properly you should not be troubled mucb with these.

Chinese Primulas.—These are not annuals, *Wilhelm*, tbat is they do not die after one season of flowering. Tbey are usually treated as such, however, for the reason tbat the flowers on young plants

are finer, the plants handier as to size, and the general results rather better all round than would be obtained by growing the plants on for another season. Should you wish to do this you must knock the plants out, shake away as much of the old soil as possible, and pot them up again. You must be very careful to minutely examine the collars of the plants, *i.e.*, that part of the short stem just above, but in direct contact with, the ground. It is at this place that rot makes its appearance. If ever so slight a speck of rot is observed there is nothing for it but to throw the plant away, for to pot it up again would only be time thrown away.

Primula obconica.—*Grower* sends a few flowers of Primula obconica to us for our approval. This is very freely given. The flowers are a good deal larger than usual, and if the plants are free flowering they mark a considerable improvement on the old type.

Top-dressing for Vines.—Yes! you may use the short manure with advantage, *Caligno*, for top-dressing the Vines.

Scale on Peach-tree.—Please tell me what I can do with scale on a Peach-tree just setting its fruit.—*Subscriber.*

You must go over each branch carefully and crush each scale by pressing it between the fingers. Then wash the place that it covered with a fairly strong solution of some insecticide, such as Fir-tree Oil, and Gishurst Compound. A soft and small brush like the small ones used by painters will be found the handiest tool for applying the insecticide. Do not despair if you do not get rid of all the scale at one operation but go over the tree again and again until the desired end is effected.

Pond for Water Lilies.—In your paper for the 17th April, you point out how Lilies can be grown. Will you kindly state what depth the water should be? and the quantity of soil, water, etc., that would be necessary for the common white and yellow Water Lilies? also whether it would be necessary to have the water running.?—*H.J.*

The depth of water may be anything from one to three feet; about two feet would be a good medium if it can be managed, although the plants will flower well enough in a foot of water. The soil in the tub may be from 6 in. to 12 in. in depth, and may be made up in the manner set forth in the answer to Aylesbury. It is not absolutely necessary to have the water running but it must be frequently changed, otherwise in a small tub it would soon become unpleasantly odorous, particularly when cow manure is mixed with the soil. In larger ponds the water does not so soon get foul, but it is always advisable to have a stream of water running through, even if but slowly.

CYPRIPEDIUM FAIRIEANUM HYBRIDS.

The group of hybrid Cypripediums in which each individual owns C. fairieanum as one of its parents provides us with some of the most beautiful and interesting yet obtained. C. fairieanum has now become so scarce that it may be considered almost extinct in cultivation. The most enterprising of our Orchid importing firms have been trying for years to re-introduce it, but to all appearance it baffles all their effort to rediscover its habitat; consequently the hybrids from this species must remain to a great extent rare and valuable. If we take for example C. vexillarium, the first of the section to flower, we find it was described by the late Professor Reichenbach as far back as 1870. It is still one of the most popular, and retains its position in the market; it is likely also to be one of the most sought after for many years to come, as no collection can be considered complete without it. It is a remarkable fact that all the offspring retain the deflexed character of C. fairieanum in the petals; also that the distinct lines and veinings have been to a great extent retained in the petals and dorsal sepals.

C. vexillarium as stated above, was the first to flower. It was raised by the late J. Dominy in the nurseries of Messrs. J. Veitch & Sons. The dorsal sepal is purple, shading to green, which becomes almost white towards the base, heavily veined with dark purple. The deflexed petals have the upper halves green, the lower part white, the whole margined with purple, and the outer edge thickly covered with rich purple hairs. It is scarcely less beautiful than the pollen parent, and is the result of crossing C. barbatum with C. fairieanum.

C. arthurianum is the result of crossing C. insigne with C. fairieanum. It is one of the most distinct and beautiful Cypripediums ever raised. It originated from Messrs. Veitch's nurseries and is dedicated to the late Mr. Arthur Veitch. It is remarkably free growing and thrives well in the intermediate house; but I find it does best and thrives even more freely when grown with C. insigne in practically a cool house. It is too well known to need description here. C. a. pulchellum differs principally from the typical form in its being more densely spotted, a character procured through C. insigne punctatum violaceum having been used in its production. It was raised by Mr. Seden, at Chelsea.

C. Juno (C. callosum and C. fairieanum) resembles to a great extent C. vexillarium, but has more white on the dorsal sepal.

C. Edwardi (C. superbiens (Veitchii) × C. fairieanum) is another variety raised in America. It is one of the most distinct and beautiful of the section; it is the largest flowered variety we have seen in this group, and equal to, if it does not surpass C. vexillarium in colour. The dorsal sepal is 2 in. across. The ground colour is white, shading to green at the base, heavily suffused with purple, lined and veined with dark brown. The petals, nearly 3 in. long, are white, suffused with pale green on the upper half; the lower part is white, lined and spotted with dark brown; there is also a broad margin of purple, and the edges are covered with prominent dark purple hairs. The lip is about the size of that in C. superbiens, partaking of the character, both in shape and colour of that species. It is one of the most desirable, and should have a place in every collection where Cypripediums are appreciated.

C. Niobe (C. spicerianum × C. fairieanum), is one of the prettiest and most popular of the group. It is too well known to need description here.

Cypripedium Regina.

C. Hy. Ballantine (C. purpuratum and C. fairieanum) is one of the most beautiful of the group. Its dorsal sepal has the characteristics of C. purpuratum with broad, purple longitudinal lines, extending from the base almost to the top. The petals also take more of the seed parents' character than any of the other fairieanum crosses. They are broader, straighter and not nearly so deflexed, purple in colonr, lined and spotted with darker purple. It is of delicate constitution but does best when grown cool.

C. lawrenceano-fairieanum is derived from a cross between the species which form its name. It closely resembles forms of C. vexillarium.

C. Mrs. F. L. Ames (C. tonsum and C. fairieanum), is a hybrid raised in the late Mr. Ames' collection in America, where it maintains a good reputation. The only plants I believe in Europe are in the collection of Mr. R. I. Measures, at Camberwell, from whence we hope ere long to become better acquainted with it.

C. Regina (C. leeanum & C. fairieanum), the subject of the accompanying illustration, is a secondary hybrid raised in Messrs. Veitch & Sons' establishment. It was exhibited by them at the Royal Horticultural Society's meeting at the Drill Hall on October 27th last, when it received an Award of Merit. The flower is about the size of C. leeanum. The dorsal sepal is white, shading to green at the base, lined and spotted with dark brown, with some purple on the white. The petals are deflexed, pale green, lined with dark brown. The lip is green, suffused with brown. This is likely to remain one of the rarest Cypripediums for many years to come, as it is the only plant raised from the cross. [It is now in the Cambridge Lodge collection, and to Mr. Measures we are indebted for the photograph from which the figure is taken. Ed.]

C. Baron Schroder (C. œnanthum superbum & C. fairieanum) is the latest addition to the group,

and it is by no means inferior to its predecessors. It is certainly one of the most distinct and beautiful of all hybrid Cypripediums. It received a First-class Certificate when exhibited by Messrs. J. Veitch & Sons at the Drill Hall on November 24th last. The dorsal sepal is white, shaded rose at the top, pale green at the base, and heavily lined from the base upwards with bright purple; there is also some spotting of the same colour. The petals have the deflexed character of the pollen parent, and are pale green, heavily lined with dark brown. The lip is dark brown, shading to green. This was raised by Mr. J. Seden.—*C. J. H.*

MUSHROOMS.*

Many years ago it was considered a great feat amongst Gardeners to be successful in the art of growing Mushrooms; but it cannot be said the gardener, who is up-to-date to-day, can claim to have done anything remarkable by having a regular supply of choice Mushrooms almost the entire year round, provided of course, that he has conveniences of a suitable character. Yet, there are many who have tried and failed, and there are few indeed who sometime or other, have not had to taste the bitters of non-success. I cannot claim to be one of those who have never had a failure, but I am happy to say that the one I did have was my initial venture, and I claim for it my ultimate success. It so happened that we had no Mushroom house, no manure, and no place to prepare any, and in fact nothing that gave any encouragement to grow Mushrooms; but I was asked to grow them and of course had to try. Two cartloads of horse droppings were ordered from an hostlery, and when it arrived the water was running out of the carts, so wet had it become through bad weather. The next difficulty was how to get this dried, but through time, by the addition of dry leaves, dry soil and keeping it covered from the rain with boards, it was at length got into fairly good order, and the bed made up outside and spawned. The result was a complete failure, for no Mushrooms ever appeared.

This bed was made up in the middle of November, and the following April it was wheeled on to a space in the kitchen garden, dug in and Brussels Sprouts planted. In the early autumn of the same year I was agreeably surprised to find a splendid lot of Mushrooms growing amongst the Sprouts, so what at first proved a hopeless failure eventually became a success, but quite by accident. In the first place the manure was far too wet, as much of the very essence of what makes Mushroom growth a success, the ammonia, was washed out of it. Then when the bed was made up there was hardly a sufficient quantity to heat properly owing to its wet condition, and of course the spawn did not run until the natural heat of the sun had set it in motion, just at the time it was removed to the kitchen garden. For want of experience and observation I deemed this course necessary to make some use of the manure, but had I been more watchful and left it alone the bed would, no doubt, have borne a good crop. I mention these facts to show how easy it is to fail, and exactly where another more observant would have succeeded There can be no doubt that failures have their value, but only to those who take sufficient interest in the matter to find out where they were wrong, and profit thereby.

To be enabled to keep up a regular supply of Mushrooms a house for the purpose is necessary. I do not mean that good crops cannot be had in any other way, but where there is a daily demand, then there is every possibility of supplying it. There is no doubt that where a cellar or under ground house can be spared this is the best means for a constant supply, as an even temperature is secured without fire heat and little or no watering of the beds is necessary; consequently the beds produce a greater crop over a longer period. There are few places where this can be had, but it is within the reach of every garden, however small, to have a Mushroom house.

The best position is on the north side of a wall, and for preference build in conjunction with some other structure, such as a tool shed, potting shed, etc., so as to enable the door of the Mushroom house to open into the other. The object of this is to prevent cold cutting winds from damaging the crop while replenishing the beds. The walls are best plastered and lime-washed, and the framework to hold the beds should be made of wood. Many prefer slate or iron as being more durable, of which there can be no doubt, but I prefer the wood as being warmer and more kindly to the crop,

Our Mushroom house is a small one, being 9 ft. wide, by 18 ft. long, and contains five beds. It is very convenient, opening into the potting shed, and fitted with hot water. The beds are 12 in. deep, and 3 ft. wide, leaving 3 ft. for the passage. Of course the size of a Mushroom house must always depend on the quantity of produce required, but the gardener has not always the making of the house, and has to make the best of what he has got. In our case we have a daily demand from the autumn till late in the spring, and we keep a record of the results of the beds collectively. In the autumn of 1894, and the following spring, we picked daily for sixteen weeks, with an average of 1¾ lb. at each gathering. In the autumn of 1895 and spring of 1896, we had a run of twenty-six weeks' picking daily without a break, an average of 2 lbs. per gathering; and from last autumn up to the present time we have picked for seventeen weeks, and though we failed on two days, we had an average of just under 2 lb. per day.

Instead of making the shelves of close boarding it is much more profitable to have the wood cut in spars 3 in. wide, and place them the same distance apart. This affords a ready means of securing a crop on the under side of the bed as well as on the side and top. Many Mushroom houses have no shelves, the beds being made on the floor; but a considerable amount of room is necessary for this method, also a greater quantity of piping. In any case a dry bottom must be secured or the heat of the beds will not be maintained. It is as well to have the house heated with hot water in case of emergency, but the less artificial heat, the longer the beds will remain in bearing, so long as a growing atmosphere can be kept up. A convenient place for the pipes is immediately under the path, not forgetting plenty of evaporating pans, which will help in a measure to prevent a dry heat which should always be guarded against.

I have spoken of the Mushroom house, but it is equally as necessary to have a structure in which to prepare the manure. One cannot over-estimate the importance of having it in proper condition, and without a shed it is not possible in wet weather. Nothing elaborate is required, but any shed that is water-proof, where plenty of air can play on the manure to dry it when needed, is quite sufficient.

The next matter of importance is the preparation of the material to form the bed. There are differences of opinion as to whether droppings from the stables alone are better than when fresh leaves and soil are added. Where plenty of droppings can be had, and at the same time never allowed to get wet, this, I consider is the better of the two plans, because of being richer in feeding properties. But on the other hand I have frequently added leaves when the manure seemed rather wet, and in reality little difference in the crop was noticeable. The droppings are best collected daily where possible, and to facilitate matters a barrow or box can be left conveniently near the stables, where it can be filled without trouble. The droppings should be spread thinly in the shed after shaking out the long litter, but there is no need to be over-particular to get all the short straw out; in fact a little is an advantage in helping to retain the heat in the bed after it is put up. It is a safe plan to turn over this daily to prevent heating. After sufficient has been collected the whole should be gathered and thrown together to ferment, in an oblong heap to the depth of three feet. This is better than making the heap conical, as there is less chance of violent heating.

Assuming that the material has had no rain, there should be sufficient moisture in it naturally to ferment; but after it has been under the heating process a day or two it will easily be noticed whether there is sufficient or not enough moisture. This is usually the point where success or failure originates, and I need hardly emphasise the necessity of strict attention at this period. One must be guided here by experience, and I venture to say that no amount of theory alone can successfully guide you. If the manure is rather wet, an addition of dry leaves and soil will sweeten it, and will also help to absorb the ammonia that might otherwise escape in the atmosphere. If too dry a slight sprinkling of water through a fine rose as it is being turned over will soon put matters right. Usually three turnings are sufficient, but more may be required if the heat is too strong; and to be in the best condition it should be something of the nature of a sponge, when pressed together with the hand. If it should spring back to its former shape when the hand is opened without leaving it wet, but just sufficiently moist to slightly stain it, then all is well.

The formation of the bed must now be decided upon, but I will take those of the usual Mushroom house character in the first place. As I mentioned before having a sparred framework to hold the beds, it will be necessary to cover the bottom of the bed with fresh cut turf about 1½ in. in thickness, placing the grass side inwards. Next to this pieces of spawn should be regularly laid down every 8 in. apart, then the manure spread on the top. It will be noticed that I advise the spawning for the bottom to be done in this manner, as it is difficult to insert it through the narrow spaces from the under side of the bed. No fear need be entertained as to the spawn getting burned, as the heat of the bed rises upwards, and the spawn being close to the bottom is quite safe. The manure should be thinly and equally spread as the bed is made up, so as to allow the heating to become regular, and the whole beat firmly. Of course a line must again be drawn as to the condition of the material, but if in proper order you cannot readily make the bed too firm. For this purpose we use a piece of wood in the shape of a brick and beat it by hand, as it is surest. A depth of 12 in. to 15 in. is sufficient, and after being made up a thermometer should be plunged in it, and a watch kept how the heating is going on. Many people consider this practice waste of time, and of being too particular, as a stick or two inserted and examined frequently is near enough for them. This may be so by chance, but the beginner is much safer with the thermometer.

After the temperature has risen and has fallen to 85° the spawn should be inserted on the top. Here again, to the inexperienced a difficulty may come in the way; the heat may not rise at all; but if other conditions are properly carried out there is little fear of the heat not rising. I have often noticed the heat rise to 120°, but 100° is about our average. I never like to see the heat get up suddenly, after the bed is put up. The slower it rises and recedes the longer the heat suitable for the spawn running will be maintained. As regards the spawn itself there can be no question of the advantage of having it fresh. This we have often proved by spawning one half of a bed with that obtained, say, a year previous, and the other half with the new materials. In each case the Mushrooms came up well, but the fresh spawn runs the quicker, and the crop is usually fit for gathering a fortnight before the other. It is remarkable how long spawn will retain its vitality if kept in a dry room. I once had an opportunity of using spawn that was twenty-five years old. It was about four months before there was an appearance of Mushrooms (except a stray one), and the crop was only fair and not at all profitable. The depth at which the spawn should be inserted is the next point, and having tried it at 4 in., 3 in., and 2 in. deep, and also merely covered, I have come to the conclusion that the last-named is the best. It is easily done with the hand, and a very short time is necessary to spawn a bed. It is a mistake to break the spawn into too small pieces, 2 in. square being a good size. The beds should be covered without delay, with soil that is of a rich character. The best that we have found is that in which Chrysanthemums have previously been grown.

*A paper read by Mr. James Gibson at the meeting of the Chiswick Gardeners' Mutual Improvement Association, on February 18th, 1897.

YUCCAS.

Among our hardy plants of distinct growth and handsome appearance the Yuccas or Adam's Needle will always maintain a foremost position; and besides their unique beauty as fine foliaged plants, they possess the advantage of being among the most stately hardy flowering plants we possess, adapted for the creation of sub-tropical effects. Flourishing in any ordinary good garden soil, but prefering one of a warm dry nature, they will stand our most severe winters in exposed situations. A single specimen always attracts notice, but to see Yuccas to the best advantage they should be planted in groups of one variety, with the possible exception of

Y. filamentosa. That, being of a dwarf habit and more frequently in flower than the others, admits of its being planted between or in front of the others. Groups of Yuccas between or in front of shrubbery borders on lawns have a most telling effect, or on the higher portions of the rock garden near the margin of ornamental water. When once established they are best left alone. Almost the only requisite attention afterwards is to free them from snow after every occasion on which it falls, because if an accumulation of it is allowed for any time in the crowns of the plants it induces rottenness. Yucca aloifolia is the tallest in growth of those cultivated in gardens. Its variegated forms are splendid additions to the attractions of a well kept conservatory. Of Y. filamentosa there is also a beautiful silver variegated form. Y. gloriosa recurvifolia or pendula is the most graceful of the larger growing kinds; its panicles of flowers are more loosely arranged than those of Y. gloriosa. A group of this when in full flower is really a glorious sight; sometimes a spike will reach 8 ft. in length. Y. flaccida sometimes gets named gloriosa, but can readily be distinguished from it by its leaves being bent in the middle. Y. angustifolia is of smaller growth than the others, and has the thread like appendages from which Y. filamentosa derives its name.—*W. B. G.*

GRANTON ROAD NURSERIES.

Mr. John Phillips, of Granton Road Nurseries, situated on the north side of Edinburgh is doing great things in the furtherance and improvement of many old (also, new and rare) plants that years ago adorned our tables for decoration and were used in conservatories. Only a few years ago when I first had the pleasure of visiting his Nurseries, I was agreeably surprised to find so many useful plants being grown as an attempt to create a love of the beautiful in the shape of Adiantums, Lycopods, and Achimenes in wire baskets; also the yellow-leaved Fuchsia. These I was told are much in demand for hanging in porches and conservatories. In those days his range of glass was but the fragments, I must say, of an old and neglected nursery. At the time of writing, his glass covers an area of about two acres. The houses are substantially constructed and from 100 ft. to 200 ft. in length.

Tomatos occupy a considerable space, those grown being such well-known sorts as, Chemin Rouge, Perfection, Horsford's Prelude, etc., which are packed and consigned to the Glasgow and Waverley markets. Cucumbers are also in evidence, Roffey's and Rochford's Telegraph being his favourite sorts.

Araucaria excelsa, the Norfolk Island Pine is simply excellent, and may be had any size from 1½ ft. to 5 ft. high in well furnished and vigorous plants. Palms being a speciality are grown in large quantities. There are some magnificent specimens of Kentias, Arecas, Seaforthia elegans, Latanias, Corypha australis, and Cocos in all sizes. The beautiful decorative plants of Dracaenas and Crotons in variety were excellent, as are also the leaves of the Coleus. This latter will in due course be drafted into larger sized pots. Bedding Begonias are being potted ready for beautifying the flower borders. Mr. Phillips also grows a large quantity of the beautifully coloured Begonia Rex.

A few other specialities for which Mr. Phillips proves himself to be the practical and capable grower, are Asparagus plumosus nanus, and A. deflexus. Smilax he grows by hundreds for florists, and market. Pelargoniums, amongst which are many new and rare varieties. Ferns in many species and varieties, together with Fuchsias, Dahlias, show and fancy varieties, and Ivies including such sorts as Caenwoodiana, Marmorata minor, and the large leaved Macrophylla, etc., are amongst the subjects taken in hand by Mr. Phillips.

Cinerarias and Primulas I noticed as being of exceedingly fine strains. Amongst other useful plants were Deutzia, Genistas, Aralia Sieboldi, Dielytra spectabilis, Clematis, Aspidistra lurida and the variegated variety which was very fine. Chrysanthemum frutescens, both white and yellow varieties are grown as well as Lily of the Valley, Spiraea japonica, and many other useful subjects for house decoration, and for grouping in greenhouses and conservatories.

Bulbous and herbaceous plants, also Conifers are not forgotten. Amongst bulbs, he grows such as Hyacinths, Roman Hyacinths, bunch-flowered Narcissi, and Daffodils, which he intends to go in for strongly, having the convenience at hand for forcing for cut bloom. The Chinese sweet-scented Paeonies, Irises, and Phloxes, are other favourites. There is also a considerable variety of ornamental trees and shrubs, and Roses in variety. The Granton Road Nurseries are within an easy distance from the town, the tramcars running within 3 minutes walk of the gates.

ZONAL PELARGONIUMS.

The closing meeting of the spring session of the Reading Gardeners' Association was held on Monday evening last in the Club Room, British Workman, when Mr. C. B. Stevens presided over a large attendance of members. The paper for the evening was "Zonal Pelargoniums" by Mr. H. Shoesmith, Claremont Nursery, Woking. The paper was of an exceedingly practical character, being full of plain cultural notes. and was followed by the members with the closest attention. In introducing his subject the lecturer said he had selected one that had been somewhat neglected at horticultural meetings, although it was not a new one. He did not propose to enter into the history of the Zonal Pelargonium, but to treat entirely with the culture of this, everyone's flower, and, therefore, he would divide the matter under headings such as propagation, specimen plants, winter-flowering varieties, etc.

Propagation.—This is a matter not attended with any difficulty during summer and early autumn, but there is some risk when an attempt is made to strike cuttings at the early part of the year. Propagating from cuttings is the plan generally adopted, raising plants from seeds being confined to obtaining new and improved varieties. The size of the cutting is not essential, but the cutting must be hardened before taking it from the parent plant. This will root readily taken from any portion of the stem, and therefore cutting to a joint is unnecessary. The chief cause of failing to root is that they are liable to rot before the process of callusing has taken place. To prevent this in those which are put in early in the year, tie each to a piece of thin stick so that the base of the cutting only is allowed to touch the soil singly in small pots or thickly placed in larger ones or in boxes. About this time of year they may be planted anywhere in soil.

Soil.—A very ordinary soil is all that is necessary. Loam, a little grit, and bone meal are all that are needed in the way of compost. A rich soil only leads to the growth of leaves and soft wood.

Plants in Small Pots.—Few things are more showy than Zonal Pelargoniums when grown in small pots. They form useful objects for the conservatory or room decoration. Their culture makes a capital hobby from the point of view of a florist when the best varieties are grown. It is wonderful what a blaze of colour may be obtained from specimens grown in the 5-in or 48-size pot. They will need but one shift from the small size in which the plants were placed as soon as rooted. Firm potting is most essential. Before the shoots have a chance to run up tall, pinch out the points, also the flower buds for a time until a bushy appearance is obtained. Meanwhile, watering must not be neglected. With regard to the stopping of the shoots, mention should be made of a fact easily noted by observation. The plant, naturally, in growing, makes one joint with a leaf, on either side, the next is a flower bud and one leaf and so on. Therefore, if a bushy growth is desirable, care should be taken not to top the shoot at the joint where the flower truss forms. Shading when the plants are in bloom is necessary. Large specimens were also dealt with, also their mode of treatment.

Winter Flowering.—This phase is not the least important; and as a plant to provide bright, cheerful colour during the dull months of the year, the Zonal is scarcely surpassed. It is a matter of special culture and selection of the proper varieties. Spring struck cuttings are the best to start with, the same rule as to soil and firm potting are equally applicable in this case. The winter quarters is a vital point because there must be heat enough to expel damp as well as to favour growth. A temperature of about 55° is required. The greatest enemy to Pelargonium blooms in winter is thick fogs, and it is next to impossible to grow such with success in or close to large towns where the air is charged with smoke from a multitude of chimneys. Pure country air and the temperature named above make winter cultivation comparatively easy Singles and doubles are both grown for the purpose, the former being more showy but the least useful for cutting.

General Winter Treatment. — Apart from flowering plants during dull, sunless months, Pelargoniums should in all cases be kept quiet. Endeavours should be made to prevent much top-growth by having a low temperature consistent with keeping out frost. The roots may be on the dry side but not so parched as to kill them.

Diseases and Insects.—Fortunately zonal Pelargoniums are troubled but very little with anything in the way of insect pests, but there are a few diseases which are, however, brought about by the careless grower in most cases such as "spot in the leaf" and "decay at the base of the stem."

Varieties.—Selection of the best varieties for a particular purpose is a phase not less important than culture. Very few of the varieties that will be named were in commerce six years ago. For general culture, the following single varieties are very suitable:—F. Wootten, Cassiope, Duchess of York, Dr. Rawson, E. Bidwell, Enid, Geo. Gordon, Kitty, Lord Farrer, Mme. Jules Chretien, M. Calvat, Mr. Owen Thomas, Mrs. Hall, Olivia, O. W. Holmes, Pink Domino, Phyllis, Rev. Bartrum, Royal Purple, Trilby, T. W. Lawton, Wilhelmina, Souv. de S. B. Miller, W. Bealby, and Virginia. Double varieties: Annie Henriot, Beauté Poitevine, Gustave Emich, Golden Gate, Joyful, Mme. Charotte, Raspail Improved, Hermine.

For Winter Flowering the following are the best:—Singles: Albion, Amy Amphlett, Chas. Mason, Edith Strachan, Enid, Kitty, Mlle. Trine, Olivia, Pink Domino, Phenna, Rosy Morn, Stella Massey, Volcalia, W. Bealby. Doubles: Double H. Jacoby, Gustave Emich, Hermine, Raspail Improved, Beauté Poitovine. Many questions were asked and an animated discussion took place, in which Messrs. Neve, Woolford, Hinton, Hobbs, Turton, Martin, Dearlove, Stewart, and Chamberlain took part. A hearty vote of thanks to Mr. Shoesmith for his admirable paper was proposed by Mr. Stevens and seconded by Mr. Pound, Junr. This was carried unanimously.

STANSTEAD PARK, FOREST HILL.

Spring work in all departments was in rapid progress in the nurseries of Messrs. J. Laing & Sons, Forest Hill, as we passed through them recently. Spring flowers of various kinds were in evidence, and the fine collection of Clivias we have already noticed.

Many Dendrobiums were flowering in the warm Orchid house, including the best form of the bearded D. brymerianum. Scarcely less noticeable was a large and well-flowered plant of D. fimbriatum oculatum, with its orange flowers and two black eye-like spots. Other useful species were D. nobile, D. wardianum, D. primulinum giganteum, and D. Pierardi. Harpophyllum giganteum, with its dense spike of purple flowers, is an Orchid that is by no means common in collections. A good form of Coelogyne cristata alba had a well-expanded lip and was flowering freely. Here, also, we noted a good variety of Oncidium maculatum with dark blotches. In the same house as these was Richardia Pentlandi maculata, having large silvery blotches on its leaves which were of great size, and the plant very vigorous.

In another house were well-berried plants of the useful Ardisia crenulata about a foot high, interspersed amongst decorative palms belonging to various genera. Livistona rotundifolia altissima is an improvement on the type inasmuch as the leaves are longer, more upright, and therefore less squatty than those of L. rotundifolia itself. It is really a graceful palm of the fan-leaved type and may be seen here in various sizes from plants with a few small leaves up to 18 in. and 2 ft. high. A decorative subject of another type is Carex elegantissima with silvery-edged narrow leaves. The Otaheite Orange (Citrus japonica) is a small-fruited type that is becoming more and more used for decorative purposes. The Casuarinas are plants that might be more extensively used for they are slender, branching plants, more graceful than the finest of the Horsetails (Equisetum). The species here grown is named Casuarina ericoides. Amongst the side-saddle flowers Sarracenia Drummondi is one of the most handsome.

A cooler house contained a great assortment of plants, including Odontoglossums, the rich orange-scarlet Ada aurantiaca and others. Shrubby Be-

gonias in rose, pink, and white flowers suspended in baskets from the roof of the house were floriferous and gay. Very distinct was B. Paul Bruant, with short fleshy stems, large, lobed or divided leaves and pink flowers, produced in great abundance. The rose wings to the seed pods add not a little to the attraction of the medium sized flowers. Sibthorpia europaea variegata is now getting better known as gardeners come to understand the treatment under which it thrives. A cool Orchid house with a moist atmosphere is the best place for it. S. e. aurea with uniformly yellow leaves succeeds equally well under the same conditions and grows freely. A distinct looking marsh plant is Scirpus Holoschaenus variegatus with slender leaves, wholly green or wholly white, or occasionally barred transversely, zebra-fashion. The Australian Pitcher plant (Cephalotus follicularis) is easily kept moist in the same house, the atmosphere being congenial to it. Lomatia lilifolia is a shrubby New Holland plant with very finely divided leaves, and is useful for greenhouse decoration.

The conservatory was gay with a great variety of plants, independently of the Clivias. Both hard and soft-wooded subjects are cared for; and certainly they associate well together when not too densely crowded. Small plants of Acacia riceana, with gracefully drooping spray, were profusely flowered. Rhododendron Countess of Haddington still maintains its reputation as a showy and suitable subject for greenhouse decoration. Profusely flowered Heaths have kept up a display for weeks together. Erica hyemalis superba is a showy Heath with flowers about twice the size of the type, but similarly coloured. The prettiest of all the dwarf heaths is E. ventricosa coccinea minor, with red-tipped flowers. E. wilmoreana and E. spenceriana, both having pinkish lilac flowers are useful and ornamental at this season of the year. They are compact in habit and easily managed Heaths. Amongst fine foliaged plants Crotons and Palms are grown in abundance. A collection of Bertolonias is always interesting on acoount of the rich colour, variegation and spotting of the leaves. Numerous varieties occupy a frame in one of the stoves of the Stanstead Park Nursery. They were just commencing to put on fresh growth when we saw them. Another pretty plant always grown in some quantity here is Saxifraga sarmentosa tricolor superba, the red, creamy, and green leaves of which are evergreen.

Out of doors the hardy herbaceous and Alpine plants were just commencing their long season of flowering. Always interestesting and pretty are Saxifraga burseriana major, S. luteo-purpurea with yellow flowers, S. sancta, and others. Pretty also were Sisyrhinchium grandiflorum, with purple, and S. g. album, with white flowers. Both are hardy and valuable border plants.

GOOD KEEPING ONIONS.

It may be just worth asking cultivators what their experience is as to the keeping properties of the modern introduced strains of Onions. I am refering to how they find them keep from February onward, as this is the period when they become scarce, and as the autumn sown ones are not large enough for use. I find there is considerable difficulty in keeping many of the quick swelling kinds after February.

Some of the old strains or types that were in cultivation from twenty to thirty years ago were superior to them from a keeping point of view; and I often wish I knew where to obtain a true stock of that grand variety, James' Long Keeping. I have had this from several seed houses, only to find it was not to be compared to the stock I used to see grown in several gardens thirty years ago. If my memory serves me correctly, this kind was somewhat tender compared to many kinds; but nevertheless it was a grand variety.

I have observed that kinds with a brown skin are better keeping than when otherwise. In point of fact I have bulbs from a selection I made some few years ago that have kept from the crop harvested in September, 1895. They kept sound enough for me to use them as object lessons, in lecturing for technical education, for eighteen months after being pulled up.

A good stock of Newnham Park is hard to beat now. I know a garden in Norfolk where the gardener has saved his own, ever since the original stock was sent out. He kept selecting the best every year, and I have never seen such a pure stock of a grand Onion as I often witness in this garden when I visit it. No other kind is saved, nor has been during that time.—*J. C., Chard.*

ARTIFICIAL MANURES.

Mr. J. J. Willis, of Harpenden, is such a well known authority upon the question of artificial manures that it was not at all wonderful that despite counter attractions he secured a large and appreciative audience at the Drill Hall on Tuesday, 13th, when he gave a long and exhaustive lecture upon this subject. Mr. J. Pearson, Chilwell, Notts, presided. It is a thousand pities that the end of the Drill Hall where the papers are read is not better adapted to the purpose, for a lecturer had need to be possessed of a stout pair of lungs, and must not be afraid of using them if he is to be heard very far from the table.

In his earlier remarks Mr. Willis laid stress upon the fact that plants have their respective wants with regard to food. These wants vary very much with the class of crops. Thus such succulent plants as vegetables had chiefly need of nitrogen, fruit trees, again, required plenty of potash, and so on. The lecturer averred that there was a great future in store for horticulture, as for agriculture, if practitioners of both would study the composition of manures and find out which of them best supplied the needs of their plants.

The lecture was illustrated throughout by diagrams setting forth the composition of various plants, and showing what the requirements were. A ton weight of each of the type plants was taken. The component parts of the substance of a ton were expressed under five columns—dry substance, nitrogen, and ash, the last named being subdivided into potash and phosphoric acid. Mr. Willis went through this mass of data in a very thorough and painstaking manner.

In order to keep up and, if necessary, improve the fertility of a soil it was necessary to put back double the amount of any element that was taken from it, as for a crop to do well there must be plenty of plant food at hand for use. The Strawberry was adduced as a good instance of a case where a lot of food had to be taken from the soil in a very limited period, for there was not very long between the flowering of the Strawberry and the ripening of the fruit. This was doubtless the reason for the Strawberry being looked upon as a very exhausting crop, although reference to the figures on the diagram did not appear to bear this out. As an aid to keeping up the fertility of the soil all unsaleable portions should be returned to it.

Potash, phosphoric acid, and nitrogen, continued Mr. Willis, were the most important constituents of plant food, and fertile soils must possess large stores of them. Good farmyard manure was looked upon with great favour in most quarters, and experiment showed that it was rich in potash and phosphoric acid. He should, therefore, recommend its use, but in conjunction with chemical manures when a better result would be obtained than if it were used alone. In passing, he remarked upon the Grape as being a great producer of sugar for which plentiful supplies of nitrogen were necessary. Nitrogen and potash were more important here than phosphoric acid. He had been told by a large Grape grower in Jersey that sulphate of ammonia had with him yielded the most satisfactory results.

Mr. Willis then referred his audience to a table wherein were displayed the relative values of various manures in the important plant food constituents. As with the other diagrams the lecturer trotted his audience through these explaining and amplifying as occasion offered. He commented upon guano as being a very favourite manure, which opinion was a true one *if*, and here Mr. Willis spoke with great emphasis, people would only buy good brands. There was a vast amount of adulteration and some of the forms of guano offered to the public were absolutely worthless, the important food constituents having been replaced by lime or sand or both. In one that was specially bad, over 75 per cent. of the whole bulk consisted of sand. One-and-a-half tons of good guano were equal in nutritive value to 33½ tons of good farmyard manure.

Phosphatic manures in their turn were described as of the greatest value. Included in this section were such forms as bone meal, bone ash, basic slag, and superphosphate of lime, all of these being admirable.

In conclusion Mr. Willis assured his audience that manuring meant something more than merely putting large quantities of farmyard manure into the soil. A superabundance of organic material was to be avoided as it too often afforded a congenial breeding ground for multitudes of injurious insects.

HEXTABLE'S VICTORIA VINES.

The Donor's Thanks.

His Royal Highness the Prince of Wales's private Secretary (Sir Francis Knollys) on January 13th last, wrote the donor that the Prince thought the donor's idea an excellent one, and that he felt sure the Vines could not fail to be much appreciated by the inhabitants. The following interesting particulars will shew that His Royal Highness's anticipation has been fully verified. The sixty Vines were received by the following classes of persons, viz.: Three widows, six orphans, eight gardeners, seven labourers, five carpenters, three grocers, two bricklayers, two dairymen, two nurserymen; and one each of the following: Assistant-engineer, baker, basket maker, blacksmith, builder, butcher, clerk in holy orders, cowman, factory hand, farmer, fly driver, fly proprietor, hairdresser, house agent, naval officer, photographic artist, platelayer, plumber, publican, rate collector, and tin-plate worker. The lengths of their residence in the neighbourhood are as follows: Five years and under, 10; over five years and under ten, 31; over ten years and under 20, 13; over 20 and under 30, 2; upwards of 50 years, 4; total 60. Their places of residence were as under:—42 in Hextable, 16 in Swanley, two in Swanley Junction, total 60. The recipients have now only to devote themselves assiduously to the cultivation of the Vines, and to signify the earliest possible date when they are ready to compete for the four annual prizes of £1, 15s., 10s., and 5s. to the four cottagers whose Vines produce the heaviest amount of ripe fruit.

The donor wishes to take this opportunity, through our columns, of conveying his heartiest thanks to all who have united in making the movement so great a success, viz., the committee of the Home for Orphans, the secretary, the principal, and, although last, not by any means least, the Press, who have entered so heartily into the matter, and have given the same such generous publicity and support.

CONQUERING THE AUSTRALIAN DRY COUNTRY.

A glance at the map of New South Wales will show nearly the whole of the north-western portion of the Colony, representing an area of several thousand square miles, to be a huge blank, traversed in some half-dozen places by roads used for stock-travelling purposes, with a few small townships situated many miles apart. This is the famous "dry country," part of the eastern fringe of the Australian arid interior, and occupied exclusively for pastoral purposes. One may travel for days through this part of the Colony without meeting a living being, and the absence of creeks and water-holes makes the journey dangerous to those who have no bush experience. To offer such land for agricultural settlement is very much like asking a hungry man to accept stones for bread. True, the soil possesses all the elements of fertility, except moisture, without which cultivation is practically impossible. There are no streams, and the annual rainfall is of the slightest. Yet there exists the possibility of a large portion of this sterile region becoming in the near future a rich agricultural district, it having been ascertained that in many places there exist vast and apparently inexhaustible underground supplies of water, great subterranean rivers, which are supposed to become discharged into the sea unless intercepted by artesian bores in their course. But it was not until 1879 that artesian boring was attempted. In that year operations were begun at Kallara, a station lying between Bourke and Wilcannia. The supply was tapped at a depth of 140 ft., and the effluent water rose to a height of 26 ft.

In 1884 the New South Wales Department of Mines put down its first bore in search of water, a

small supply of which was reached at 89 ft. Since then much work has been done, and in December, 1894, there were thirty bores completed, nine in progress, and sites selected for twenty-three others. Of those completed, twenty yield a daily supply from artesian sources of somewhat over 7,000,000 gallons. Ten bores tap a sub-artesian supply, and by pumping give a daily yield of 500,000 gallons. In one instance only has the search for water been entirely unsuccessful. In June, 1895, there had been completed by private enterprise ninety bores, all yielding serviceable water; of these, seventy-three gave a combined daily flow which may be approximately stated at 30,000,000 gallons, and from the other seventeen a supply was being pumped. At one of the Government bores, that at Pera, an irrigation colony has been established, there being ten selections of twenty acres each, and a Government experimental farm of 78 acres. The country in which Pera is situated is in the dry season the triumph of desolation. Yet in this isolated locality there are spots with heautiful flowing water, gardens in the richness of successful cultivation, a delightful homestead, and splendid baths. This is the transformation that has been effected by the Pera bore. The bore sends out 700,000 gallons a day, all of which is at the disposal of the settlers, and of those who choose to follow their example.

Vegetables are grown in considerable quantities, a ready market being found at Bourke, a few miles distant. Fruit-growing has every chance of success, and the settlers are planting Apricots, Peaches, Figs, and Prunes, chiefly for drying purposes, the local articles being said to be far superior to those imported from other countries. This little colony is not only blessed with a market at its door for all the vegetables and produce it can raise, but a firm in Sydney has agreed to take all the broom Millet the settlers can grow, and convert it into brooms. Samples of these brooms have already been exhibited at various agricultural shows, and have met with high approval, and it is stated that "Pera brooms" will be a familiar household article in a few years. Another firm has offered to take all the dried fruit produced at the settlement. The water supply shows every indication of being not only permanent, but also of increasing in volume. Each settler is entitled to 21,000 gallons a day.

About forty of the Date Palms, specially obtained through the services of the French Government, from Algiers, have been planted on the Government experimental section at Pera, and they have done very well, and are flowering this year. Next year it is expected that they will bear fruit, the district being admirably suited for the growth of Dates. Indeed, they grow wild from seeds scattered about. It is expected that by cultivating the fine Algerian variety it will develop into a paying industry. There are also nine acres of Lucerne on the Goverment section doing admirably Lucerne does so well there that everybody has a little patch of it planted. Cotton is another crop which it is anticipated will prove payable under irrigation, as the Bourke climate is said to be very well adapted for this plant. As the cretaceous formations are known to cover the greater portion of the so-called "dry country," extending into Queensland in one direction and into South Australia in another, it shows that what was until very recently regarded as the least valuable portion of the colony is destined to become a land figuratively flowing with milk and honey.—*John Plummer, Sydney.*

GARDENING MISCELLANY.

ERICA CANDIDISSIMA.

Several of the heaths of a bygone popularity continue to be grown in greater or less quantity; but those which find most favour belong to what gardeners term the soft-wooded class, that is, those which are most amenable to the cultivator's art. They must grow pretty freely and admit of pruning so that they may be kept in shape and produce shoots of good strength and flower freely in a sort of compound raceme. The subject under notice readily conforms to this sort of treatment and comes in handy for conservatory decoration at the same time as Erica ventricosa coccinea minor, E. spenceriana, E. persoluta alba, and others of that class. The flowers are pure white as the name would indicate, but larger than those of the last named and abundantly produced in long racemes similar to those of E. hyemalis, but different in shape. Some plants of beautiful and bushy habit may be seen in the nursery of Messrs. J. Veitch & Sons, Ltd., Chelsea, where they have been conspicuous for weeks past.

NARCISSUS JOHNSTONI QUEEN OF SPAIN.

It would be hard to overpraise the beauty and refinement of this Daffodil, which was found by Mr. Barr during one of his wanderings in Spain, and brought here to grace our gardens 'neath the alternate shower and sun of our fickle April. In form it is distinct from the ordinary trumpet Daffodil, for the trumpet though long is narrow, and may well be described as tubular. The shape varies slightly in some of the flowers; thus while in the majority of cases the tubular trumpet is exhibited, in others the mouth is spreading. The perianth segments are narrow and abruptly reflex, the whole flower being of a soft golden yellow and of medium size but far more than medium elegance.

PRIMULA DENTICULATA.

A batch of seedlings of this Himalayan Primrose was planted on a piece of ground bordering the right of the path leading from the economic to the Palm house at Kew. The plants made good growth, survived the winter and have been flowering beautifully for some weeks past. Many of the plants are still in prime condition. They are dotted about on the outskirts of the collection of hardy Ferns, and received no protection whatever. They have probably done better in this exposed position than if they had been planted in a sheltered position on the rockery. Several of the Himalayan Primroses are very much inclined to bloom in the autumn particularly if sheltered; and when this happens they are almost sure to perish during winter by the rotting of the crowns. If full exposure will prevent them from doing this, horticulture will gain thereby, for the dense globular heads of lilac or purple flowers of P. denticulata are both ornamental and by no means common. On the opposite side of the path is a large batch of P. elatior, also raised from seeds, and which has been flowering well during the same period as the above.

LEPTOSPERMUM BULLATUM.

This pretty little Myrtaceous plant is naturally possessed of a dwarf compact and shapely habit, and as it flowers freely during the earlier months of the year should not be overlooked by those who have conservatories or greenhouses to furnish. The leaves are small and elegant, and when the branches are covered with the small white or pinky-white flowers there is no gainsaying the beauty of the plants. Shapely little specimens in 48's or 32's exhibit their character at its best. Considerable use is made of this Leptospermum at Kew, and we noticed a nice stock of it at Bush Hill Park when looking round Messrs. Hugh Low & Co's Nurseries at that place.

OBITUARY.

Col. Trevor Clarke.

To those who have only recently been in the habit of attending the Drill Hall meetings of the Royal Horticultural Society, Col. Clarke will be little more than a name; but those of the older fellows of the society will greatly regret to hear of the death of this renowned horticulturist on the 11th inst, in the 84th year of his age. He served on the council as well as on the Scientific Committee, and was much liked by those who had the privilege of coming in contact with him. He was also a frequent exhibitor, for those who love plants and improve various garden subjects can seldom resist the pleasure of showing them to his fellow men. He had a wide experience and knew something of horticulture, botany, entomology and chemistry, all of which have a considerable bearing on practical horticulture.

He well established his claim as a cultivator, hybridist and cross-breeder of plants. He had a hand in the hybridising of Begonias, belonging both to the shrubby and tuberous sections; and though many of his achievements in the early days of the latter are now forgotten, it is only what might have been expected when one considers the vast improvements that have been effected in the tuberous race during the last thirty-three years. B. Clarkei, one of the tuberous species was named after him. He received it from Messrs. E. G Henderson & Son, of Maida Vale, as a plant from Peru, and was the first to flower it in Europe, in 1867. The species, however, like several other of the tuberous-rooted ones, was not much used as a parent in the development of the race which has now obtained the supremacy. B. weltoniensis, one of the shrubby species will long live to recall the name of Col. Clarke's residence at Welton Place, Daventry. This beautiful leaved hybrid is useful as a pot plant for conservatory or greenhouse decoration, or for summer bedding. We have seen it used as a window plant at places as remote as the most northern part of Aberdeenshire, and at Eastbourne in Sussex.

A good and useful variety of Celery raised by him still bears his name. Commercially and otherwise, the most important of the work accomplished by him was the cross-breeding of various varieties of the Cotton Plant, with a view of raising improved forms. This cost him a large amount of time, labour, and money during the years he carried on his experiments. His method of procedure consisted in getting pollen from wild forms such as he could procure, and in applying the same to cultivated varieties. The improvements were obvious from the very first. A house was erected at the South Kensington exhibition of 1872 for the growing and exhibiting of various kinds of Cotton Plants (Gossypium). In recognition of the value of his labours he was awarded the Gold Medal of the Cotton-supply Association of Manchester. He was also the recipient of a special gift from the reigning Czar of Russia; and of a Veitchian Medal in 1894.

Mr. Phillip Ladds.

To market gardeners and growers for market generally Mr. Ladds has been well and widely known for many years past as an extensive grower of Grapes, Cucumbers, Tomatos, &c., for market, but particularly the first named, of which he put many tons on the market annually. He died on the 1st inst., at the age of fifty-five, and was buried at Bexley Heath Cemetery on the 7th inst., amid every manifestation of respectful sympathy, by a large assemblage of mourners from Meopham, Swanley Junction, and Bexley Heath, where he had extensive areas of glass for market work. The mourners included a large number of relatives, employees, and others who came in contact with him in business. Many of these sent beautiful wreaths as a last tribute to their departed friend.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who row collections of them.*]

Carpet Bedding.—*Diagram*: Your design is rather complicated for the size of the bed, so that you must keep the various occupants of the hed well trimmed during the summer to preserve the neatness of the whole. Where the four half circles join in the middle you might plant a good sized Echeveria metallica. The diamond shaped figure, formed by the eight plots marked 1 and 2, might with advantage be elevated about 3in. above the rest, even if the slope is gradual so as not to interfere with the dividing lines. That, however, we leave to your own discretion. No. 1, we should fill with Iresine Wallsii; No. 2, with Sedum glaucum; No. 3, with Alternanthera magnifica or some other dark variety, not yellow; No. 4, with Mentha Pulegium gibraltaricum; No. 5, with Mesembryanthemum cordifolium variegatum; No. 6, with Golden Feather; and No. 7, with Echeveria secunda glauca, for dividing lines. This makes use of all the plants of which you furnished the names. Nos. 4 and 5 must be made distinct because they touch at four points in the bed, with exception of the dividing lines. You did not wish to use much Alternanthera, but if you fill the four plots, No 3, it will just make its presence felt. Golden Feather will clash slightly with Mesembryanthemum in No. 5, but it cannot be helped unless you leave it out and use Sedum glaucum or some of the small Sempervivums in No. 6.

Peas and Sparrows.—*J., Gosport*: Stick in a few pegs on either side of the rows, and run a single black cotton thread from one to the other, about

3 in. from the ground. Make the thread tight, because if the sparrows run against it they get alarmed directly and let the Peas alone. Black thread is better than white, because the sparrows cannot see it; at least this is the general opinion. After the Peas get sufficiently far advanced, mould them up and stake them. Leave the thread in position or tie it against the stakes about the same height as the Peas.

Canna Seed.—*W.M.*: The testa of these seeds is very thick and hard, and owing to the necessity for drying the seeds when they have to be stored, they become practically waterproof for a long time. You might steep them in hot water before sowing. It would be a good plan to look for the micropyle or opening from which the radicle emerges in germination. At this point cut away a small portion of the outer skin, hut not sufficiently deep to injure the embryo. You might even use a file and ruh it off for the same reason—namely, to let the moisture into the interior to assist germination.

Lime or Soot for Potatos.—*Omega*: We do not think that one of these would be better than the other for Potatos, because they are entirely different in their nature. Lime should only be applied in case your soil is heavy, or if it is old garden soil and contains much humus. In other words if it is very rich, by all means apply the lime, as it will benefit the Potatos to some extent, and the soil to a greater degree. It helps to render plant food soluble and fit to he taken up hy plants, and serves to sweeten the soil, as gardeners term it. Soot will help to drive away vermin, but it will also supply a small amount of ammonia; and the nitrogen it contains will supply an ingredient of plant food in much request by Potatos. Wood ashes or the refuse from burnt heaps of garden ruhbish will supply potash, also highly beneficial to Potatos. Moreover, if your soil is rich as above stated, you might very well apply both the lime and the soot, with some benefit, and certainly no harm. You can sprinkle them in the Potato drills, as you say.

Planting Water Lilies.—*M. M'L.*: You are doing right in hevelling off the south bank of the pond, for Water Lilies should be fully exposed to sunshine. They will flower all the better for it. We should advise you to make the pond at least 2 ft. deep; it will be all the better for the plants. Make sure that you will have a continuous supply of water to keep the pond full all the summer. This is one reason for making the pond fairly deep. For the plants themselves a minimum of 1 ft. of water would suffice. We presume that the spring does not dry up in summer if that should happen to be a dry one. A constant overflow would he highly advantageous, for it would serve to keep the water in the pond clear, and more attractive. Rockwork will associate very well with the water. Aquatic plants should occupy the margins of the pond and as far up the bank as there is wet soil. Several of the British and other hardy Ferns would grow very well there. You could grow Aponogeton distachyon with the Lilies. The crown of the plant should he a few inches helow the surface of the water, even in winter. You could grow your Lilies for one year in your orchard house, if you like, hut they would increase faster if planted in the pond, unless you can give them plenty of room where they are. For soil use good fihrous loam mixed with some cow manure, or rotted leaves; but the first is more lasting and substantial. Peat is very poor material and should not be used. Even if you grow them in pots for a year, you would do well to use such a compost.

Coelogyne Cristata Pseudobulbs Shrivelling.—My Coelogyne cristatas, which have just finished blooming, are all shrivelling up, what is the reason? The temperature varies from 45° to 55°, or probably more in the sunshine. The plants are watered overhead perhaps once in three days, and are well vapoured by the steam arising from the hot water pipes every evening.—*Cobweb.*

Names of Plants.—*P. W.*: 1, Saxifraga crassifolia cordifolia; 2, Narcissus poeticus ornatus; 3, Corydalis cava; 4, Scilla pratensis; 5, Narcissus incomparabilis var.—*A. J.*: 1, Thuya orientalis aurea; 2, Cupressus lawsoniana aurea; 3, Juniperus virginiana; 4, Cupressus pisifera plumosa; 5, Thuya orientalis; 6, Taxus baccata fastigiata aurea.—*Omega*: Juniperis chinensis variegata.—*A. L.*: 1, Dendrobium crepidatum; 2, Dendrobium chrysotoxis; 3, Dendrohium densiflorum thyrsiflorum; 4, Odontoglossum nebulosum.—*H. C.*: 1, Fritillaria Meleagris; 2, Fritillaria Meleagris alba.—*W. H.*: 1, Coleonema alhum; 2, Boronia heterophylla; 3, Sparmannia africana; 4, Abutilon garden variety; 5, Araucaria excelsa.—*A. Ironside*: 1, Erica persoluta alha; 2, Coelogyne cristata lemoniana; 3, Citrus japonica (The Otaheite Orange); 4, Phlox amoena.—*J. M., B.*: Rhododendron Thomsoni.—*Omega*: Narcissus Jonquilla.—*T. C. S.*; Dendrobium Pierardi.—*W. C. M.*: Zygopetalum discolor, sometimes called Warscewiczella discolor.

Communications Received.—A.T.—M.P.—J.M., B.—Omega.—Robert Henderson.—A.S.—T.Watson. E.G.—W.P.—Jas. Menzie.—Jas. Muir.—Negro.—F.C.—Geordie.—C.A.—Johnson B. Cummings.—D.G.—Arthur Gower.—S.L.R.

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Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
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Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
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Carnations doz. blms.	1 0	3 0
Eucharis ...per doz	3 0	4 0
Freezia per doz. bunches	2 0	3 0
Gardenias ...per doz.	3 0	4 0
Geranium, scarlet, doz. bunches	4 0	6 0
Hyacinths (Roman) doz. sprays	0 6	1 0
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Maidenhair Fern, 12 bs.	4 0	8 0
Orchids, doz. blooms	1 6	12 0
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Dracaena viridis, doz.	9 0	18 0
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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 1st, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, May 3rd.—Sale of hardy perennials and florists' flowers by Messrs. Protheroe & Morris.
TUESDAY, May 4th.—Sale of established Orchids, by Messrs. Protheroe & Morris.
WEDNESDAY, May 5th.—Sale of florists' flowers, by Messrs. Protheroe & Morris.
THURSDAY, May 6th.—Meeting of the Linnean Society.
FRIDAY, May 7th.—Sale of Orchids, by Messrs. Protheroe & Morris.

GARDENERS AND THEIR WAGES.—A writer in last month's *Cornhill* discourses fluently on the expense of keeping up the gardening establishment attached to country houses. If we are to take the figures there supplied as absolute facts, we must acknowledge that we have long been labouring under a delusion as to the remuneration which gardeners get for their services. The unmarried men, that is, the journeymen receive on an average 25s. a week, while the more experienced get 30s. These figures might be reduced to 15s. for the former and 22s. for the latter, and it would be more nearly a correct average. Wages in country districts are in most cases much lower than in the suburbs of cities and towns. The gardeners and labourers in the service of the London County Council are much better paid than journeymen in private establishments, notwithstanding the fact that many of the latter are sufficiently experienced to be perfectly capable of taking entire charge of a garden and everything connected with it. The writer in question, in summing up the garden expenses of a country house, says that it would not be difficult to name 200 of them which keep a staff of twenty-five to forty, but for a staff of fifteen—ten at 25s., four at 30s., and a head gardener at £100, the annual minimum cost would be £1,062, independently of seeds, plants and coal. It would be a fairly large establishment that would keep a staff of fifteen: but their cost would be greatly reduced by taking eight journeymen at 15s. per week, two foremen at 22s., two women at 12s., and three boys at 10s., and the head gardener at £90 a year.

The kitchen garden at Welbeck covers an area of thirty-two acres, but it must not be supposed that the cost is rapidly run up by the size of the kitchen garden. The same area of glass would require an infinitely larger staff to take proper care of it. The present generation of gardeners all have a desire for conservatories, and "working under glass," it is said. Well, if the owners desire glass they must also have the men to grow the plants under the conditions which such houses necessitate. Surely it must not be imagined that the kitchen and flower garden are neglected where indoor gardening is pursued. There are still plenty of good men, of long experience to be got for out-door work, ay, men who are heart and soul in those phases of gardening. What we would more readily find fault with, is that work in large gardens is departmental, and young men beginning their career in such places, very often do not get sufficient experience in the several branches to enable them to be good all-round gardeners when they come to take charge of head places. This is not the fault of the young men; and by a little judicious forethought and consideration on the part of their masters, this defect might easily be remedied.

Large gardens are looked upon as universities of floriculture, endowed and maintained by private generosity. All the same we suppose these benefactors of the profession and the community at large, derive their own share of the pleasure to be had from a garden. The larger and smaller gardens in the country districts thus serve as seminaries where the thousands of skilled gardeners are trained, who take charge of the surburban gardens of London, Birmingham and the North. A contemporary greatly doubts the skilled character of the London suburban gardener. His experience may be exceptionally unfortunate; but we are afraid that he has only picked up "wildings" or at least uncultivated and unimproved varieties. It is pretty safe to say that none of those suburban gardeners get the minimum wage of £100; probably 25s. a week would be nearer the mark. There can be little doubt that many of them get less; but we do not look upon such men as the proper kidney. There are many gardeners of talent, and who show it when circumstances are propitious, that get very indifferent remuneration for their skilled services, even in the suburbs of London; and if a number of half groom, half butler, half gardener, and others of that kidney are to be found in the suburbs, they have no right to be taken as the standard nor to be placed in the same category as the genuine and experienced gardener.

THE COLD STORAGE OF FRUIT.—The Technical Education Committee of the Kent County Council has been carrying

on experiments at Dartford in order to test the practical value of the cold storage of ripe fruits. The experiments have been personally superintended by two members of the committee, who have issued their report. Two stores were kept at temperatures of 30° and 40°, respectively till the end of last December, when this trial was discontinued. During the refrigerating process the fruit loses weight at the rate of 1·5 per cent. each week. The moisture, as it arises from the fruit, is collected by the dry air of the stores, and which is kept continually circulating; it is deposited, however, on the colder portions of the walls, and, trickling down, is carried away in the drainage. This loss of weight to the stored fruits is a great disadvantage to the system, and the object of future trials is to lessen the dessication as much as possible, but yet maintain a dry atmosphere, which is absolutely necessary to prevent the growth of mould and other fungi, which are ever ready to live upon fruit when the conditions are suitable.

The effect of a low temperature is to retard the maturation and decay of fruit, a fact that is well know to those who bring fruit from Australia and the Cape to this country. One of the principal objects of these experiments was to determine the relative cost of carrying on operations of this kind on a small scale. A gas engine was used for producing the low temperature desired, and at 3s. 6d. per 1,000 cubic ft. of gas, the daily expenses were 8s. 9d. This does not include the wages of the attendant, as the labourer who looked after the engine had only to do so at intervals, while he pursued his other duties. An oil engine would cost approximately about the same. The engine used was one of the smallest practicable, and was capable of refrigerating a much larger chamber. Moreover, it was only run for about 3½ hours each day. The same engine if kept running on an average of twelve hours a day, it could maintain a chamber 24 ft. by 24 ft. by 8ft. high. Such a store would be capable of holding 2,000 bushels of Apples, and, calculated on the basis of the recent experiments, would cost only 2s. 2d. per day. The quantity of fruit in the store would practically determine the economy or otherwise of the operations. Larger houses would require a larger engine, and the cost would practically be spread over a greater quantity of fruit.

During the experiments 4½ bushels of Apples were stored in the refrigerating chambers for 101 days, and 35½ bushels for 56 days. Some of the varieties were summer Apples, which kept sound till the end of the experiments, but had lost considerably in flavour, and were somewhat soft. The long keeping varieties were of course as sound and good in flavour as when put in. It is proposed to make experiments on soft fruits in season during the coming summer. In private establisnments where an engine is kept at work for producing and storing electricity for lighting purposes, or pumping water, a refrigerating chamber would be a useful and inexpensive adjunct to the place in keeping fruit till wanted.

Primroses were moderately plentiful on Primrose day, but the Bank Holiday crowds displayed a great variety of flowers, indicative of great differences of taste or no taste at all, and in honour of anybody or nobody, particularly the latter.

The Trumpet Daffodil, Grandis, is now in perfection, as may be seen by the beds of it in Kew Gardens. The plants are wonderfully dwarf as usual, in fact dwarfer than any other Daffodil with flowers of the same size. Even those varieties which were planted very late last autumn are now mostly past their best, so that Grandis is decidedly late for the trumpet section of the genus. It may be described as a dwarf and late Empress, though it differs from this in other respects.

Lichen and Moss upon fruit trees may be cleared off in winter by spraying with a wash consisting of 10 lbs. of caustic soda and 10 lb. of potash in 100 gallons of water.

Mr. J. Hudson, Gunnersbury House, Acton, is appointed one of the jury at the first or opening show of the Hamburg Horticultural Exhibition which opens to-day.

A Daffodil Bazaar was opened on Tuesday last at Ash Common School, Aldershot, by the Duchess of Connaught. The proceeds are to be employed for the purpose of clearing the school from debt.

Floral Cycles.—A novel competition was recently held at Devonshire Park, Eastbourne, and consisted of bicycles bedecked with flowers. Miss Evelyn Fenn obtained the first award. She had decorated her wheel with white Hyacinths until it looked like a swan.

The late W. G. Head Fund.—This has now been finally closed and the balance, after payment of medical, funeral and other accounts, has been handed to the widow, who desires to most gratefully thank all who so kindly assisted in meeting the very heavy expenses incurred during her husband's long and very painful illness.

Hawthorn is merely the old Saxon term for hedges thorn, the old name being *hagathorn* or *hägthorn*. *Haga* and *hag* may also be translated haw, the fruit of the haw. The Saxons planted numerous hedges all over the country for the purpose of impeding cavalry. There are similar words to *hagathorn* in the German, Dutch, Danish, and Swedish languages, all of which are akin.

A Scarlet Daffodil is now considered more easy of acquirement than a blue Rose, Dahlia or Chrysanthemum, or than some other unnatural curiosities which might be named. The red or scarlet in a Narcissus is found in the corona of N. poeticus, and to a larger extent in N. p. poetarum. From these it has been transferred to N. incomparabilis, N. Barrii, N. Nelsoni, and other wild types by artificial crossing; or some of them may have been picked up in the wild state. A considerable amount of orange-scarlet or orange may be found in C. J. Backhouse, Mozart Orientalis, Beauty, Gloria Mundi, and Nelsoni aurantiaca.

Cabbages and the Weather.—Writers in some of our daily contemporaries make curious statements concerning vegetables. One says that Cabbages should not be planted in the open ground before the end of April. Even in the far north Cabbages are sown in beds in the open ground, and left there all the winter, unless autumn plantations for spring and early summer use are made. Plantations are also made in January, February, or March, according to the state of the weather and the ground. The Cabbage is a hardy plant, but grows naturally in dry places. Rich, wet ground, therefore, is its enemy in winter. In the hearting stage of the cultivated forms the Cabbage would be more tender because such a condition is unnatural to the wild plant. Autumn plantations do not, however, heart in winter.

Hamburg Exhibition.—The horticultural exhibition at Hamburg promises to be the most important this year. It is being supported by the Kaiser, and many German Princes and Governments, and a great number of the people of Hamburg have offered honorary prizes, so that the more successful competitors will receive more than 100,000 marks, besides medals. Moreover, the Senate and Municipality of Hamburg propose to give 50,000 marks to the committee for honorary prizes and State medals. Would-be competitors, both native and foreign gardeners are so numerous that the committee fears there will not be space for all the exhibits promised. A few days ago an exhibit of plants arrived from Mr. W. A. Manda, South Orange, New Jersey. This group was very interesting to nurserymen as well as amateurs, because it consisted largely of new introductions. American gardeners frequently come in contact with flowery Japan, so that many new things may be expected. Amongst them are Japanese Lilies, Paeonies, and Maples, which will be grown on and flowered at Hamburg. New American Roses, Cannas, carnivorous plants and other subjects will be shown by Mr. W. A. Manda, who will keep exhibiting these till the autumn.

A crop of Cabbages removes 12·5 lbs. of sulphur, and 23 5 lbs. of Phosphorus, per acre of land.

The green Narcissus, that travesty or burlesque upon nature, is going its rounds again fishing for admirers of its very doubtful beauty. The double form of N. poeticus is the variety most often operated upon by the addition of a green dye to its unimprovable white.

The Wilts Horticultural Society recently held a meeting in the Council Chamber, Salisbury, at which it was resolved that no show should be held this year. They had been obliged to draw upon their reserve fund last year, and it would be difficult to maintain their subscription list or to hold a good show with financial success this year, owing to the numerous attractions there would be during the next few months.

Botany and Bicycles.—On the face of it there does not seem to be much connection between the two; but the boom in cycles threatens the extinction of the plants from which the rubber is obtained for making the pneumatic tyres. Cultivators are so reckless in their haste to get rich that they cut down the trees in order to drain them of the last drop of juice they contain. There are more than a dozen kinds of trees from which the juice is extracted for commercial purposes. Landolphia, a genus comprising some 16 species, natives of tropical and sub-tropical South Africa and Madagascar, is now being looked upon as a source of supply. If bicycling ceases to be fashionable in the course of a few years, the plantations of rubber trees will have time to recuperate.

Bad Planting is not infrequently the cause of non-success in the cultivation of hardy fruits. An instance of this comes to our notice where an owner of some 13 acres of orchard found that his trees, which had cost him several shillings each to plant and protect moved very slowly, some of them dying. It was found that the holes for the trees had been made too narrow and too deep, and had ultimately proved like so many drainage places, the roots of course perishing. If instead of digging such holes as these, they had been made as wide again and not so deep, success would have followed. Again many people do not seem to know that the soil that has long supported an old fruit tree is not fit to receive a young one. A proof of this may often be seen in cases where young trees have been introduced into an orchard, as they have generally failed to grow, Where young trees are planted in orchards to fill up gaps, the situation should be properly prepared. A quantity of good loam, with a sprinkling of crushed bones for the young trees to start in, would make all the difference. If this practice were followed we should see less of the stunted young standards in orchards.

The extermination of Orchids.—Collectors find their occupation getting more and more difficult and unremunerative every year in the United States of Colombia The plants are becoming scarce owing to the drain upon them, and more particularly owing to the coffee region corresponding to the Orchid district, which lies between 2,000 ft and 7,000 ft. above sea level. Below and above these elevations very few useful Orchids are found. The cost of transporting Cattleya Trianaei and C. gigas has doubled within the last four or five years, owing to the localities where they grow being more retired and the difficulty of getting beasts of burden, which are required to move the Coffee crops. In the department of Antioquia, the Orchids are getting scarcer every day. Here occur such as Cattleya gigas, C. dowiana aurea (in limited quantity), C. Skinneri, Oncidium Papilio, Houlletias, Acinetas, Pescatoreas, Peristerias, Anguloas and allied genera. Miltonia vexillaria is plentiful in some districts owing to the lull in their popularity and the conseqnent limited demand for fresh importations. Odontoglossum crispum is getting very scarce in the Pacho district of Cundinamarca. Collectors stay in a place for three or four years, and the owners of the forests where they grow, imagining there is a fortune in them, prohibit their being collected except under conditions which they impose, and which are often excessive. Cattleya choçoensis is still fairly plentiful, but the area in which it is found is limited. C, Mendelii is disappearing; and though C. Schroderae is fairly plentiful, the plants become costly in transportation.

Wild Birds' Protection Act.—A gamekeeper when gathering Peewit's or other birds' eggs according to instructions from the proprietor is exempt from the above act by virtue of the clause which exempts occupiers of land and their licensees from the operation of the act. The Secretary of State may, however, on the application of the County Council of any county, prohibit the destruction of wild birds' eggs within that county.

The Horncastle and District Chrysanthemum Society has commenced its second year's operations under most favourable auspices. The first show held in November last was a huge success, and all the officers and members of the committee have been unanimously re-elected. Next autumn's show is to be held in the Corn Exchange, Horncastle, on November 16th and 17th. It is satisfactory to note that the value of the prizes has been materially increased.

Cape Fruit.—The Afrikander has entered the lists against the American fruit exporter, and the trade between British markets and the Cape is steadily growing. The months of January and February saw several tons of Peaches, Nectarines, and Pears from the Stellenbosch district. This was followed by extensive shipments of Grapes from the Paarl, Wynberg, and Constantia districts, the average shipments per week for the last three months amounting to two tons.

Manchester Whitsuntide Exhibition.—This annual show is to be held from the 4th to the 10th June, from Friday of one week to Thursday of the next, inclusive, that is, seven days. Orchids are always a strong feature of the Whitsuntide show held under the auspices of the Royal Botanical and Horticultural Society of Manchester, in the Gardens, Old Trafford. On this occasion prizes are offered for the best miscellaneous collection of Orchids in bloom, in one class for amateurs, and in another for nurserymen. The prizes in the amateurs' class are good, and should draw forth a keen competition. In other classes there are good prizes offered for the best collection of Cattleyas and Laelias, the best collection of Cypripediums, and for ten specimen Orchids in bloom. These specimens must not be made up. Groups of miscellaneous plants, open in one case to amateurs and in another to nurserymen, should also bring plenty of competition.

National Chrysanthemum Society.—Notwithstanding the fact that this society carried out preparations on an extensive scale to celebrate its own Jubilee last year, it has not forgotten the Queen's Diamond Jubilee. In common with various other societies, it offers prizes in three special classes for Chrysanthemums and fruit, independently of the usual national competition of Chrysanthemum and horticultural societies, and the Holmes Memorial Challenge Cups. The first of these special classes is for thirty-six blooms of Chrysanthemums, twenty-four Japanese, and twelve incurved, all novelties or introduced during 1895, 1896, and 1897. Instead of being shown separately, the twelve incurved blooms will have to occupy the front row of the stands. This competition is open to the trade only and should serve to extend the centres of interest at the great autumn competition on the 9th, 10th, and 11th of November next. The liveliest rivalry amongst cut blooms is generally confined to gardeners. The Turner Memorial Challenge Cup is for thirty-six blooms of white, yellow, and crimson Japanese Chrysanthemums in twelve varieties, three blooms of each to be shown on ordinary boards, with 6 in. of clear stem associated with foliage not necessarily belonging to the same varieties as shown. This is open to all comers, as well as the class for twenty-four dishes of Apples. Nine of the varieties must have been in cultivation in Britain at the time of the accession of the Queen in 1837. The remaining fifteen varieties must consist of those introduced during the past thirty years. Apparently, to ensure competition in such an unusual class, the fruit shown need not have been grown by the exhibitors, so long as it was grown in the United Kingdom. Other assistance given consists of a list of thirty varieties of Apples which were in cultivation at the time of the accession of the Queen. All are so common that little difficulty should be experienced in selecting nine of them to meet the requirements of the schedule.

Cromwell and The Lilac.—In the inventory of the gardens of the Palace of Nonsuch, which Cromwell caused to be taken, the following item occurs:—"Six Lilackes, trees which have no fruit but a pleasant smell."

West of England Chrysanthemum Society.—The annual exhibition of this strong society is to take place on the 2nd and 3rd of November next. Prizes are offered for competition in eighty-five classes; and to the amount of £23 in the class for forty-eight Japanese blooms, in not less than twenty-four varieties, nor more than two of any one variety.

Easter Flower Trade.—A more than usually motley assembly were awaiting the opening of the Flower Market at Covent Garden on the Saturday before Easter. Groups of Curates, and members of various sisterhoods and brotherhoods, including the costers, were in strong force. The supply was equal to the demand, however, and the returns, as compared with those of last year, showed a marked expansion. Southern France was a heavy contributor of Roses and Lilac. From the Scilly Isles came tons of Daffodils and Jonquils, so that there was no lack.

ROSE DAY.

I saw in some paper lately a list of all the proposals which had been made to commemorate the Queen's Diamond Jubilee. They ran up into the hundreds, and were full of fun, fancy and folly, though the fun was usually unconscious. Notwithstanding the portentious number of suggestions, I am going to make another. It is a simple and sentimental proposal for the decoration of our persons on June 22nd. I think the British floral emblem, the Rose, should be worn by everybody on the Celebration Day. The Rose crop will be in all its glory at the end of June, and no one need be without one who has a penny to spend. I further suggest that here from June 22nd shall be always known as "Rose Day," in honour of England and good Queen Victoria. (N.B. All pirates of this idea are hereby warned that it is the sole property of "Alter Ego.")

Yes! I think "Rose Day" ought to come, as the Poet Laureate says in his best prose work. "The Garden that I Love" (p. 96): "The Rose is the typical flower all the world over, and the mind cannot get away from its representative personality. Withal, in most gardens, the Rose enjoys but a brief reign, much briefer than that of many another flower; but so long as it blooms in profusion, it throws into the shade all other pretenders" Just so. "Rose Day" would throw all other celebrations days into shade. The Rose is a Royal flower and should be used on such a truly Royal and national occasion this year, and for all times.—*Alter Ego.*

RHODODENDRON CAMPYLOCARPUM.

The other week a truss of this species was sent us by Mr. J. Mayne, gardener to the Hon. Mark Rolle, Bicton, Devon, who has flowered it in a greenhouse. It is a native of the Sikkim Himalayas, at an elevation extending from 11,000 ft. to 14,000 ft., and is consequently very nearly hardy in this country. At first sight it very strongly resembles R. Thomsoni, differing most obviously in the colour of the flowers. Those of the latter are of a glowing crimson-red, while R. campylocarpum has bell-shaped flowers of a delicate and charming sulphur-yellow, with brownish-red anthers. The leaves are remarkably similar in both cases. The stalked, reddish glands of the petioles, pedicels, calyx, and ovaries, and the spherical buds, are characters of some botanical value, however, which separate it from R. Thomsoni. There is a full page, coloured illustration of it in *Sikkim Rhododendrons t. 300*, by Dr., now Sir Joseph Hooker, who says the flowers exhale a honeyed flavour, and a resinous odour from the stalked glands above mentioned. In its native habitats it forms a bush about 6 ft. high, of a cheerful green hue; and Sir Joseph Hooker regards it as one of the most charming of the Sikkim Rhododendrons, as compared with its usually very gaudy congeners. He, in fact, speaks of it in very enthusiastic terms. The height above stated is very dwarf for a Himalayan Rhododendron until very much more elevated regions are reached. During ordinarily severe winters in this country, R. Thomsoni will live out of doors, and, probably, R. campylocarpum would prove equally hardy. It is next to impossible to distinguish the two except when in bloom or fruit, the seed vessels of the latter being curved as the name implies.

ORCHID NOTES & GLEANINGS.

By The Editor.

Cattleya Mossiae.—A consignment of this species from a new district is now flowering for the first time in the nursery of Mr. P. McArthur, 4, Maida Vale, London, W. The usual season for C. Mossiae is May and June; but the plants of this importation made a fine display in April. Many of the varieties are notable for the clearness of their colours, many of them having a broad white margin to the lip, the disc being brightly and richly marbled with violet-purple. The sepals and petals are often pale, but what determines the light colour of the flowers is the white ground of the lip. A certain amount of interest attaches to this importation, owing to the fact that it was sent home by the collector as a blue Cattleya. A blue-purple variety turned up amongst the importation, and secured a buyer at £100, while a similar amount has been offered for the next plant of the same or similar colour that may turn up The disappearance of crimson and much of the orange from the lip serves to bring out the blue or violet tints to advantage.

Odontoglossum Pittiae.—On p. 326 of the present volume of The Gardening World we noted a a valuable Odontoglot which was sold at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, and secured by H. T. Pitt, Esq., Rosslyn, Stamford Hill, for 105 gs. On the page quoted above, we gave a full description of this natural hybrid, and in the following week, p. 343, we gave some more particulars respecting it under the name of Odontoglossum Pittiae. Now we are informed from reliable sources that the plant exhibited by Mr. H. Ballantine, gardener to Baron Schroder, at the meeting of the Royal Horticultural Society on the 13th ult., under the name of O. wilckeanum Queen Empress was a piece of the same plant. It was a larger piece and growing more vigorously, with larger flowers, so that it looked a slightly different variety; and in the absence of specimens for comparison at the time the new comer was allowed to pass. Now, seeing that the name O. Pittiae was published as long ago as the 23rd and 30th of January last, it should have the right of priority, and be regarded as the name, and the other dropped.

ROYAL GARDENERS' ORPHAN FUND.

The Royal Gardeners' Orphan Fund was established in 1837, the Jubilee Year of Her Majesty's Reign, and the gardeners hope that this the Diamond Jubilee year may be a fitting occasion for them again to appeal to the public for a liberal contribution towards the fund. The objects of the society speak for themselves, namely the provision for the fatherless children of gardeners, and bearing in mind the pleasures we derive from the results of their labours it is perhaps not too much to ask the public to favourably consider this appeal.

The principle on which the Charity is conducted is one which strongly recommends itself to the benevolent. The management expenses incurred are comparatively nominal, and the granting of allowances to children in their homes, thereby assisting the mother to maintain her family, is one of the best that can be adopted. There are at present seventy children assisted in this way by an allowance of 5s. per week to the widow.

I sincerely trust that a generous response will be made to the appeal which the society is now making, and that a sufficient sum will be raised in this the Diamond Jubilee year to form a permanent endowment for the Institution.

Should you not have been able to attend the Festival on the 30th April perhaps you will kindly forward to me any donation or subscription you may desire to give, so that it may be duly announced. —*J. Whittaker Ellis, Chairman, Buccleuch House, Richmond, Surrey.*

FRUIT PROSPECTS, &c., IN SCOTLAND.

It is pleasing to notice so many good reports of fruit crops as have appeared of late. Such is somewhat unusual in low-lying districts, at least, after such a sunless autumn as we had in the north last year. The rains for weeks were almost continuous. Apples, all small fruits, Plums and Cherries are, as usual here, not promising; but Pears are not so good, except in very favoured positions, and only certain varieties are well budded. We learn that in many parts Apricots have suffered severely from frost (even with special coverings), but damp weather, succeded by severe frost, was beyond the resisting powers of this popular fruit. The longer we live the more strongly we are convinced of the untoward practice of attempting to maintain collections of fruit instead of selections suitable to the locality; and we often advise young planters of orchards to acquire as much knowledge as they can of the good cropping fruits of the district before they start orchard-making or fruit-tree-culture under any form.

Soil, latitude, and altitude are matters of much moment. When one sees great success in northern parts with certain fruits which do badly hundreds of miles further south, one may fairly state that *soil* has as much to do with success as exposure and latitude in bearing good crops of the best quality of certain fruits—Apples especially. To have an abundant supply of the latter every year from early autumn till the summer months, without fail, is a matter of no mean importance. There is no fruit which we can grow which supplies so many purposes for dietetic necessaries as the Apple, and reports given on Apple orchards indicate much neglect. The best Americans never meet the wants of the culinary department like those we are accustomed to have every year in full crops, which may be had in most districts when selections are skilfully made and the roots of the trees well cared for.

In orchards, trees are too often allowed to become mere thickets, from which sun and air are too much excluded; while severe pruning is too often seen in northern gardens and orchards. In others there is the extreme "let-alone" practice of trees crowded and one-sided, while few believe in severe root-pruning—of strong roots—especially when the practice is on aged trees deep in the soil; yet it has often been proved that complete success in fruit culture has been achieved by lifting and root pruning old trees, doing the work piece-meal. I have done it in this fashion all the year through, especially on gross trees during May and June. And even by experiments of the most severe nature we have trees which have borne crops of capital fruit—and now being sent in for culinary use April 21st—for fourteen years, with short growths, large green foliage, and all the fruits exposed to sun: the keeping qualities are all we could wish.

Many object to dwarf trees—I would have no others where vegetables are grown—but I have often observed that after heavy gales orchards are almost denuded of fruits, whilst the dwarf root-pruned trees have carried their heavy crops uninjured. These dwarfs—say 7 ft. to 9 ft. high—with a mass of fibrous roots can be assisted with every advantage with top dressings of good decayed manure, even old trees planted about the end of last century, quite hollow in their trunks and which were filled up some years ago with cement, have recuperated very much by the removal of down-growing roots by the use of lime rubbish made firm underneath them, and by finishing with good farmyard manure covered with soil to retain its virtues, and for appearance sake. Reverting to severe root pruning, we have often had to do this much against our wishes; but owing to the presence of roads and pathways there was no other alternative but to cut hard in. A number of Morello Cherries now clustered with fruit buds all over the wall space to within 9 in. of the ground were cut in during the last dozen years three times to within 1½ ft. of the trunk. They are full of natural spurs which are often thinned, and the only fault is we cannot always find time to thin the fruits as much as they should be.—*M. Temple, Carron, N.B.*

VICTORIA AND PARADISE NURSERIES.

One day the other week we had the pleasure of passing through the various departments of the establishment of Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway. Fine foliaged plants and Orchids are the leading features of the place; but other flowering plants are not neglected, while some of them receive special attention.

Fine Foliaged Plants.

Licuala grandis still remains a popular fan-leaved Palm of useful size for decorative purposes. Cocos weddeliana is even better known, and may be seen here of all sizes. A beautiful companion plant is Geonoma gracilis, but it does not withstand the fatigue of decorative work as well as the previous species. The arching, pinnate leaves of Ptychoraphis augusta are very graceful. Equally so are those of Calamus palambaricus, but in a different way, for the finger-like pinnae, of young plants at least, radiate like an open hand. Bambusa argenteo-striata is a dwarf species, having its leaves striped with silvery lines or wholly white.

In the same house as the above is a fine collection of Aralias, represented by many species. A. Chabrieri maintains its position as a beautiful stove subject. A. leptophylla is graceful but less well known; and A. Regina is akin to it but more upright in habit. A. Veitchi, A. V. gracillima, and A. elegantissima,, are useful and too well known to need description. Very singular are the long, finger-like leaflets of A. osyana, a plant that we seldom see in collections. All are in capital order, and the most popular are grown in the largest quantities.

Dracaenas, but particularly the narrow-leaved forms are also well cared for. A fine batch of hybrid seedlings was raised some years ago, and Miss Glendinning has the narrowest leaves of any, being exceedingly useful for table work. The leaves are linear and olive-green, with a narrow red margin, or the young leaves may be wholly red. A. Laing has slightly broader leaves, of similar colour. Those of Princess May are the broadest of the three, but all are first-class subjects for table decoration. D. sanderiana is also grown here. More than one house is occupied with Crotons in variety and of all sizes, one batch being about ready for table decoration. Useful in their way are Cyperus laxus variegatus and Agapanthus umbellatus variegatus.

The large Palm house is crowded to over-flowing with a great variety of Palms for decorative work of all kinds, of which Messrs. Williams do an extensive business. Here may be seen tall plants of Kentias, Arecas, Latanias, Phoenix, Seaforthias, and all such as are suitable for this kind of work. The dwarf Bambusa Fortunei aurea is found very useful, and is urged into growth by being placed in the Palm house. Many flowering plants of Anthurium scherzerianum serve to keep the side benches gay, stood about amongst the smaller Palms. The large conservatory abutting against the Highgate Road contains numerous tall Tree Ferns and other decorative subjects.

An interesting group of Orchids might be mentioned here, being solely grown for the sake of their beautiful foliage. Anoectochilus setaceus has dark olive leaves with red veins. Other species are A. sanderianus, A. intermedius and A. Petola, the golden tracery of the later being the charm of all who see it. Microstylis Scottii has metallic-brown leaves. Those of Liparis are also brown, but variegated with gray.

Orchids.

The cool Orchid house contains a great variety of Odontoglossums in bloom at the present time. There are some finely spotted varieties of O. cirrhosum. Very beautiful also is O. naevium majus, like a miniature form of the latter. Many of the pseudobulbs of O. crispum bear two spikes of bloom each. There are numerous varieties of it as there are of O. triumphans, O. andersonianum, O. Pescatorei, and O. ruckerianum. A handsomely blotched form of the latter is O.r. Edithae. Other sorts that lend variety and interest to the collection are O. baphicanthum, O. prionopetalum, with richly blotched flowers, O. Coradinei and a beautiful and richly coloured variety of O. excellens. The bright, orange-scarlet flowers of Ada aurantiaca are very conspicuous and attractive. A rare species is Oncidium Phalaenopsis, having its sepals and petals blotched and marbled with purple on a white ground. The lip is lilac on a white ground, with a dark purple blotch at the base.

A warmer house, but only having an intermediate temperature, contains the beautiful Eulophiella Elizabethae in fine form. The fragrant flowers are coloured like Apple blossom in the half-opened stages. Pescatorea Lehmanni, P. Klabochorum, P. Roezlii, and P. R. rosea are all highly interesting Orchids, generally considered difficult to cultivate, but they grow here like weeds. The allied Bolleas behave in the same way. Cypripediums are grown in quantity and variety in two or three of the honses. We noted C. rothschildianum in fine form. The Selenipedium group is well represented. Utricularia montana always does well here, and though not an Orchid is always associated with them.

One of the two Orchid houses abutting on the main walk contains a number of Dendrobinms in bloom. A large-flowered and handsome form is that named D. thyrsiflorum Schroderae, the petals and lip of which are of unusual size, and the latter spread wide open. The finely fringed D. devonianum and D. wardianum are indispensable in good collections. We noted also a fine form of D. nobile. Some pieces of Cypripedium chamberlainianum bear large and highly-coloured flowers. Vanda suavis, hybrids of Calanthe, and other subjects extend the variety of plants in bloom.

The other house in this part of the nnrsery is rendered gay with Cymbidium lowianum, C. devonianum, Laelia cinnabarina, Sophronites grandiflora the pretty Cypripedium Exul, and Lycaste Schillerlana. The olive-brown sepals of the latter make a beautiful contrast with the white petals and lip. The highly fragrant Cattleya citrina has flowered well in pans suspended near the glass. Some flowers of Cattleya Schroderae are notable for the coppery-orange blotch in the throat. C. lawrenceana is also in fine form, and amongst the specimens of C. Mendelii are some with a very dark lip.

Clivias.

We were able to compare Clivia miniata superba, which was considered a superb variety fifteen years ago, with the most highly evolved forms of to-day, and the difference is very great. The old variety is useful nevertheless, for decorative work. Baroness Schroder is a soft orange flower with a long, white and yellow throat. Surprise, on the other hand, is a wide open flower, of a deep orange-scarlet. Another very choice form is Prince of Orange with dark and long, funnel-shaped flowers. Another richly coloured variety is Queen Victoria, with very large and finely formed flowers. Meteor is one of the brightest, and otherwise notable for its short bell-shaped flowers. Marie Reimer is also highly esteemed for its rich colouring. Close by this house is another, filled with a collection of tree Carnations being staked when we saw them.

Amaryllis.

We were rather late to see the main bulk of the houseful of Amaryllis at their best, but a large number of seedlings and late varieties were still in prime condition. Ladas is a wide open flower of a deep red, with a short green star. Very bright is Holloway Gem, being glowing scarlet, with a white centre and white rays to the tips of the segments. A widely bell-shaped flower is Lady Waldie Griffith, of a clear light scarlet, with a soft green base, and altogether very pretty. An unnamed seedling of a light scarlet, is netted and rayed with white.

One of the finest of the dark forms is Gerald Balfour, the flowers of which are of a uniform crimson-scarlet. One of the prettiest and most chaste varieties, is that named Butterfly. The segments are very broad and softly mottled with pale scarlet on a creamy white ground. This combination is rare amongst Amaryllis. Prince Albert Victor may be compared to Gerald Balfour in the intensity of its crimson flowers, of which there were five on a scape. The flowers of Mrs. Burroughes are of grand substance, and crimson, with white edges and rays. Another bold and handsome self is Grandidens, with wide open and fiery-crimson flowers, having short rays. Another seedling is light scarlet with white rays to the tip. Ackermannii pulcherrima is one of the darkest of the selfs, having flowers of a glowing fiery crimson, deepening to maroon in the throat, and green at the base. The above are only a very few of the numerous named varieties occupying a span-roofed house.

THE ORCHID HOUSES.

Catasetums.—To the lovers of the curious rather than the beautiful we would recommend the growth of the species of this remarkable genus.

Coming as they do from Mexico, the Cattleya

house would be the best place for them. Most of them have drooping spikes so that basket culture is the best for them. C. christyanum, however, has erect spikes and does well in pots.

The compost should consist of the best peat two parts, and one of moss; to this may be added bits of finely broken crocks to keep it sweet and porous. Water must be afforded sparingly, even when in active growth, and when at rest, only just sufficient to keep them from shrivelling.

GONGORA.—This is a very much neglected genus generally speaking, for it can only be found in what may be termed representative collections. Like the Catasetums they should be acommodated with a position at the coolest end of the Cattleya house, but here the similarity ceases, for they require a very liberal supply of moisture at the root, together with a syringing overhead when damping down during the summer months; but when the growth is complete, gradually reduce the supply until it is withheld altogether. The best kinds are, we think, G. maculata, G. maculata alba, G. tricolor, and G. odoratissima.

Now that we are discussing this peculiar class of plants, a few words in favour of Cycnoches would not be amiss. Here we have another member of the curious family from tropical America, requiring similar treatment to the preceding. A few more degrees of heat is preferable so that the coolest end of the stove should be set apart for them when growing, but when at rest a much cooler and drier position is best. Rough fibrous peat and good drainage they must have to do them well.

CORYANTHES.—Here we have another of the quaint kinds, but as the flowers last but a few days in perfection they have not found much favour amongst amateurs. They delight in plenty of light and air. A position near the door or ventilator, where they can get a free circulation of air about them each time one goes in and out of the house, suits them; without this they rarely flower satisfactorily. The compost and treatment in other particulars should be the same as for the others mentioned above.

GENERAL WORK.—Particular care must now be given to shading, watering, and airing in all departments. Most of our watering is done with the syringe. We find that the sphagnum grows much more kindly by this system, but care must be exercised in doing it or some of the young growths might damp off if any quantity of water was to lodge in the centre of them; especially would this be the case with Cattleyas, but we have never lost a growth amongst Odontoglossums through syringing overhead during spring and summer.—*C.*

FRUIT UNDER GLASS.

GRAPE THINNING.—As the rush of Grape thinning takes place within the next fortnight or so it may be well to touch slightly upon the subject. At such a time the whole strength is usually brought to bear upon the task, for every day is of importance. Good Grape thinners are made and not born; in other words it is impossible for an inexperienced hand to thin a bunch properly. Ragged shoulders and seedless berries when the fruit is ripe indicate the work of the green hand. Such a one should therefore, be carefully looked after and guided where he is apt to go astray. The first thing to do is to cut out all the small and inside berries which would not have a chance to swell. Then the larger outside ones must be carefully thinned, with a close eye kept upon the ultimate shape of the bunch. A mistake that is often made is the cutting away of the berries on the under side of the shoulders. These should only be thinned in the same way as the rest of the bunch, the shoulders themselves being supported with light straws of raffia as soon as the berries reach any size. Pricking the berries with the point of the scissors must be vigilantly guarded against, and in order to entirely steer clear of this evil a start must be made with the bunches before the berries get too thick and crowded. All the workmen should wear caps, since if the bunches are rubbed by the bare heads some of the berries are almost sure to rust.

EARLY PEACHES AND NECTARINES.—Directly the stoning of the fruit is completed the final thinning should be given. An allowance has to be made for falls during stoning, although healthy well-cared-for trees do not drop many fruits, and thus it is not possible to do all the thinning until this risk is over. It will now be possible to give a rise of several degrees of temperature, both by night and day, without danger. Ply the syringe well morning and afternoon, and do not fail to give the borders copious supplies of water. Sufficient farm-yard manure may be used to colour the water a light brown. If well looked after the fruits should start vigorously on their second swelling, and should finish successfully. —*A. S. G.*

THE FLOWER GARDEN.

WITH the advent of May we enter upon one of the busiest times of the year. All vegetable life is striving to make up for the inactivity of winter and routine work becomes of the greatest consequence. Added to this there is the near approach of the summer bedding season, and preparations in this direction will not suffer delay.

THE LAWNS in themselves constitute no small share of the work, for the grass is growing with great rapidity, and the mowing machine will thus have but little rest. The outlying portions of the ground over which the machine has to operate will not give so much trouble, but even here the grass should not be allowed to get too long or the strain upon both machine and horse will be much too great. Tennis, and cricket grounds, and bowling greens must receive very close attention. Here the sward must be close and tough if it is to play properly. Weeds of all kinds, more especially Plantains, must be rooted out as soon as seen and the holes filled up with fresh soil, a few grass seeds being sprinkled on the top.

TULIPS.—Not only are these very gay in their natural position in the garden but they look exceedingly well when cut and placed in water. They last a long time too under such conditions; almost as long in fact as they would if left on the plants. The half-opened buds are the best for cutting, as they expand readily enough in water. Care must be exercised in the cutting, however. Some of the upper leaves may be removed with the flower stalk, but two leaves must be left attached to the bulb which would otherwise be considerably weakened by the removal of the greater part of its foliage.

CHIONODOXAS.—The various forms of these seed freely, and the seed germinates very quickly. This may be easily verified by observing how the seedlings come up for some distance around the parent bulbs if left undisturbed. The seed vessels are now fit to gather, and may, therefore, be collected at once, and taken to a dry place to ripen. The seed may then be sown at once in shallow drills and out-of-doors. In this respect it is well to imitate nature, which sows the seeds as soon as they are ripe.

HERBACEOUS BORDER.—Here the hoe must be kept busily at work whenever possible. Just as spring weather suits the cultivated plants so also does it favour the growth of weeds. By having the surface soil constantly stirred, the growth of weeds is not only kept down, but a more perfect aeration of the soil is obtained, which, where the latter is inclined to be heavy, is of inestimable value.

POLYANTHUSES.—These are old-fashioned flowers but they are not the less beautiful on that account. If given a fair amount of attention they can be depended upon to produce a grand show in the spring months. Their value in spring bedding plans is, accordingly, immense; and whether allotted beds to themselves, or in conjunction with other taller subjects such as Tulips, or dotted here and there in masses in the front ranks of the mixed border, they are equally a success. The quaint forms of Jack-in-the-Green, and Hose-in-Hose varieties have also a charm of their own that must not be overlooked. In addition to their propagation by division of the roots, a packet or two of seed of a good strain should be sown each year. Some cultivators prefer to sow in a gentle heat in February and March, afterwards transferring the plants to the open. The practice of sowing out of doors may likewise be recommended. Choose a shady spot whereon to make the seed bed, for the plants like to be sheltered from the fierce rays of the sun throughout the summer. Any time from the commencement of the present month till the end of July will answer, but May is the most favourable month.

CALCEOLARIAS.—If necessary, a start can be made with the summer bedding by getting out some of the Calceolarias. The under-glass room thus obtained may be of considerable value for other things. The plan of bedding out the Calceolarias thus early is only possible when they are to be planted in masses in such a way that they can be easily protected should occasion require it. A few long supple sticks may be bent down over the plants so as to form hoops, and over these mats can be quickly and easily thrown if frost threatens. Where the plants have not had a shift since the putting in of the cuttings in the autumn they are getting perilously thick, and the thinning out is much needed.—*A. S. G.*

Gleanings from the World of Science.

THE undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on the 13th ult..

Mushrooms Raised from Spores.—With reference to this subject, the following communication was received from Dr. D. H. Scott:—"Mr. Massee, of Kew, has referred me to what seems to be a thoroughly successful solution of the problem, how to raise Mushrooms from spores. Two French authors, Costantin and Matrachot, have raised fine varieties true from spores, carrying on their cultures in sterilised food solutions, and subsequently on sterilised manure. The whole development is said to take from six to seven months."—("Comptes Rendus," vols. 117 and 118, 1893-4.)

Wireworms, Cure for.—With reference to this, discussed at the last meeting, Mr. Masters remarked that Mustard as powder, or dug in green, had proved to be effective in destroying this pest.

Daffodil with Frilled Corona.—Dr. Masters exhibited a blossom having this peculiarity, which occurs also on Cyclamens, Primroses, and a variety of Chrysanthemum. The structure of the fibro-vascular cords is peculiar in the Daffodil in having its elements reversed in position from those of the perianth itself. It was received from Mr. Dick, of the firm of Messrs. Cooper, Taber & Co.

Anemone fulgens.—He also showed specimens of this flower from the Riviera, and also the Greek form with rounded sepals. Several of the former were becoming double just as is the case in the South of France. Dr. Masters observed that the wild Anemone, A. nemorosa, had become double in his garden after some years' growth. Mr. Henslow added that the same had occurred with him; specimens originally single, received ten years ago from woods in Wiltshire, were now semi-double.

Larvae of Bibio..—Mr. McLachlan observed that an error occurred in the statement about propagating soil containing the larvae of daddy-longlegs, in the report of the meeting on March 9th. It should have been that of a species of Bibio.

Tulip Leaves Diseased.—Mr. Thos. Wannock, of Polegate, Sussex, sent specimens of leaves showing discolouration. They were forwarded to Kew for examination.

Cineraria cruenta.—Mr. Herrin, of Dropmore, sent specimens of the original form of this plant exhibiting different shades of colour, as well as a cross between it and the garden form. The latter was of a deep crimson tint.

Daffodils synanthic.—Rev. C. W. Dod sent two specimens, each consisting of two flowers, of which the stalks were fused for the entire length from base to flower; they were the var. Empress. He observes that in one case "the union was by a superficial membrane only; but in the other the combination was complete, the joint scape being hollow at the base, without any visible joining." [Daffodil Empress behaved in the same way with us in a flower pot. The perianth consisted of five plus five segments, and the stamens five plus five in number. The union was complete, and the combined flower of fine form. ED.]

Earthnuts.—Mr. Wilks brought specimens of this Umbellifer, which is common in the woods and hedges and open hills about Croydon, the tubers being much eaten by children in that neighbourhood. He remarked that two, of the ages two and ten, had lately died, apparently poisoned by eating the leaves of some wild plant, but its nature could not be discovered. [The doctor's report on the case was that the two children died suffering from acute enteritis, probably caused through eating the young shoots of Privet, a leaf of which was found in the stomach of the younger, surrounded by inflammation. We have frequently eaten the tuberous rootstock of Conopodium denudatum, in common with other schoolboys, under the name of "Arnuts." The younger and firmer ones are the most toothsome. ED.]

HINTS FOR AMATEURS.

WHERE what is known as "spring bedding" has been indulged in, the beds in the flower garden are now very gay and bright. The earlier Tulips such as Keizer's Kroon, Cottage Maid, Artus, Standard Royal, Prince of Orange, and the Duc Van Thol and Pottebakker varieties have been making a brave display, and have resisted the stress of weather wonderfully well on the whole. Hyacinths, too, with their stately spikes of variously coloured flowers have been loading the air with their delicious fragrance and filling the eye with their dignified beauty. Our old friend the Wallflower must not be forgotten, for its rich and varied shades of orange-yellow, and ruddy brown are a host in themselves. Besides, there is the delightful perfume of the flowers to be reckoned with, and this always seems most powerful in the first hours of the morning and at eventide. As "Clare" says:

"The single Wallflower hath a luscious smell—
Old-fashioned flowers which housewives love so well."

Old-fashioned the Wallflower may be with regard to the length of time during which it has been an honoured occupant of our gardens, but not old-fashioned where the term implies out of fashion. The owners of cottage gardens are very conservative, and thus do not easily lose sight of an old favourite. Thus it would be difficult to find a cottage garden of the old stamp that did not contain a few Wallflowers, which, however, may not be treated so well as they might be. On the other hand the larger gardens usually hold considerable numbers, for in the Wallflower we have both the brilliant colour and delicious fragrance, and both are lavishly produced. The utility of the plant for bedding purposes is recognised, although not to the extent that it might be.

"Moir," the "Delta" of *Blackwood's* has thus compared it to other well-known and favourite flowers:—

"Rich is the Pink, the Lily gay;
The Rose is summer's guest;
Bland are thy charms when these decay,—
Of flowers first, last, and best."

To some the comparison may appear extravagant, but there is certainly a good deal to be said for the Wallflower, and although we may not be able to endorse "Delta's," words when he says "To beauty give the flaunting Rose," we think few will quarrel with the immediately succeeding statement that "The Wallflower is sublime." Planted in masses of one colour in small or medium-sized beds of various shapes, they are very effective; and scarcely less so when seen in long lines in the border. This, by the way, is a very favourite method of disposing them, and we will not attempt at the present to quarrel with it.

Assiduous cultivation and careful selection and propagation of desirable types have done much to improve the Wallflower, which naturally is much inclined to vary. In thus directing Nature into various paths, florists have had a congenial and a moderately easy task. There is now a good deal of difference in the habits of the plants as well as the colour of the flowers. The double-flowered section alone has a good many admirers, but we must confess to a sneaking regard for the single forms as being less heavy, and quite as effective in the mass. Another point that must not be lost sight of is the difference in the flowering seasons of the several varieties. Sutton's Earliest of All, for instance, well justifies its title. The plant runs to about 12 in. in height. and by sowing in May it may be had in flower by the end of September. If the winter proves a mild one, flowers are produced continuously; but if the frost applies the closure, this would naturally not be expected. Anyway, a little March sun and a few showers will soon start them going again. Earliest of All thus steals a march on the old but useful Harbinger, but the flowers are yellow instead of brown.

Parisian Early is also in evidence at an early season. It commences to bloom in December, unless the winter has set in by that time, when it lies low until frost has passed. The flowers are somewhat variable, passing from yellow to light brown.

Veitch's Dwarf Dark Red is a gem of its colour. The plants are naturally dwarf and bushy and very free-flowering. In masses, whether in beds by themselves or introduced in clumps amongst taller varieties of lighter hue, they look very rich and effective.

Sutton's Dwarf Bedder is one of the dwarfest, for it usually runs to about 6 in. in height. The flowers are brilliant yellow, and the plants are marvels of symmetry. This is a very suitable variety with which to fill small beds, and it may also be utilised as edging material for larger beds. We have employed it with the best effect, however, in the form of panels let in, as it were, amongst other sorts. There is also available a brown form that is the exact counterpart of this with regard to size. Both are well worthy attention, and we can confidently recommend them as being certain to give satisfaction. The great point, as with all Wallflowers, is to sow early enough to give the plants a long growing season and allow the lower part of the stems to become well hardened and matured. We will take care to give a gentle reminder in the columns of "Hints" when the sowing season arrives.

We have already stated our preference for the single flowered varieties as against the double ones, but the latter must not be ignored, and indeed claim a certain amount of attention. The Improved Double German strain sent out by Messrs. Sutton & Sons, marks the latest and best development in this direction, and those of our readers whose tastes lean towards double flowers will doubtless know how to appreciate plants which produce large and very double flowers in numerous shades of orange and brown. The fragrance is nearly or quite as marked as in the single varieties. They need a little more attention than the latter, however, for from their very heaviness the racemes of flower are apt to twist and break the stems carrying them. It will thus be necessary to afford artificial support, in order to avoid disaster, for at the time of blooming we expect heavy rains, and not infrequently a little wind comes with it.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write 'Amateurs' Page" on the top of their letters.

Sweet Peas.—It is quite possible to keep these down to 3 ft. in height, *Enquirer*, and you will find that it will not do for you to let them get much higher than this in the place you mention. The idea of using a row of Sweet Peas as edging to a walk is not a new one, while at the same time it cannot be termed a common practice. Use neat stakes of sufficient length for them to stand about 3 ft., or 3 ft. 6 in. high, after their ends have been securely inserted in the soil. Let the Peas alone until they have reached the top of the sticks, then pinch all the points out. You will then get plenty of flowers, and by an occasional pinching of other strong growths that may make their appearance, you will keep the plants well within bounds.

Potato Onions.—*R.N.*—The name of Potato Onions is applied to bulbs of Allium aggregatum, which are planted (in the early part of February usually) for the sake of the young shoots which they send out. These shoots reach a respectable size, forming small bulbs. Underground Onions is another name given to them in rural localities, owing to their producing clusters of bulbs or offsets just beneath the soil.

Agapanthus umbellatus.—I have several large plants of Agapanthus, but as these take up a good deal of room under glass I want to put them out of doors if possible. Would it be to early to do this?—*James Muir.*

It is certainly rather early yet, but you may manage it by standing the plants beneath the shelter of a wall or thick hedge. Here they will take no harm except a severe frost intervenes. Further protection will then be required.

Clematis indivisa lobata.—A plant of this which is growing in my greenhouse has the leaves quite white with mildew. It was the same last year. Will you tell me how to stop it.—*F. C.*

This Clematis seems particularly liable to mildew. You may dust the leaves with flowers of sulphur for the present to keep the fungus from spreading to the other plants in the house. The cure, however, really lies in the direction of prevention. Do not give the plant too much root-run, and be careful not to give too much water. A lot of cold stagnant soil about the roots is sure to cause mildew. In ventilating the house try and avoid draughts as far as possible.

Vine Border.—The advice your friend gave you was good, *S. L. R.*, and you do not go wrong in acting upon it. The back half of the border may be filled up in the ensuing autumn. The half that is already made up to the proper level will be quite enough for the Vines for this season.

Young Vines.—We should strongly advise you to take up a good strong shoot from near the level of the stage to form a cane. This shoot will make a great deal of growth during the season, and you will be able to depend upon it better than you would upon the old cane if you allowed it to break and trained its shoots out laterally in the same way as permanent Vines. The cane may then be shortened back next winter according to its strength and degree of ripeness.

Beetroot.—You should be able to grow Beetroot easily enough, *Geordie*, since it will do in almost any soil except clay. Naturally it prefers a light loam, and it is from such a medium that the cleanest and most shapely roots are obtained. It is a mistake to dress the soil with a lot of rank manures near to the time of sowing, for this will only result in producing gross ugly roots, more like Mangel Wurzels than anything else. What manuring is necessary must be seen to in the previous autumn, a deep digging being given at the same time. Seaweed is a most valuable manure, and those who live near to the sea-side and can procure it easily should use it. Nothing is gained by sowing Beetroot seed too early. The end of April is early enough at any time, and from the beginning to the middle of May, according to locality, is even better. If your soil is fairly light *Geordie*, you may sow at once.

Mushrooms.—I have a quantity of horse droppings with which I want to make up a Mushroom bed. How long will it take to prepare them for use? and must they be put under cover? *Johnson B. Cummings.*

The droppings must be placed under cover, otherwise a shower or two of rain will go a long way towards spoiling your chance of mushrooms. The exact time that the manure will take to get in readiness for use depends upon its condition now. If this is fairly good, that is, not too wet and not too dry, three turnings, at intervals of three days will suffice. In turning see that the outside of the heap is turned into the middle, and that the whole is well shaken up and mixed together. If the material becomes too dry, a light sprinkling of water may be necessary, but this watering must be conducted with caution.

Shading Begonias.—You must shade your young plants *T. Jenkins*, otherwise the sun's rays will scorch them. In pricking the seedlings off do not select only the strongest and throw all the small ones away, for by so doing you may be throwing away some desirable varieties. The weakness in the seedling stage is not always followed by constitutional weakness in the more mature stages. The seed giving rise to the smaller plants may have been longer in germinating and the apparent weakness of the plants will then be due to insufficient room.

Large Flowering Plants for Greenhouse.—The term large is rather indefinite, *Reader*, and is usually fixed by individual ideas, which vary. You will find the following easy to grow, and amenable to pot culture for flowering in the greenhouse during the winter and early spring months:—Camellias of sorts (the old Alba Plena being as good as any) Acacia armata, A. dealbata, Polygala dalmaisiana, Cytisus racemosus.

Tacsonla Van Volxemii.—*F. D.* has been rather unlucky in his experience with this beautiful greenhouse climber, and wishes to know if it is really difficult to grow, or in other words if other people are as unfortunate as he has been.

This is usually a very easy plant to please, and grows and thrives under the same conditions as will Passifloras. If *F. D.* will write again and tell us exactly how he has treated his plant we may be able to help him to a solution of the difficulty.

Cold Tea is of no use to plants, *Argus*, so that the plants are really "teetotalers."

ROYAL EXOTIC NURSERIES, CHELSEA.

An abundance of indoor spring flowers of all kinds has been keeping up a fine display for many weeks past in the nurseries of Messrs. J. Veitch & Sons, Ltd., Chelsea. Orchids as a matter of course receive a large share of attention, for the number of hybrids that have been raised and sent out from the Chelsea establishment for years past, is now widely-known wherever Orchids are cultivated. The more common as well as the uncommon flowers belonging to various other natural orders are also well cared for, and the quantities of flowers to be seen in the conservatories or show houses are enough to make the amateur feel green with envy, ay, and others with more glass accomodation as well.

Orchids.

The Orchid rockery house is always an interesting feature of this establishment, because plants of a most varied character are transferred to this house when in bloom. The pots or baskets containing them are tastefully arranged, according to their habit amongst the boulders and banks of tufa, covered with Selaginellas or other trailing or tufted subjects that supply the greenery; or they are suspended from the roof if the flowers are drooping and look down upon visitors. The water in the centre, with broken and rocky banks surrounding it, also adds greatly to the interest of the place.

The creamy yellow sepals and petals of Phaius amabilis are faintly tinted with brown, and the lip heavily marbled with crimson-brown on an orange ground. A grand Cymbidium is C. eburneo-lowianum, whose parentage is indicated by the name. The creamy-yellow flowers are tinted with bronze. Some of the varieties of C. lowianum are rendered conspicuous by the large dark blotch on the lip; and the delicious fragrance of C. eburneum will always recommend it. Vanda suavis is also fine, the flowers being richly spotted with crimson-brown on a white ground. Good varieties of Lycaste Skinneri have also been plentiful. Coelogyne cristata alba looks best when suspended, owing to the drooping character of the flowers. Oncidium cavendishianum remains one of the showy and useful species, but it is entirely overshadowed by the branching panicles of the large and richly coloured flowers of O. marshallianum. Laeliocattleya Pallas, a hybrid between Laelia crispa and Cattleya dowiana aurea, still remains one of the uneclipsed gems of the establishment. The lip is the handsomest and most striking feature of the flower, being of a dark crimson-purple, with a lilac margin, beautifully undulated and crisped. The accompanying illustration lent us by Messrs. Veitch & Sons, will give an idea of the general aspect of this splendid hybrid.

The dwarf Epidendrum Endresii is a gem in miniature, having white flowers and a violet blotch on the lip. That together with E. Wallisii has been the parent of more than one set of hybrids. In E. Endresio-Wallisii, it was the pollen bearer. The progeny has dark purple sepals and petals, and a lip that is heavily tinted with violet on a white ground. A batch of seedlings has been raised from E. Wallisii crossed with the pollen of E. Endresio-Wallisii, and the name E. elegantulum has been given to all of the seedlings. The flowers vary greatly in colour, the sepals and petals being either greenish, creamy, pale yellow, golden yellow or orange-brown. All the varieties are beautifully spotted, but those having a dark ground more particularly. They are certainly very elegant, specially when grown side by side for comparison. The beautiful Miltonia Phalaenopsis is well grown here, and very attractive. An uncommon species is Trichopilia brevis, with its yellow sepals and petals blotched with brown, and its short, white lip.

Cattleya Trianaei has been a feature of the Cattleya house for some time past, and when at its best showed a considerable amount of variety and some richly coloured forms. C. T. delicata in beautiful and delicate shades of colour, has also upheld its share of the display. C. T. alba, with the exception of a pale lemon blotch in the throat, is pure white. Laelia cinnabarina is notable amongst its kind for its tall stems and dark orange-scarlet flowers. L. c. harpophylla is dwarfer with a paler white and apricot lip, though the rest of the flower is very bright. Cattleya Schroderae in its numerous and beautiful shades of colour, is now in the height of its season; and C. Mendelii is quickly adding its quota to the display.

Hybrid Dendrobiums are now a feature of this establishment, which sometimes places a group consisting entirely of hybrid Orchids before the public. A new variety is Dendrobium Ainsworthii intertextum, with creamy white flowers and a rich violet blotch on the lip. Beautiful is D. Virginia, with white flowers and a dark purple disc. D. Cordelia flavescens (raised between auratum and euosmum leucopterum) has creamy-white flowers with an orange-brown disc. We meet with rich colour in the rosy violet-purple flowers of D. Alcippe derived from D. wardianum × Freemani. D. Ainsworthii album adds yet another to a popular and easily grown race of hybrids. The creamy and slightly bronzy tints of D. Wiganiae are distinct and pleasing.

D. Rolfae is a beautiful hybrid intermediate in colour between its parents (nobile × tortile). There is a considerable amount of purple on the sepals and petals of D. Edithae, and the lip bears a large, rich violet blotch. The hybrid named D. wardiano-japonicum is intermediate between the parents here indicated, and shows that the progeny is more vigorous and easily grown than the parents often prove, particularly in the case of D. japonicum. D. Aeneas (japonicum × crystallinum) is another instance of this with creamy-white flowers and the usual blotch. D. splendidissimum leeanum Veitch's var., has large white flowers, tipped with rose, and a violet blotch on the lip. The name D. chrysodiscus recalls the orange-brown disc of the lip. Both the natural and the artificial cross known as D. crassinodi-wardianum are grown at Chelsea. Though not a hybrid, yet D. nobile nobilius still maintains its popularity as the finest variety of the species.

Cypripediums, both hybrids and otherwise, maintain an equal race with the Dendrobiums for popularity. C. Schroderae candidulum is quite distinct from the type in having very pale, almost white flowers of huge and imposing size. C. lathamianum is now well-known and more widely disseminated than C. germinyanum and C. godseffianum, both having bold and beautifully blotched flowers. They are allied in origin, inasmuch as the former was obtained from C. hirsutissimum × C. villosum; and the latter from C. hirsutissimum × C. v. Boxallii.

Laeliocattleya Pallas.

Large and bold flowers are produced by the well-known C. selligerum majus. Other flowering plants in this house include Chysis bractescens, with massive white flowers, and C. Chelsoni, with yellow flowers, tipped with bronze. The latter is a handsome hybrid raised at Chelsea. Very fragrant are the white flowers of Angraecum modestum. The richly coloured and spring-flowering Oncidium sarcodes is grown in quantity. The creamy-white Stanhopea amesiana is a very choice species.

The cool or Odontoglossum house contains a great variety of the usual occupants assigned to this division, that is to say, Odontoglossum crispum, O. cirrhosum, O. Pescatorei, O. Cervantesii, O. andersonianum and a great many others. The amount of variety to be seen amongst the individuals of O. triumphans is wonderful, particularly those

with dark chestnut-red sepals and petals on a golden ground. Very choice is Oncidium concolor, with uniformly yellow flowers. The orange-scarlet of Ada aurantiaca is also fine. Masdevallias are always pretty numerous here, and amongst others we noted the hybrid M. parlatoreana, M. Heathii, and M. Chelsoni, all with orange-scarlet flowers more or less overlaid with a violet plush.

One of these cool houses is entirely new, and several others, together with the stages and fittings have been thoroughly renovated with very substantial material, and brass fittings to the doors. Double staging enables the cultivator to maintain a moist atmosphere without wetting his plants.

GREENHOUSE AND FORCED SUBJECTS.

A cool conservatory here is always kept gay with flowers in season, but during spring the wealth of flowers both in quantity and variety is simply astonishing to those who have not closely followed the times, and adopted the means placed at their disposal for maintaining a rich and attractive display. The plants are for the most part common, but in that respect lies the interest for those who have conservatories under their care. Beautiful and pleasing are the plants of Acacia cordata with long and elegant spikes of lemon-yellow flowers. Other useful subjects are Boronia heterophylla, B. megastigma, Erica ventricosa coccinea minor, E. candidissima. E. spenceriana, Cytisus racemosus and others. Hyacinths were plentiful some time ago, and they together with Mignonette, and Heliotrope maintained a delicious aroma in the house. Forced subjects include Spiraeas, (herbaceous and shrubby) Lilac, Guelder Roses, Solomon's Seal, Rhododendrons of the hybrid ponticum type, Waterer's Cherry, and Hydrangea Dr. Hogg, having white flowers. The yellow flowered Primula verticillata is well done at Chelsea. Deutzia gracilis and Prunus sinensis flore pleno are indispensable in spring. The Cinerarias are very brightly coloured. With such an array it may well be imagined that the house presents quite a gorgeous appearance at this season of the year.

Another house has been kept gay for weeks past with various species and hybrids of Himalayan and Javan Rhododendrons. The latter are represented by various varieties. Grand and telling types are R. fosterianum R. Countess of Haddington, R. Countess of Sefton, and R. Veitchi, some of which are highly fragrant. The rich yellow spathes of Richardia elliottiana, with its ample and dark green foliage, beautifully blotched with white, will in a few years be an occupant of every garden of any note. It is easily grown and peculiarly handsome, as the accompanying illustration, lent us by Messrs. Veitch & Sons, will show.

The stove rockery presents a fine appearance with its flowering plants stood about amidst a greenery of Ferns, Selaginellas and other subjects. Some of the flowering plants are Tillandsia Lindeni, Begonia Gloire de Sceaux, Epiphyllum Gaertneri, Tacca cristata, Anthurium scherzerianum in variety, Begonia President Carnot, Tabernaemontana coronaria, and Pancratium fragrans, the two latter being deliciously scented. The Otaheite Orange (Citrus japonica) is a useful decorative subject. A colony of hybrid Javan Rhododendrons may always be seen in this house.

DWARF BEARDED IRISES.

NOT the least noteworthy feature at Messrs. Barr & Sons nurseries at Long Ditton is a fine collection of these hugely pretty dwarf Irises. The plants are growing in close proximity to some of the larger growers, and thus the difference in height and the lowliness of stature of the pumila section are both rendered very striking. The plants run to about six inches in height, and the tufts of short bright green leaves make a pretty picture when surmounted by the variously hued flowers.

The type, I. PUMILA, which is a native of Asia Minor, from whence it was introduced in or about the year 1596, has bright lilac purple flowers, with a dense white beard on the claw and lower part of the keel of the falls. Since that date the energy and skill of our florists has brought forth a number of very pretty varieties, exhibiting a considerable range of colour. Their very dwarf habit renders them suitable as edging material for beds or borders, in which position they prove a great success. When grown in masses upon rockeries, or semi-naturalised by the side of woodland walks, or the wilder portions of the grounds where they are not too much shaded they are equally good, and seldom fail to bloom freely.

I. P. COUNT ANDRASSY is one of the finest forms. Both falls and standards are azure blue, the falls having rather conspicuous dark veins.

I. P. NELLIE exhibits a fine shade of bright yellow, and is very attractive by contrast with the darker flowered forms. The flowers are extra large.

I. P. CAERULEA is a very rich azure blue, and is rather cheaper at present than Count Andrassy, although it is fully as fine a form.

I. BIFLORA MACULATA has a soft blue flower, marbled and veined with purple ; the purple form is also a great acquisition.

RICHARDIA ELLIOTTIANA.

DEEPDENE GARDENS, DORKING, SURREY.

SINCE the Duchess of Marlborough came into possession of this grand place, wonderful alterations and valuable additions have been made in the glass departments, as well as in the grounds. A beautiful range of span-roof plant houses has been erected, and contains a good collection of plants most suitable for decorative purposes, both as regards cut flowers and foliage plants. One house contains as grand a lot of well-grown, clean and healthy Palms as one could wish to see, from a foot high up to 20 ft. A noticeable feature is the small pots. The gigantic well-furnished specimens are grown in all the leading varieties of Kentia, Phoenix, Rhapis, Latania, Cocos, and Geonoma, all well done. There are several houses of Orchids. Cattleyas, Dendrobes, Cypripediums, and Vandas, are grown for cut flowers in large quantities. Amongst stove-flowering and forcing plants sweet-scented flowers are the order of the day. Gardenias, Eucharis, Pancratiums, forced Liliums, of all varieties, are grown in great qnantities, as well as all kinds of bulbs, which are just past their season.

Carnations are a special feature, all the leading varieties of the Malmaison section, also the tree varieties are well-represented by well-grown plants of various sizes, which daily give a supply of their valuable sweet-scented flowers. Amongst florist flowers Pelargoniums have great attention, as do also Cyclamen and Calceolarias. Amongst the former, noticeable are the celebrated Reading Strain of Messrs. Sutton & Sons, Butterfly, Vulcan, and the varieties of their Giant strain being most noticeable. The Calceolarias are likewise splendidly done. The strain is Sutton's Perfection, and for profusion of bloom, size, and well-formed flowers, diversity, and splendid colours, combined with the dwarf, vigorous habit, are everything that can be desired. I was also struck with the free manner in which Saintpaulia ionantha is flowering. This is a remarkable

little plant when well done. The Violet-like flowers, with the green fleshy leaves, render it very attractive. Seedlings are easily raised, and when a few months old commence to flower very freely, and will do so all through the winter months. The plants do well under the same treatment as the well-known hybrid Streptocarpus. The vineries and fruit houses look most promising, for they are showing fine crops of fruits. The kitchen garden was also showing signs of activity. The demand in the various departments for the house supplies is very extensive, but the gardener-in-chief, Mr. J. Chamberlain, is equal to the occasion. The condition of the place is everything that can be desired. All-round gardening is carried out in a thoroughly practical manner. There are many other features of interest in this well kept place, which I shall note at some future time. These few notes are made by "Rusticus," who recently paid a hurried visit to the Deepdene Gardens.

MUSHROOMS.

(*Concluded from p. 538.*)

THE artificial manures and feeding required for the Chrysanthemum renders the soil rich, and becoming decomposed is just in the proper state for the Mushrooms to feed on.

Failing that, we use the ordinary garden soil that has previously been heavily manured for some crop such as Onions. This also anwers the purpose well; the great drawback is the quantity of slugs that may accompany the soil, and which become a never-ending source of trouble to the young crop. Good loam is also suitable, but whatever is used, it should not be of a worn-out character. I have also tried fresh cut turves, but was not so successful as with the others.

We have tried some experiments with the addition of artificial manures to the soil, also in having a thin layer of cow manure immediately under the soil, but although the number was not greater, individual Mushrooms were larger. Therefore, if soil has to be used that is poor in character an addition of these would be an advantage.

The depth of the soil on the beds is best about 1½ in., after it has been beaten down firmly; at any greater depth the Mushrooms are longer in appearing, and the crop is in no way larger. The soil should be fairly moist but not too wet, or it will be difficult to beat it without sticking. I do not agree with the old practice of making the top like mortar, because, after the bed begins to get dry, it is sure to crack and likewise sever the threads of spawn in large quantities.

Covering the beds with straw or hay is an advantage, especially if the house is at all exposed. Sheets of brown paper are also helpful when the Mushrooms are appearing. The moisture that rises from the beds collects in small particles on the under side of the paper, and the young crop seems to revel in the surroundings.

It usually takes five or six weeks from the time of spawning until the first appearance of the Mushrooms, and a further fortnight before they are fit for gathering. The temperature and atmosphere of the house must be carefully attended to, 55° being a good medium.

The great point in favour of a regular crop is the uniform condition of the atmosphere, the heat of the beds, and the promptness in which small irregularities are put right. Syringing the walls daily but not the beds is necessary, and a little ventilation should always be left on the top of the house, but not sufficient to cause a draught, thereby ensuring a sweet atmosphere. The best condition under which to gather Mushrooms is after the top has parted from the stem and has become full size. If allowed to remain longer the juiciness of the flesh is lost through the spore gills becoming ripened. Carelessness at this stage must be avoided, because, if a few are gathered too old, and possibly some too young, they cannot be expected to cook equally; consequently the weight is put on the cook which, for once, is the fault of the gardener. They are best pulled all of one size and of one age when possible.

The length of time a bed will bear all depends on how it has been treated from the very beginning; but with us they bear profitably for three months, when the beds are taken out and renewed as required. Of course, a bed well done will bear longer, as I have noticed them yielding for six months, but it would have been far more profitable to have had two good crops instead of one, which for the last three months only produced a dish now and again. After a bed has been in bearing some time, and signs of exhaustion become evident, a thorough soaking of water at 90°, with a little salt dissolved in each can, should be given. This will renew vitality, and a further crop will be secured. Liquid drainings from the stables are also excellent for this purpose.

The foregoing remarks have been entirely of culture in the Mushroom house, and exactly such as we practise at Devonhurst; but it by no means follows that good results cannot be had otherwise. There is the amateur, for instance, who has no Mushroom house, and the market gardener who grows his by the acre in beds in the open; but for all that I do not hesitate to say that where there is a daily demand and only a limited convenience, the Mushroom house is the best. You are clear then of the influence of our variable climate, and rain, frost, and snow can have little effect compared with what they have outside. In any case, Mushroom growing will pay for culture of the highest order, and the greater attention that is paid to trifling details, the greater will be the return of Mushrooms.

We will now take the case of the amateur who has no Mushroom house, but who, nevertheless wants to grow them. There is usually some odd corner in which a small bed can be made. I have frequently noticed beds under the stages in small greenhouses, but in very few cases have I noticed a good crop. A few weeks ago I was invited to examine a bed by an amateur who had procured some manure, and who, from theory, considered himself competent to grow Mushrooms for the first time. According to his statement he had got the manure and had faithfully carried out what knowledge he had obtained by having it turned several times to dry, and then had it thrown together in a heap to ferment. The mistake was, he did not take into consideration the dull weather, with the result that the manure did not dry a bit. After a day or two it heated violently and then the bed was formed under a stage in the greenhouse. Relying entirely on what he had read he beat the manure as hard as possible (which would have been right in other conditions), and, of course, it being so wet, was more like paste than horse droppings. Needless to say, it never heated after being put up; and had it been spawned, the excessive moisture would have rotted the spawn.

I advised him not to rely on any one bringing in manure without first knowing its condition, and he is now collecting it from the stable himself daily. I have no doubt about this man succeeding now, as he knows what to avoid and will profit by his first experience. This is, in most cases, the root of the non-success of the amateur, the manure being too wet before reaching him and he has little means of drying it. I would advise anyone who has difficulty in getting good dry manure in the winter to get the droppings in the autumn, and make up the beds then, when he will be more likely to get it dry, and better weather to manipulate it. When the bed has been made up after the manner I have already described (but, of course, on the ground level), cover it heavily with strawy litter, and a piece of tarpaulin for preference, placed over it. This will run the water off and keep the bed dry, taking care that no water is allowed to soak under the bed. No anxiety need be entertained should the crop not appear at a given period, because the temperature of the house might not be suitable throughout the winter, but whenever the conditions become favourable the Mushrooms will appear all right. The same rule applies to beds in sheds, out-buildings or odd corners. Get the material right in the first instance, spawn at the right temperature, and with fair treatment the Mushrooms are bound to come sooner or later.

No amount of frost will damage the spawn should the beds get frozen. A few years ago I was in a market garden, and saw a fine crop in a number of old dwelling houses. The whole of the floors were utilised with beds, spawned and covered at Christmas time. Frost immediately set in, and the beds were frozen for two months. These began to bear in May, and a fine crop resulted at a good profit, the whole lot being sold at 1s. 6d. per pound.

The usual market system is, the beds are made in the form of a ridge in the open 3 ft. wide at the base, and 2½ ft. high, and prepared in a similar manner to that in which I have already described, although not so rigidly carried out, through having large quantities to prepare. The men who usually prepare these beds, although they may be only considered labourers, are nevertheless masters of the situation, as regards experience, and know exactly the conditions required to secure a crop, and work accordingly.

Spent Cucumber or Melon beds are often made profitable by inserting pieces of spawn just at the time the Melons, &c., are becoming matured, the soil being watered and well beaten down, after which a good return is had with little outlay. The power of these tiny threads of spawn is surprising, and if one could only watch their progress how interesting it would be. We spawned a Cucumber bed in a frame two years ago, and even got a crop both inside and out. The spawn ran through the 9-in. brickwork, and produced Mushrooms in the gravel path. A year later from the same bed we got another crop, but they were this time a nuisance, as our Chrysanthemum plants were set on the bed without any thought of Mushrooms. When they began to grow, each morning a considerable number of the plants were tumbled over, but we soon found out what was doing the damage, and removed the Mushrooms.

Where Peas are grown in trenches made up of manure, &c., spawn may be inserted during the growth of the crop, and a good return of Mushrooms had when the Peas are cleared away without further trouble. Again, to prolong the season, a trench 2 ft. wide and one spit deep can be made at the bottom of a north or east wall, and filled with manure and spawned in the usual way, covering the same with the soil taken out. The more natural conditions in the beginning of the summer renders the growth less fastidious, and usually a heavy crop is the result.

It is a difficult matter to produce Mushrooms that are any good here in the south, from June to August inclusive. The heat is far too great and the air too dry, unless a cellar can be had that is beyond the influence of the outside atmosphere.

The Mushroom maggot is usually the result of these dry and hot surroundings, and it is needless to keep on growing while these pests are in evidence, as they render the Mushrooms practically useless.

The Mushroom lends itself to an endless variety of ways by which it may be grown. I have seen them grown in boxes, baskets and pots. These latter are plunged in another bed and eventually spawned and turfed over, after in the first place being three parts filled with manure. Grown in this way, they would be an attractive feature in a collection of vegetables, if six pots were arranged in a similar manner to what Cauliflowers are. One large piece of spawn is enough for one pot, finishing with a piece of turf cut to the size necessary.

There are several insects, &c., that are troublesome, but none worse than the slug for destroying the crop. Constant hand picking in the evening, when they are feeding, is the only remedy after they once get into the house, but much may be done by a rigid examination of the soil before being taken in. Woodlice, in some instances, are troublesome, as are also cockroaches and others; but a soaking of boiling water poured into their crevices and haunts will prove too much for them.

It is quite possible to fail in Mushroom growing, even with all the care and experience brought to bear on their culture. As a case in point, I would mention where horses are dosed with medicine and the droppings from these used. The medicine has eventually the effect of killing the spawn, and the grower may be quite innocent of the fact, and put down, inadvertently, as not a successful grower. I have heard it stated that when the horses were fed with Carrots that a similar effect was noticeable, but I am not so certain about the truth of this statement, as our horses are fed in part with these, and I have not seen any ill effects. It is, however, necessary in any case to try and guard against these points; it may not always be possible, but you have the satisfaction, should failure confront you, that you have at least done your duty. I have purposely said nothing about the history of the Mushroom, its natural growth in the fields and woods, also of the endless variety of the fungi, but have endeavoured to give you, instead, what is more useful and important to the gardener, their practical culture.

—*James Gibson.*

Beans remove about 9·3 lbs. of sulphur, and 12.0 lbs. of phosphorus, from an acre of land annually.

BUSH HILL PARK NURSERIES.

Besides the vast numbers of hard-wooded plants accommodated by these nurseries, to which we referred in a recent issue, there is a great deal more to be seen. The propagating department in itself is replete with interest, for just as the young of all animals are interesting, no matter how devoid of interest the mature animal may be, just so with plants. The wants of a large general nursery are many, aye, and diversified, too, and in this miniature cosmos may be observed much that is suggestive of the greater cosmos without.

Ferns of themselves take up a good deal of room, thereby giving us one more demonstration, if such were needed, of the firm hold they have upon the affections of the public. Pteris tremula was represented in its thousands, and the variegated form, P. t. argyraea, is also done well. Pteris Wimsettii is equally well grown, and it was most interesting to see how in the large batches of it on view much diversity of cutting of the fronds was shown. In some cases it approached dangerously near to P. cretica. P. serrulata cristata is a well known form of the type that is likewise very valuable. Messrs. Low possess the finest crested form of it that has yet come before our notice. The crests at the tips of the pinnae have developed into huge tassels that by their very weight draw the fronds into a subpendant position. As a basket Fern it is exceedingly elegant, and as it appears to have as sound a constitution as the type there is no doubt that it has a future before it once it becomes more widely known, and can be propagated with sufficient rapidity to supply the demand. Such Adiantums as A. cuneatum, A. Williamsii, A. gracillimum, and A. Legrandii are also grown in great force, and the familiar Polypodium (Phlebodium aureum) was not lacking. Onychium japonicum is a greenhouse Fern that should be more generally known. It is easy to grow, and the delicate light green of the fronds shows up very conspicuously amongst a mixed collection. Bunches of Davallia elegans just as they had been imported were a unique feature in this department. These were tied up in round bundles, the rhizomes being packed in very coarse fibrous peat. When suspended from the roof of a stove or other warm house, and regularly syringed, these rhizomes are not long in breaking out into growth, when they form very elegant hanging baskets. The bulk of peat affords plenty of lodgement for moisture, and suits the plants well.

Another house was filled with as fine a batch of Statice profusa as one could wish to see. Fatsia japonica variegata is not so common as the ordinary green one, but it sells well, and as it is a pretty and good tempered plant it deserves all it gets. Cannas are grown in great numbers. Bearing in mind the promise of this noble flower the Messrs. Low have got together a fine collection comprising most of the leading varieties, and including the two fine forms, Italia and Austria, the former of which we figured last year by kind permission of Messrs. Damann & Co. At the time of our visit the rhizomes had been divided up for purposes of propagation. These divisions were laid in in cocoanut fibre refuse on stages in warm houses, and the greater part of them were just starting strongly into growth.

Carnations are passed through hands in large numbers. The collection includes a small collection of the best American varieties, which have recently been sent from the states for comparison with our English varieties. From the samples on view it would appear that however well these varieties may behave across the herring pond they are scarcely up to our best standard. Nicholson, bright rose; Hector, deep crimson; and C. F. Hill, bright crimson with fimbriated edges like a Marguerite Carnation, were three of the best. The colours were excellent, but in most cases the flower lacked substance. Madame Thèrèse Franco, hetter known, perhaps, as Mrs. L. de Rothschild, came out to advantage by the side of the "Yanks." With few exceptions, such as Wm. Robinson and Winter Cheer, which seem to be ever in bloom, the rest of the plants were out of flower, although judging from the strength and vigour of the grass and flower stems, the winter months have not been devoid of beauty.

Show, regal, and decorative Pelargoniums are grown in great numbers, no fewer than seven large and roomy houses being devoted to them. If the realisation of flower is anything like equal to the promise, of which we saw unequivocal signs on all hands, these plants will be no mean spectacle in the near future.

Messrs. Low have a great name and fame for Cyclamen, and a visit to the Bush Hill Nurseries will soon convince the visitor that both name and fame are deserved. Those who have had the pleasure of seeing the various exhibits of Cyclamen made by them in various parts of the country will be able to imagine the sight when house after house is filled with the same material. The purity of the white forms, the delicacy of the pink, and the depth and vividness of the rose and purple are magnificent. Besides obtaining a strain of flower with very wide segments a crest or feathering has been developed upon the centre towards the top of each segment, the effect being very fine. This departure was first made evident in the white (Pioneer) form, but the crest has also been added to the rose and red varieties, so that the whole of the colour sections have now armorial bearings. Having regard to the vigour of the plants as well as their great floriferousness it is scarcely a prophecy requiring much foresight to predict a great future for them.

GARDENING MISCELLANY.

MEDINILLA MAGNIFICA.

Amongst the many novelties and grand example of cultivation in the garden at Nonsuch Park, Cheam, is a grand specimen of the above, over 6 ft. through, throwing enormous tresses of its beautiful deep rose-coloured flowers. As seen here it is a noble plant and well worthy a place in every collection of stove plants, especially when there is plenty of room. The plant referred to is the grandest specimen I have ever met with. This place for many years past has been noted for its collection of Azaleas, the enormous specimens of which are wonders for their age. They were potted last year and have greatly benefited by it, flowering very freely and making splendid growth. Another noticeable feature is Clerodendron Balfourii, which is well-represented by specimen plants well-flowered, as is the old Franciscea calycina major, not so often seen as it ought to be.—*Rusticus.*

PORTUGAL LAUREL DISEASED.

In a recent issue the peculiar whitish appearance of the leaves of some Portugal Laurels, shown by Mr. Wilks was commented upon, the assumed cause being deficient nutrition. From a prolonged acquaintance with plants similarly affected I quite agree with that conclusion, so far as it relates to individual branches; hut as they may at times be found on plants which are in some of their parts making healthy growth, it cannot be from the poorness of the soil in which they are growing. I have always found upon examination that the evil has its source in the main stems of the tree, which will at the juncture of the diseased branch he found in a decaying condition. What I believe to be the same thing may be found at times among Plum trees, and I always thought it to be a kiud of canker. With respect to Portugal Laurels I take it that upon enquiry it will be found to have arisen among plants which have at some time been subjected to a very drastic kind of pruning.- *W.B.G.*

VANDA TERES AT GUNNERSBURY PARK.

Amongst the many grand examples of cultivation at Gunnersbury Park, Acton, is the ahove. This plant was at one time considered very difficult to flower; but as seen here under the cultivation it receives by Mr. George Reynolds, the latter has evidently found out the treatment suitable to make it flower freely, for here there are upwards of 200 spikes, showing some with six flowers in a spike. The plants are very dwarf, being from 2 ft. to 5 ft. high, and are grown in pots plunged in sphagnum moss in a warm sunny position in one of the stoves here near the glass. It delights in an ahundance of water when making its growth; but when at rest only a limited quantity is necessary. It lasts a long time in flower, and coming in at this season of the year is most valuable. It was introduced many years ago from Sylhet. There is a pure white variety also, which is very rare, and quite distinct from this, the rosy and magenta-veined one.—*Rusticus.*

SOCIETIES.

ROYAL HORTICULTURAL.—*April 27th.*

There were no additional shows at the Drill Hall on Tuesday last, so that the several benches were not so crowded. Nevertheless, the exhibits were very numerons, spring flowers being much in evidence. Orchids occupied a considerable amount of space. Daffodils, Tulips, Primulas (including Auriculas), Roses, and stove and greenhouse subjects were abundantly represented.

R. Brooman White, Esq., Ardarroch, Garelochhead, exhibited a group of Odontoglossums interspersed with Maidenhair Ferns and Palms, and were bright on account of the quantity and variety of the flowers. Varieties of O. crispum and O. andersonianum were the most numerous and conspicuous. He also had two plants of Cattleya Laure-Mossiae, the parentage being indicated by the name. (Silver Banksian Medal.)

Messrs. F. Sander & Co., St. Albans, exhibited a group of Orchids, amongst which several richly-coloured varieties of Miltonia vexillaria were conspicuous as well as the dwarfer M. Phalaenopsis. Other noticeable subjects were Brassia Lewisii, Masdevallia mundyana, Coelogyne tomentosa, Sobralia alba nana, Cattleya Docteur Vonga, Dendrobium Phalaenopsis schroderianun, Phalaemopsis amabilis, Vanda Bensoni, and Miltonia vexillaria leucoglossum. Oncidium marshallianum and O. fuscatum were also showy. (Silver Banksian Medal.)

Messrs. Hugh Low & Co., Upper Clapton, also exhibited a mixed collection of Orchids, including richly-coloured varieties such as Odontoglossum excellens Lowae, O. cirrhosum, Cattleya Mendelii, C. Mossiae, C. lawrenceana, Oncidium sarcodes, O. Papilio, the singular looking Coelogyne pandurata, and several bold Cypripediums including C. grande atratum. (Silver Banksian Medal.)

Messrs. B. S. Williams & Son, Upper Holloway, exhibited a group of Orchids in which Cattleya Mendelii, C. lawrenceana, Dendrobium devonianum, D. thyrsiflorum, D. crystallinum, Odontoglossum prionopetalum, O. luteo-purpureum, and O. l.-p. sceptrum were conspicuous. Pretty also were Eulophiella Elizabethae, Trichocentrum tigrinum, Ada aurantiaca, and Miltonia spectabilis. (Silver Banksian Medal.)

M. S. Cook, Esq. (gardener, Mr. W. Buckell), Kingston Hill, exhibited a richly coloured variety of Miltonia vexillaria, and heautiful varieties of Odontoglossum luteo-purpureum, O. crispum, O. triumphans, and O. ruckerianum. (Bronze Banksian Medal.)

A mixed and varied group of Orchids was set up by Welhore, S. Ellis, Esq. (gardener, Mr. Barrell), Hazlebourne, Dorking. Varieties of Odontoglossum crispum, O. citrosmum, O. andersonianum, O. ruckerianum, O. Pescatorei, and others were very conspicuous and showy. Many of the varieties were of excellent quality. A fine piece of Cattleya citrina on a raft bore nine flowers. (Silver Flora Medal.)

A Cultural Commendation was awarded to a magnificent plant of Dendrobium thyrsiflorum bearing thirty spikes of hloom, and exhihited hy the Marquis of Camden (gardener, Mr. A. Methven), Bayham Ahbey, Lamberhurst, Kent. A similar award was accorded to a well-flowered piece of Dendrohium infundibulum, exhibited by Wm. White Palmer, Esq., Rutland Lodge, Kent. A splendid piece of Ludemannia Lehmanni was exhibited by Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Berks. The spike bore seventy-four flowers, and the plant has never been seen in finer condition (Cultural Commendation). F. W. Martin, Esq. (gardener, Mr. P. Bradley), Lake House, Byfleet, Surrey, staged a well grown piece of Laelia purpurata.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., received a Silver Banksian Medal for a neat little group of Ericas, Clivias, and stove foliage plants.

Messrs. Wm. Cutbush & Son, Highgate, N., made a brave show with a collection of varieties of Azalea mollis. The plants were full of flower, and backed as they were by Palms and the variegated Acer Negundo, with a frontage of Adiantum cuneatum and Isolepis gracilis they made a gay picture. (Bronze Flora Medal.)

Hardy flowers in considerable quantity, and in great variety were forthcoming from Mr. T. S.

Ware, Hale Farm Nurseries, Tottenham, N. Trillium grandiflorum, and the purple T. erectum, Arabis albida foliis variegatis, Iris pumila, I. tingitana, Primula Sieboldii, in variety, Cypripedium Calceolus, Lilium Browni, Sanguinaria canadensis were conspicuous here, and in conjunction with other Irises, cut Tulips, etc., made a fine display. (Silver Flora Medal.)

Messrs. Frank Cant & Co. had a very nice group of pot Roses, which were very noteworthy for their dwarfness, healthiness and vigour. There were included some grand samples of individual blooms of such varieties as Mrs. Paul, Marie Baumann, Mrs. R. G. Sharman Crawford, and Camille Bernardin. (Silver Flora Medal.)

Messrs. Barr & Son, King Street, Covent Garden, contributed a very showy collection of cut blooms of late Daffodils, chief amongst which were fine batches of the new Victoria, and Glory of Leiden. By the side of the Daffodils were staged panfuls of Iris pumila Count Andrassy, I. albiensis grandiflora, and I. a. g. purpurea. (Silver Flora Medal).

From the same firm came a magnificent show of cut blooms of earlier Tulips. These included T. acuminata, T. retroflexa, T. fulgens, and such grand varieties as Thos. Moore, White Swan, Couleur Cardinal, Prince of Austria, Koh-i-noor, and Silver Standard. The colours throughout were excellent, and both form and size were good. (Silver Flora Medal.)

Messrs. John Laing & Sons, Forest Hill, S.E., were responsible for a very showy group of flowering and foliage plants, for which they were awarded a Silver Banksian Medal.

Roses in excellent condition came from Mr. W. Rumsey, Joynings Nurseries, Waltham Cross. The cut blooms contained good samples of Niphetos, Marechal Neil, Ella Gordon, and Catharine Mermet. Plants of crimson Rambler, Mrs. Sharman Crawford, Madame Montel, etc., formed a back-ground. (Silver Banksian Medal.)

Messrs. Paul & Son, the Old Nurseries, Cheshunt, had some excellent pot Roses. Such varieties as Celine Forestier, Ulrich Brunner, and Elsie Fugier appeared to great advantage. In front of the Roses were several pans filled with Geum montanum, Adonis vernalis, Saxifragas, and Aubrietias. (Silver Flora Medal.)

Messrs. James Veitch & Sons, Limited, received a Silver Flora Medal for a very comprehensive collection of cut blooms of Daffodils. The Ajax, Leedsii, and incomparabilis sections were all well represented and the somewhat heavy double flowers were not forgotten. The same firm also sent baskets full of the showy Cydonia Maulei, Exochorda grandiflora, and Andromeda speciosa cassiniaefolia in full flower, whilst a noble specimen of Cytisus scoparius praecox with a clean stem fully 4 ft. high attracted a deal of attention. A Silver Banksian Medal also fell to the lot of Mr. J. W. Wilson, Drewton Dray, South Cave, R.S.O., Yorkshire, for a very nice collection of cut Narcissi. Varieties of Leedsii were very strong here and N. poeticus ornatus was well shown.

Mr. George Mount, Canterbury, sent some superb cut Roses. The samples of General Jacqueminot, Ulrich Brunner, Captain Hayward, The Bride, Catharine Mermet, and Star of Waltham, especially, were in magnificent condition with regard to size, colour and form. (Silver Gilt Flora Medal.)

A Silver Flora Medal was awarded to Mr. Charles Turner, Slough, for a collection of named varieties of the beautiful Primula Sieboldii. Mr. Turner also submitted a nice group of Alpine Auriculas, which were up to the best florists' standard.

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, had a miscellaneous group. Some well grown and coloured Coleuses, in 48-sized pots were the feature here, and as these were bedded in the soft green of Maidenhair Ferns their bright colours showed up to advantage. Some larger Pterises, Davallias, and Nephrolepis formed the background. (Bronze Banksian Medal.)

Messrs. James & Sons, Farnham Royal, made an interesting exhibit of crosses between Cineraria cruenta, and the garden Cineraria. The progeny had been re-crossed with C. Heritieri and the influence of the last named species was very evident throughout.

Mr. Downs, gardener to J. T. Bennett-Poe, Esq., Holmewood, Cheshunt, submitted three fine plants of Arctotis aureola. Messrs. J. Veitch & Sons, had samples of Carnation Winter Cheer. Mr. Chas. Turner received a Bronze Flora Medal for a bunch of first-rate blooms of Malmaison Carnation Princess May. The Rev. G. H. Engleheart, Appleshaw, Andover, Hants, sent a few seedling Narcissus.

At a meeting of the fruit and vegetable committee Mr George Wythes, gardener to Earl Percy, Syon House, Brentford, received a Silver Banksian Medal for a splendid array of vegetables and fruit. The former included Tomatos, new Potatos, Broccoli, Seakale, and Cabbage; whilst among the fruits were Figs, Strawberries, and Grapes. The two baskets of the latter were most interesting, for one contained Lady Downes kept from the 1896 crop, and the other Black Hambro cut this season.

Messrs. Hurst & Son, Houndsditch, E.C., sent some grand heads of their new Broccoli, Hurst's Early April.

Mr. Owen Thomas, the Royal Gardens, Frogmore, sent dishes of the yellow Tomato, Royal Windsor, and some fruited plants of the new Strawberry, Russell's Early Giant.

In the Veitch classes for the best flavoured Apple Mr. Herrin, Dropmore, was placed first with Sturmer Pippin; and Mr. J. C. Tallack, Bury St. Edmunds, second with Brandy Apple. No Pears were forthcoming.

IMPORTANT NOTICE TO EXHIBITORS.

The Council of the R.H.S. wish to remind exhibitors that the object for which the various committees of the society were constituted, and the bi-monthly meetings held, was to allow of any new or rare flower or fruit, which might be in perfection at a time when no exhibition was being held, being submitted to a body of experts for adjudication.

By degrees a practice has grown up of groups of plants and collections of fruits being also sent by exhibitors, such plants and fruits being frequently neither new nor rare, and these groups and collections have become so large and frequently so numerous that there is danger of the more important work of the committees being lost sight of.

The Council, whilst grateful for the consistent support the society has received from exhibitors and desirous of offering every encouragement to them and of seeing the Drill Hall always well filled, feel that the time has arrived when some limit must be put to the size of the groups and collections. They have therefore drawn up the following rules which they have directed the superintendent to strictly adhere to:—

I.—Exhibitors at the Drill Hall, of groups and collections, must give notice to the Secretary, R.H.S., 117, Victoria Street, Westminster, not later than the Friday before, of their desire to exhibit, and must, at the same time, state the nature of their proposed exhibit and how much space it will occupy; this must in no case exceed 100 sq. ft.

II.—Exhibits entered separately for the separate committees will be considered distinct, but not more than 100 sq. ft. of table space can be allowed for each; that is to say, an exhibitor may stage 100 ft. of fruit, 100 ft. of Orchids, and 100 ft. of floral committee plants and flowers; but each group must be separately staged and consist exclusively of fruit, Orchids, and hardy or tender plants or flowers respectively—not mixed together; excepting only that small decorative foliage plants may be used amongst Orchids and fruit, if desired.

III.—The limit of 100 sq. ft. does not apply to large plants placed on the floor; special arrangements should be made beforehand for such plants with the Superintendent.

IV.—No alteration is proposed in the existing rules with reference to the exhibition of new or rare plants, flowers or fruits for the society's Certificates and Awards of Merit.

N.B.—Should, at any time, the entries of groups be so numerous as not to allow of all being staged in their entirety, the exhibitors will be informed how much less space than that they have applied for can be placed at their disposal.

By Order of Council, *W. Wilks, Secretary, 117, Victoria Street, Westminster.*

Queen Wasps are now on the hunt for suitable nesting places. Bearing in mind the fact that so many queens mean so many wasps' nests presently, gardeners and fruit growers generally are anxious to kill all the queens they can find. Wasps may be scavengers, but they destroy many a ton of good fruit in the year.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Bog Plants in Pots. — *Sigma*: We consider it necessary that such plants as Drosera, Campanula hederacea and Mosses should have drainage when subjected to such artificial conditions as cultivation in pots. We doubt if they would thrive very long in pots, the bottom of which is stopped up for the purpose of maintaining the soil in a boggy condition. In a state of nature, more or less of a change or movement of the moisture is going on and bringing fresh food within reach of the plants as well as securing other conditions which would not be present in pots. Even when found in bogs, Droseras and Campanula hederacea are benefited by the companionship of the roots and stems of other plants which assist in keeping the soil in a suitable condition, besides furnishing plant food by the decay of the older portions. You might succeed in growing these plants without drainage, but we believe you would be more successful by a judicious use of the same.

Best form of Vinery.—*Omega*: Good Grapes can be grown in lean-to, three-quarter span, span-roofed, and curvilinear vineries; but we think the lean-to facing the south or south-east, and the span-roof running north and south the two best. For early work a lean-to is much more easily kept warm than any other form, unless it be a sunk pit, because the back wall shelters the house from the cold north, north-east, and north-west winds. The value of a three-quarter span would lie in the fact that you would get a longer rod in a house of any given height; and provided you do not commence to force very early, it would probably prove as easy to manage as a lean-to. The shape of a vinery is very often a matter of convenience; but you should bear in mind whether you want an early house or otherwise. In any case the vines must be well exposed to sunlight, and not overhung nor shaded by trees, though the house should otherwise be well-sheltered.

Moss on lawns.—*Anxious Enquirer*: If you had dressed the lawns with nitrate of soda as well as with basic slag and kainit, or with the nitrate alone, you would have got a more vigorous growth and a greener hue in the grass. The specimens you sent us were lichens, showing that the soil is poor and probably overhung by trees. In any case a remedy is wanted that will encourage the growth of grass. The most you can do at present is to give the lawns a sprinkling of nitrate of soda, and possibly a watering with the drainings of the stables if you have the appliances to do so. Then in autumn or any time in winter you should give the lawns a top-dressing of rich material, and another about the beginning of March. This compost may consist of rich soil from under the potting benches or any waste heap, and well-decayed cow or stable manure. Even if you mix it with clay it will be all the better, and serve to give your gravelly soil more holding power. Spread this on the grass as a top-dressing, and scatter it about with a broom. Repeated dressings of this kind will be more permanent than artificial manures; and when you get good growth into the grass the moss and lichens are bound to disappear.

Poplar with a Strong Aromatic Smell.—*Sigma*: We have never heard of a tree called the Friar's Balsam, and probably the name is chiefly known locally. In any case the tree to which you refer would be Populus balsamifera, or the broad leaved variety known as P. balsamifera candicans, for both of them have a strong but agreeable balsamic odour, particularly when the leaves are unfolding in spring. This fragrance is most readily discernible in dewy mornings and evenings, and emanates from a viscid gum with which the scales and the young leaves are besmeared. P. balsamifera candicans is the more common of the two forms, and possibly is the one to which you refer.

Primroses from Seed.—*S. Burnett*: We think it would be more satisfactory in every way to collect seed from the wild plants as soon as it is ripe, and sow at once in a box or boxes placed in a cold frame than to dig up and transplant the old roots. You could raise seedlings in quantity with a minimum of trouble, and have them ready to transplant into their permanent positions in autumn, say about the end of October or sooner, provided the soil is suitably moist. By sowing the seed in boxes you could bring on the seedlings rapidly under the shelter of a cold frame. Then prepare a suitable compost consisting of old potting bench soil, sand, and plenty of leaf mould. Place 4 in. of this in a cold frame, make it fairly firm, and transplant the seedlings 2 in. or 3 in. apart in lines 5 in. to 6 in. apart. Keep the seedlings watered and they will grow sufficiently rapidly to be able to flower next spring. The frames can be emptied in readiness for other bedding plants, by transferring the Primroses to where they are intended to bloom.

Names of Plants.—*J.C.*: 1, Kerria japonica flore pleno; 2, Pyrus japonica; 3, Ribes aureum; 4, Ribes sanguineum; 5, Spiraea astilboides.—*R. Patterson*: 1, Narcissus poeticus ornatus; 2, Doronicum austriacum; 3, Phlox subulata; 4, Aubrietia deltoides Leichtlinii; 5, Narcissus odorus; 6, Caltha palustris flore pleno; 7, Primula verticillata.—*H. J.*: 1, Pyrus baccata var.; 2, Pyrus spectabilis; 3, Prunus triloba.—*A. Calder*: 1, Berberis Darwinii; 2, Berberis stenophylla; 3, Amelanchier Botryapium.—*T. Robertson*: 1, Acacia dealbata; 2, Pancratium fragrans; 3, Dendrobium devonianum; 4, Dendrobium crassinode; 5, Odontoglossum polyxanthum.—*George Jennings*: 1, Selaginella kraussiana; 2, Selaginella uncinata; 3, Selaginella Martensi robusta variegata; 4, Streptosolen Jamesoni; 5, Nepeta Glechoma variegata.

Double Cyclamen.—*George Jennings*: The white flowered Cyclamen you sent was one of the most double we have seen, but as the others are of the ordinary form, double flowers may not make their appearance next year. It appears like a case of synanthy, consisting of the union of four flowers. There were only five sepals, but they were white at the edges, showing a tendency to become petaloid. There were nine small petals reflexed in the ordinary way, and eleven large spreading ones, making twenty in all, and equivalent to the number of petals that should belong to four flowers. There were four perfect stamens, and one imperfect, being just the normal number. The ovary and style were also normal. You might preserve the plant to see what it will do next year.

Thorns on Pear trees.—*W. M. W., F. L. S.*: The wild Pear tree is more or less spiny, and seedlings raised from the pips of perry Pears, as well as others are more or less spiny in character. They are used as stocks for the cultivated varieties. We have not examined that named Fertility, but would advise you to examine the same to see whether the thorn bearing branches do not arise from the stock. If Fertility is really spiny it would be a case of reversion provided it was raised from a parent that was not spiny; otherwise it might be regarded as a less highly evolved form. In any case the improved varieties of Pears are all tending to be spineless. If Fertility is spiny we should not regard the circumstance as the effect of the stock.

Graft Hybrids.—*W. M. W., F. L. S.*: The most authenticated case of a graft hybrid coming under our notice is Laburnum Adami, intermediate between Laburnum vulgare and Cytisus purpureus. Very often one or other of the two latter, pure and simple, may be found on typical Laburnum Adami. We have not heard however, that the combination by grafting has ever been proved by direct experiment.

Communications Received.—W.M.W.—Omega.—F. Davids.—Anxious enquirer.—Constant Reader.—Troubled Amateur.—A.L.—G. Walls.—S.W.—G.T.—R.S.—Amateur.—X.Y.—A. Charles.—R., Glos.—T.L.—F.G.S.—J.—P. Kellerman.

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Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs.		
Grapes, per lb	4 0	4 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve ...		
Strawberries, per lb.	2 6	4 0
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet ... per dozen		2 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers ... doz.	2 0	3 0
Celery ... per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs ... per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ... per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions ... per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes ... per dozen	1 0	1 3
Seakale ... per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos ... per lb.	0 6	1 0
Turnips ... per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 6	4 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays ...	0 6	0 9
Bluebells, 12 bun.	1 0	1 6
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	3 0
Cowslips, 12 bun.	1 0	2 0
Eucharis ... per doz	3 0	4 0
Freesia per doz. bunches	2 0	3 0
Gardenias ... per doz.	1 6	2 6
Geranium, scarlet, doz. bunches	4 0	6 0
Hyacinths Lilac, White (French) per bnch.	3 0	4 0
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Orchids, doz. blooms	1 6	12 0
Pansies, 12 bun.	1 6	2 0
Pelargoniums, 12 bun.	6 0	9 0
Polyanthus, 12 bun.	1 0	2 0
Pyrethrum doz. bun.	2 0	4 9
Roses (Indoor), doz.	9	1 6
" Tea, white, doz.	1 0	2 0
" Niels ...	1 6	6 0
" Safrano ...	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch	3 6	6 0
Tuberoses, doz. blooms	1 0	1 6
Primula, double, doz sprays	0 6	0 9
Violets (French) per doz. bnches.	0 9	1 3
Violets (English) per doz. bnches.	0 9	1 0
Violets (Parma) per bnch.	3 0	4 0
Violets Czar, large, per bnch.	2 0	2 6
Wallflowers, 12 bun.	1 6	3 0

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Azaleas, each	2 0	3 6
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.	18 0	36 0
" specimen	3 0	5 0
Arum Lilies, per doz.	8 0	12 0
Cinerarias, per doz.	6 0	10 0
Cyclamen, per doz.	9 0	12 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	9 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen	21 0	63 0
Spirea ... per doz.	8 0	10 0

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6 To include the above two, 20s. Yellow Madame Carnot, separately, 10s. 6d. each.
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12 Beautiful kinds, specially selected for cutting, 4s.
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12 Beautiful Early Flowering Pompons for the Garden, 4s.
12 Beautiful single kinds, A1 for cuttings, 4s.

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12 Best Show and Fancy, 3s. 6d.; 6, 2s.
12 Best Pompon, 3s. 6d.; 6. 2s.
12 Best Singles, 3s. 6d.; 6, 2s.

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6 Finest Single Zonals, Souv. de Mirande Type, including Mdme. J. Chretien, 3s.
12 Finest Double Zonals selected from 1897, 1896, and 1895, to include Apple Blossom, Golden Gate, and Double H. Jacoby, 7s. 6d.; 6, 4s.
12 Very fine double Zonals, 4s.; 6, 2s. 6d.
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12 Grand kinds, 4s.; 6, 2s. 6d.

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 8th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, May 10th.—Sale of ornamental plants and florists' flowers by Messrs. Protheroe & Morris.
TUESDAY, May 11th.—Royal Horticultural Society: meeting of committees at 12 o'clock.
WEDNESDAY, May 12th.—Tulip Show and Conference of the National Tulip Society at the Royal Botanic Society's Gardens, Regent's Park (2 days).
Sale of Orchids at Croydon by Mr Henry Hill.
Sale of Lilies and miscellaneous plants by Messrs. Protheroe & Morris.
FRIDAY, May 14th.—Sale of imported and established Orchids, by Messrs. Protheroe & Morris.

EXPERIMENTS ON FINGER-AND-TOE.—The third annual report on field experiments carried out by Professors Douglas A. Gilchrist, B. Sc., and P. Hedworth Foulkes, B. Sc., under the auspices of the University Extension College, Reading, has just been issued. It embraces field experiments in Berkshire, Dorsetshire, Hampshire, and Oxfordshire, and gives articles on the manuring of crops, notes on manures, and a report on injurious insects. The experiments include those on pasture, results of rotation cropping, and the disease of Turnips, Cabbages, Cauliflowers, etc., known as Finger-and-toe or Anbury. The latter applies to garden as well as field cultures. A set of experiments on Finger-and-toe disease on Swedes was carried out by Mr. E. G. Legg, at Melplash Court, Brideport. Six plots, each one-twentieth of an acre in area were set apart for the purpose of these experiments. The first received no dressing; the second had sulphate of copper applied to it at the rate of 2 cwt. per acre; the third had bleaching powder, at the rate of 2 cwt. per acre; the fourth had caustic lime at the rate of two tons; the fifth had this proportion doubled; and the sixth was dressed with gas lime at the rate of two tons per acre.

Neither of the above dressings seemed to have much effect in increasing the total weight of crop. The lowest return in produce was at the rate of 27 tons 10 cwt. per acre on the plot dressed with bleaching powder. The heaviest return was at the rate of 29 tons 1 cwt. 8 lbs. per acre on the plot dressed with gas lime. The latter should therefore be looked upon as a fertiliser as well as a fungicide when applied at the proper time of year, that is, when the ground is unoccupied by crops. It may here be stated that all the dressings were applied to the soil at the end of January, 1896, so as to give them time to act upon the slime fungus (Plasmodiophora Brassicae) infesting the soil. They were covered to a depth of 1 or 1½ in. It is considered probable by the authors of the report that the remedy would be all the more efficacious if applied a year previous to the sowing of the Turnips, and proper precautions taken to have it properly and evenly distributed. In order to ensure this being accomplished, the dressings mentioned above were all applied in a finely pulverised condition. The fungus is believed to be capable of existing in the soil for a number of years, and no doubt it would be able to find sustenance where such cruciferous field weeds as Charlock, Shepherd's Purse, etc., were found to exist. For this reason farmers as well as gardeners should avoid growing any of the Brassica tribe on the same land for some years afterwards. This, of course, is difficult of accomplishment where ground for the various crops is scarce. Farmyard manure from cattle fed with Turnips, infested with Finger-and-toe, should not be used for Turnip crops, according to the advice here given. It is difficult, however, to make either gardeners or farmers attend to this simple requisition.

Another method of ascertaining the value of the above dressings, was to count the number of diseased Turnips in each plot. The principal object of the experiments was to determine what effect the various reputed remedies had in checking the ravages of the disease. According to Dr. Somerville's experiments at Newcastle-on-Tyne, sulphate of copper and bleaching powder were good remedies; but the results at Melplash, which were carried out on a larger scale, did not corroborate his views, for these remedies were far less effective than gas lime. Where no dressing at all had been used, there were eighty-six diseased tubers; and seventy-four and fifty-nine respectively, where sulphate of copper and bleaching powder had been used. In the plot dressed with gas lime there were forty-eighty diseased tubers; and thirty-three where caustic lime had been applied at the rate of four tons to the acre. Curiously enough, on the plot to which only half of the latter dressing had been given, the number of diseased tubers were reduced to twenty-seven. This might have been partly owing to a smaller quantity of disease germs in the soil, or other accidental circumstances difficult to detect; but, all the same, we must conclude that caustic lime and gas lime were the more effective of the remedies used. The cost of the fungicides or remedies must also be taken into consideration; for though the whole

field suffered less from Finger-and-toe than the farmer expected, that remedy is the most practicable which costs least, and gives the best result. Gas lime is valued at 3s. per ton, and caustic lime at 15s. per ton. On the contrary, though least effective, sulphate of copper costs 22s. per cwt., and bleaching powder 16s. for the same weight.

The experiments carried out at Headington, Oxfordshire, had the same object in view as at Melplash, and were equally, if not more interesting, because they show under what conditions the disease is most virulent. Rich soil, deficient in lime, bore a poor crop of Swedes, more or less decimated by Finger-and toe, whereas a shallower soil overlying limestone rocks and containing 5·49 per cent. of lime, was comparatively free from disease. It may here be remarked that the use of farmyard manure had considerably increased the attack; while outside the experimental plots the soil was almost bare in places owing to the ravages of the disease. The effect of farmyard manure is significant, and would indicate that it serves to carry the spores from a previous crop of Turnips to fresh ground. Strange to say, the ground that received no dressing gave the greatem weight of sound roots, while gas limes caustic lime, basic slag, and chalk came next in order of merit, respectively. Of the dressed plots, bleaching powder, basic slag, and sulphate of copper. in this order, gave the lightest total weights of crop. The same plots are to be used next year without further dressing, to ascertain whether the fungicides require considerable time to disinfect the soil. Gardeners may, with a certain assurance of their effectiveness continue to use gas lime and caustic lime as remedies for clubbing amongst Cabbages and other members of the same tribe.

Royal Botanic Society.—Owing to the late cold weather having kept back the flowers, the show of the National Tulip Society, which had been announced to take place in the gardens, on May 5th and 6th, has been postponed to the 12th and 13th.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, May 11th, in the Drill Hall, James Street, Westminster, one to five p.m. At three o'clock a lecture will be given by Mr. G. Massee, F.L.S., on "Diseases of Plants, especially of Orchids."

Erratum.—On p. 350 in the ninth line from the top, for "not promising," read "most promising." Since this was written we have had severe weather for the season; but hardy fruits generally are not much affected by the frost, hail, and heavy rains. Small fruits in early positions have suffered much, but bush fruits generally promise to be a good crop. We planted these where the early morning sun is shaded by large Beech trees, and the frost is then off most of the bushes before the sun shines upon them. We attribute the complete observance of failure in a great measure to this. Tall fruit trees in the same positions are, however, not so favoured.—*M. T., Carron.*

Wild Flowers in Devon.—"In sweet Devon's fair land" the amateur botanist, or any other botanist for the matter of that, may find an abundance of flowers to interest him. In the shade of the thinner copses the Wood-Sorrel has taken the place of the Windflower, the Wood Sanicle is just coming into bloom, and the brown spikelets of the Wood Melic, so much relished by pheasants, are to be seen. The blossoms of the Red Campion, and the spathe of the Cuckoo Pint are common. By the sides of the streams may be seen Comfrey and Figwort, Flags and Sedges in profusion, whilst the Brooklime and the Water Avens have already opened their blossoms. Walks amidst such surroundings can scarcely fail to be interesting.

The Black Spot of Tomatos is caused by a fungus named Cladosporium Lycopersici. It was rather ingenious of a writer in answering his correspondents to say that the black rot was caused by a fungus named Macrosporium Tomato. Well, after all, "what's in a name?" he may reply.

Princess of Wales Violet, otherwise known as Princesse de Galles, is making headway towards becoming highly popular and widely cultivated on both sides of the Atlantic. The large size of the flowers, their rich colour, delicious odour and long stalks account for the rising popularity of the variety. The size and shape of the flowers show that the Violet is now more rapidly undergoing evolution than formerly.

The Sparrow Once Again.—A defender of the sparrow has recently written to the Board of Agriculture urging that the Government be appealed to, to take measures to protect this useful bird. The result of leaving it unpersecuted would be, he said, a tendency to improve the prospects of agriculture. It is most likely that the gentleman in question will be welcome to all the sparrows that his land will contain—as far as the farmers and gardeners are concerned.

Boys' Allotments.—"Train up a child in the way he should go," says a very old book, and the Surrey County Council evidently believe in the motto. In several parts of the county boys' allotments have been made, wherein boys of the ages of from fourteen to eighteen may learn the way to garden. The ground, manure, and seeds are furnished free to the boys, and a competent gardener supervises and instructs them. Prizes also are given for the best results. This is an example that might well be followed by other county councils in various parts of the country, for it would admirably supplement the work carried on amongst the seniors, and would, moreover, develop in the juniors the faculty of observation and resource.

Flax Cultivation in England.—The success of the proposed revival of Flax growing in England will depend upon that of the "English Fibre Industries Co., Ltd.," in Suffolk and Cambridgeshire. If this company is able to continue the prices offered for Flax and Hemp, farmers in the district should find it profitable. At present the price offered for Flax is £4 per ton with the seed on. A fair crop is 2¼ tons per acre, this making £9, the value per acre of such a crop. The cost per acre is under £7. For Hemp the company will pay £3 10s. per ton. A low average crop of this is three tons to the acre, whilst the expenses are equal to those incurred in growing Flax. About 8,000 acres of Flax and Hemp are now being grown for the company, and if the venture proves a success this area will doubtless be largely increased.

No Flowers for Hospitals.—Bearing in mind the pleasure given to the patients in hospitals by the sight of flowers, it seems a cruel and arbitrary measure to deprive them of the enjoyment. After due consideration however, it has been decided that the exclusion of flowers is necessary. Flowers placed in water cause the latter to quickly ferment, and numbers of microbes find a lodging place and congenial propagating ground therein, to the danger of patients already weakened by disease. The only alternative to the rigid exclusion of flowers would be the frequent changing of the water in which they are placed, and also the prohibition of cut flowers being kept longer than twelve hours in a room. Experience has demonstrated however, that no matter how strict the discipline it is impossible to insure the sick against infringement or neglect of the rules. Then again, the odour of some flowers has a deleterious influence varying of course with the character and strength of the individual. According to eminent laryngologists such as Dr. Fannel, and the late Sir Morell Mackenzie, the flowers which are most injurious are the Violet, Rose, Heliotrope, Gardenia, and Mignonette. Their perfume is said to produce a paresis of the constrictor muscles of the glottis, and spasm of the bronchial tube, after which dreadful warnings we shall of course never wear the Gardenia more as a buttonhole, or eagerly sniff the perfume of the Mignonette, whilst we shall tear the Rose and Heliotrope root and branch from our gardens, and shun the Violet bed as an insidious snare.

A rook, it is said, will destroy 700,000 insects annually.

Kentish Fruit Growers are anticipating a fine season, for the promise of heavy crops is better this year than it has been for many years previous. The Cherries have bloomed with astonishing freedom, and if only the frost will keep away, there will be little to grumble at.

Snow in Perthshire.—So cold has the weather become in Perthshire since the end of last week that the mountains and hills have again taken to wearing their mantles, wraps and caps of snow. Many of them, indeed, intend to wear their furze all the summer.—*Snaggs.*

Royal Botanic Society.—The members of the Quekett Microscopical Club gave an exhibition of microscopic plant life before a meeting of the above society, on April 22nd. The chairman, Mr. C. Brinsley Marley, then announced that the gardens would be opened to the public by payment on the Saturdays in June and July, and gardeners would then be appointed to take visitors round and show the chief points of interest.

Sports amongst Roses.—Last year is stated by *The Florists' Exchange* to have been very prolific in sports from Roses. White blooms have appeared on Katherine Mermet, identical with The Bride, and a yellow sport in Ireland. Marechal Niel on two different shoots produced blooms identical with Gloire de Dijon; and the question arises whether Marechal Niel originated from that Rose, as its history has not been given. A pure white sport has appeared on Maman Cochet in Baltimore. A seedling produced from a cross between Souvenir du President Carnot and Mme. C. Testout, shows no trace of relationship with the Teas, but looks like a hybrid perpetual. It has not yet flowered however.

The Cuckoo was heard as early at least as the 22nd of April, at Twickenham, Middlesex. This reminds us of the singing of three notes by the Cuckoo, which Mr. Charles A. Witchell, in discussing "Bird-songs in Spring," in the April number of *Knowledge*, says has been recorded. We ourselves have heard the cuckoo repeatedly utter a treble note, more than twenty years ago; but our impression was that it was an alarm-note rather than a song, for there was a considerable commotion amongst the thrushes at the time. Owing to the presence of a high wall and the thick foliage of the trees we could not determine the cause of the commotion. The treble note in question was cuc-cuc-koo, the first two notes being each only a quarter the length of the third, as near as we can remember. The three notes were several times repeated in shrill tones and quick succession, and were very noticeable, because so different from the familiar double note — cuc-koo — usually so deliberately and sonorously repeated.

Earthworms and Vegetable Mould.—*Longman's Magazine* of a recent issue contains an article upon the above subject emanating from the pen of Mr. Grant Allen, who states that it was Gilbert White, of Selborne, who first of all pointed out the importance of earthworms as producers and maintainers of the living layer of vegetable mould. It was the patient investigations of Darwin, however, which fully established the fact, and raised it to the rank of a scientific discovery. Darwin showed that earthworms act upon the soil in three ways. In the first place they open up and loosen the ground for the roots to penetrate, more perfect aeration of the soil being thus obtained. The acids they secrete also act chemically upon the layer of rocks beneath in a way that assists the disintegration of the latter. In the second place they crush in their gizzards small fragments of stone, and liberate their component elements. In the third place they drag down into their burrows countless numbers of leaves which they eat, and carry up the refuse to the surface. It is computed that no fewer than 53,000 worms inhabit an acre of garden soil. These worms pass through their bodies ten tons of material in a year, and throw it up as mould at the rate of 1 in. in depth every five years. The greater part of this mould is composed of a refuse of vegetable matter, and is teeming with myriads of bacteria. Even after allowing for other co-operating causes, earthworms are responsible for the formation and renewal of this layer of vegetable mould.

SHOW OF BRITISH GROWN FRUIT.

I FEEL inclined to head my letter "Lost, Stolen, or Strayed, £100," for, though not "Lost" or "Stolen," the £100 required for the Autumn Show of British Grown Fruit certainly seems to have "strayed" into the all devouring capacity of the many mouthed Diamond Jubilee projects.

You will remember that when the autumn fruit show, which had been held from time immemorial at the Crystal Palace had fallen through, the R.H.S. offered to revive it as a show of "British Grown Fruit" with prizes to the value of £250, on condition that those interested in the encouragement of fruit growing in this country would subscribe not less than £100 towards the unavoidable expenses.

For the last few years this £100 has been forthcoming, and magnificent shows have resulted, teaching thousands and thousands of spectators what fine fruit can be grown in Great Britain, and instructing very many planters as to the best varieties with which to stock their Orchards and gardens.

Alas! Sir, this year of especial grace the £100 has strayed—it is not—or at least, is not as yet. Letter after letter reaches me to the effect, "Very sorry, but am so bled with Jubilee projects that I cannot help this year." In fact Peter is to be robbed in order to pay Paul.

May I be allowed to appeal to all interested in British fruit not to let our great annual show fall through for lack of £100. Immediate help is wanted as the schedule is all ready for issue—all ready with this one all important exception.—*W. Wilks, Sec. R.H.S., Vicar of Shirley, Croydon.*

GENTIANA ACAULIS.

THE Gentians generally prove difficult plants to grow and flower in the southern counties, so that very few attempt their culture, except those who may be looked upon as specialists or experts. Notwithstanding this fact, Mr. H. Bailey, gardener to W. L. Barclay, Esq., The Briars, Reigate, has grown and flowered G. acaulis most successfully, as the accompanying illustration will show. It represents one of six small beds planted at intervals on either side of a long Rose walk. The centre of each of these beds is occupied with a standard Rose, and though they are only 2 ft. 6 in. in diameter, the number, size, and rich blue of the flowers had a most striking effect, particularly when the sun was shining. The rich blue of this and several other Gentians is difficult to match amongst hardy plants, and never out-rivalled. Certainly the Gentians were much admired by visitors to the Briars. The accompanying illustration was prepared from a photograph taken in April last year by Miss J. A. J. Barclay, who is merely an amateur at this kind of work. A first glance at the photograph gives one the impression that the mass of flowers consists of Gloxinias.

Firm, and fairly moist soil during the summer months, seems to supply the most suitable requisites for this Gentian, as in the case of several other alpine species. We have seen it used as edgings to walks in the kitchen garden, even where the ground sloped to the south with a steep declivity. There are, no doubt, many places even in the southern counties where this species could be grown successfully, if gardeners would only try to ascertain for themselves. The glowing blue of the flowers would be sufficient recompense to those who succeed.

GENTIANA ACAULIS.

ORCHID-NOTES & GLEANINGS.

BY THE EDITOR.

Cattleya Schroderae Bandon Hill var. *Nov. var.*—This name has been given to a very delicately coloured and pretty variety of C. Schroderae now in the height of its season. Although pale colours are the general rule in this Cattleya, recent introductions show that a great amount of variation occurs amongst individuals. The intense colours are usually, if not always, confined to the lip, and consist of orange, purple and crimson-purple, the first named being the most widely prevalent. The orange blotch in the Bandon Hill var. is, however, of very moderate intensity and size, being, if anything, smaller than usual. All round the orange area, the lip fades almost to white; this in turn is surrounded by a broad and clearly defined, pleasing soft purple border, beautifully crisped at the edges. The tube of the lip internally and externally is the darkest part of the flower being of a beautiful rose-purple, shining on the inner face as if polished. The sepals and broadly ovate petals are of the palest blush lilac. The plant has been recently imported and is flowering for the first time in the nursery of Mr. J. Seeger, Bandon Hill, Croydon, S.E.

GARDENERS AND WAGES.

Your leader, p. 547, is of great moment to gardeners of every grade, and all feel that such a lucid article is very relevant. Such vital force is welcome to a class who can give as good a record of themselves as any employees in this country. Your concluding remarks are a sequel to a deal of what has done so much—and is still doing—to banish horticultural science and practice from Scotland as well as England. There were few of the class of men described to be found in Scotland, but I regret to say that under a belief in (false) economy, the putting of men in charge of gardens who assume the title of "gardeners" is more common than it was years ago.

Many places of note I know are now let to tenants (some of them very wealthy) who have no further interest in the gardens than to get their wants supplied. They make an effort to engage a man to take charge at the lowest wages they are inclined to offer and it is not long till "Ichabod" is stamped on all things in the garden. While I know many such places—and am sorry that they are in the majority—there is a brighter ray evinced now and again by humane employers who will not grind down deserving men, nor tempt them by remuneration which would not be accepted by a drudge in a factory. On the contrary they offer their gardeners enough to fairly maintain their homes, and at the same time reserve the energies of their employees in the fulfillment of their duties in the gardens and grounds instead of making them scheme how to appear respectable and pay their way honestly.

This is the right way to face such matters. Such is also humane and logical. Were I to give my personal experience, and that of good men, many of whom I have had the honour of helping to "breast the waves," some stories stranger than fiction could be told. It is regrettable that such employers as those "who think that their neighbours should be loved as themselves" are not better represented numerically.

Gardeners in Scotland, as well as in England, are not in every case blameless. One well-known nurseryman said in certain districts "gardening apprentices were propagated as by cuttings, and potted off as journeymen when they had not acquired a mean rudimentary knowledge of the profession they were attempting to follow." In agricultural districts youths are easily found to work in gardens at small remuneration to aid their parents in surmounting the difficulties they have to endure in the battle of life by receiving nominal payment. But where there are manufactories in which mechanics get good wages, such youths to enter gardening are difficult to find. So the raising of apprentices is not so common, and they, like journeymen, and foremen, too, have to be brought from a distance. We never think of offering regular labourers less than 21s. or 22s. per week with free house and other privileges, and casual workmen have to be paid not less than 6d. per hour. But such wages are looked upon as insignificant where such workmen as steady moulders can make easily from 65s. to 70s. per week.

The system in Scotland of raising gardeners has many advantages over the English by the men being all apprentices first, learning every branch of gardening on the place, and entering the glass department when their superior considers promotion is due to the aspirant. But in English gardens there is much more improvement in raising "all round" men than when I worked in the South.—*M. Temple, Carron, N.B.*

Gleanings from the World of Science.

The Maple Mould.—Those who see this fungus or its effects for the first time, little suspect the cause of it. Some have set it down to a natural form of variegation, and such it is, indeed, but not in the usual acceptance of the term. The Maple Mould (Rhytisma acerinum) is discussed by the Rev. Alex. S. Wilson, M.A., B. Sc., in the April number of *Knowledge*, and makes it a plea for introducing various common, but interesting fungi belonging to the same natural order, to the notice of his readers. Rhytisma comes from a Greek word meaning to dye or stain, and those who have seen the black spots on the Maple (who has not?) will admit the appropriate character of the name. Whether the spots are regarded as a disfigurement of the foliage or otherwise, we think is a matter of opinion, for we have seen huge old trees, almost every one of the thousands of leaves on which were covered all over the surface with black patches, and such leaves appeared so characteristic of Acer Pseudoplatanus as to be almost ornamental. The fungus cannot be of a deadly character, seeing that these old giants appeared otherwise to be quite healthy. Other species of Rhytisma attack such garden plants as Heath, Andromeda, and Willows.

Nectria.—Most gardeners, probably, have noted dead sticks and wood about and in gardens, covered with small orange-scarlet cushions about the size of large pin heads. These cushions are the fruiting-cups of Nectria cinnabarina. Gardeners can afford to look upon this species with more complacency than upon N. ditissima, the fungus which causes canker in Apple trees, and is so deadly and destructive. The former living upon dead wood, may be regarded as a saprophyte; but the latter, attacking as it does, the living tree, is truly a vegetable parasite. The fruiting-cups in this case are more assimilated to the colour of the wood, and seldom observed by gardeners, although the effect of it is almost universally recognised in gardens and orchards—more is the pity. Wherever the diseased

portions can be entirely removed they should be burnt forthwith as soon as observed. Severe and untimely pruning should be avoided. The trees should be encouraged to ripen their wood early by means at the gardener's command. The soil should be well-cultivated and well fertilised to encourage a healthy and vigorous growth to enable the trees to grow out of the disease, as gardeners term it.

Erysiphe Tuckeri—Most cultivators of Grapes are more or less familiar with the mildew or disease of Vines. Many recognise it under the name of Odium Tuckeri; but science now makes it out to be merely a stage of a fungus to which the name Erysiphe is given. The malady is more prevalent and destructive in the vineyards of France and Spain than it is in this country. It belongs to the same order as the Maple Mould, the latter being black and the former white or gray. The mildew of Vines is by far the more destructive of the two, and should be vigorously kept in check by means of flowers of sulphur or something containing a large percentage of sulphur in its composition. Although the Vine mildew is so common and widely distributed, it has never been known to produce sporocarps as a result of fertilisation.

Podosphaeria pannosa.—This fungus produces the mildew of Roses and allied plants. It is one of the simplest of the family to which it belongs, and produces a web-like white felt that rapidly spreads over the surface of the leaves of its host plants. Sooner or later the hyphae produce specialised cells—the antheridium and carpogonium, which are functionally equivalent to the stamens and pistils of flowering plants. When climate and temperature favour this mildew, it is difficult to cope with, particularly in the open air, where atmospheric conditions are not so well under control. The carpogonium divides into two cells, one of which becomes an ascus or sack containing eight ascospores. Sulphur is a good remedy owing to the fact that the mycelial threads live on the surface of the leaf.

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were made by the Royal Horticultural Society on the 27th ult.

Orchid Committee.

ODONTOGLOSSUM CRISPUM HELIOTROPIUM, *Nov. var.*—The flowers of this beautiful variety are of medium size, with broad, well imbricated segments. The sepals and ovate, toothed petals are of a deep rose, ornamented with a cluster of crimson spots on the centre of each. The lip is small and white, with a large yellow disc, and a few small spots in front of the crest. The rich rose hue of the flowers is the most striking feature of this grand variety which ranks amongst the best of the species. First-class Certificate. R, Brooman White, Esq., Arddaroch, Gaerlochhead, N.B.

ODONTOGLOSSUM EXCELLENS LOWAE, *Nov. var.*—In this we have one of the finest varieties of O. excellens, which is a natural hybrid. The sepals are golden-yellow with a few large, dark chestnut blotches distributed all over the surface. The petals have more numerous, but smaller spots, and a white area towards the base. The lip is white with a few large blotches in front of the yellow crest. Altogether it is a richly coloured variety. Award of Merit. Messrs. Hugh Low & Co., Upper Clapton, N.E.

Flora' Committee.

RHODODENDRON SUPERBISSIMUM.—The leathery leaves of this hybrid are elliptic, woolly at the edges and beneath, and 2 in. to 2½ in. long. The flowers are 4 in. to 5 in. in diameter, wide open, and white, with a cluster of greenish-yellow spots at the base of the upper segment. They are borne in clusters at the apex of the shoots; and the plant is dwarf, branching and bushy. First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

LOMARIA CILIATA GRANDIS.—An Award of Merit was accorded to this handsome variety on the 9th of March last, and having been brought before the committee again it was accorded a First-class Certificate. The fronds are of great breadth and infinitely superior to those of the type which used to be cherished in collections twenty to thirty years ago. The fertile fronds are nearly erect, with narrow pinnae, but the barren ones are drooping, with very broad pinnae. Mr. H. B. May, Dyson's Lane Nursery, Upper Edmonton.

LOMARIA CILIATA MAJOR.—The fronds of this variety are similarly broad as those of the above named; but both the fertile and barren ones are much more spreading, so that the plant presents a dwarfer appearance. Award of Merit. Mr. H. B. May.

ALKANNA TINCTORIA.—This is the true Alkanet, being much used for colouring oils, wax, wines, &c. in the south of France, where it is grown for the purpose. It was introduced to this country in 1596, and is recorded in various books under the name of Anchusa tinctoria. It has various other names, including Lithospermum tinctorium, under which it was shown by J. T. Bennett Poë, Esq. (gardener Mr. Downes). It is perennial, and hardy, with stems about 9 in. to a foot high, and linear-lanceolate, gray, hairy leaves. The flowers have been recorded as white, purple, and purple-blue, no doubt being variable, especially under cultivation. Those of the plant shown were bright sky-blue and very pretty. It is figured in Reichenbach's Flora Germanica, XVIII, t., 1,316 under the name of Alkanna tinctoria. Award of Merit.

PRIMULA TRAILLI.—This is closely allied to P. involucrata, of which it may be considered a form with larger, drooping white flowers, and a faint tint of lilac externally. The leaves are oblong, dark green, smooth and almost remind us of the leaves of Rumex acetosa. It is one of the prettiest of hardy Primulas, a native of the Himlayas, and a valuable acquisition for rockwork or even pot culture. Award of Merit. G. F. Wilson, Esq., F.R.S., Weybridge and Wisley.

TROPAEOLUM MRS. SANDERSON.—The flowers of this bedding variety are of a rich maroon-crimson, and produced in great profusion. The leaves are of a much lighter green than those of the well known Empress of India. A little group of plants in pots and which had been grown in a greenhouse, was shown by Mrs. Sanderson (gardener, Mr. J. R. Wood), The Mount, Ealing, W. As a bedding plant, it flowers as profusely, remains dwarf, and owing to the greenness of the foliage is quite distinct from the well-known, dark variety above named. Award of Merit.

AURICULA FRED KNIGHTON.—The flowers of this alpine variety are of large size and produced in large trusses. The large eye is golden-yellow, and the ground colour maroon fading to a purple-red margin. The flowers are handsome and produced in large trusses. Award of Merit. Mr. R. Dean, Ranelagh Road, Ealing, W.

MORUS ALBA PENDULA.—This is a weeping variety of the White Mulberry, and requires to be grafted on upright stems so as to display the gracefully drooping habit of the branches. The leaves are lobed and quite distinct from those of the Black Mulberry (Morus nigra). Award of Merit. Messrs. Paul & Son, Cheshunt.

Fruit and Vegetable Committee.

TOMATO ROYAL WINDSOR.—The fruits of this variety are of medium size, slightly flattened, golden-yellow and more or less heavily flushed with orange, particularly on the top. Award of Merit. Mr. Owen Thomas, The Royal Gardens, Frogmore, Windsor.

APPLE HILLIER'S EASTER ORANGE.—This resembles a small Cellini in shape. The skin is yellow, more or less suffused with red and striped with a deeper hue on the exposed side. The variety keeps well, but the flesh is now getting soft, and of course is past its best. As a dessert Apple it would seem to be of some considerable value. Award of Merit. Messrs. Hillier & Son, Winchester.

The undermentioned Dwarf or French Beans have been grown in pots in the gardens of the Royal Horticultural Society, at Chiswick, in order to test their suitability for early forcing. They are only six out of a large number of sorts which have been grown on trial, and each of the six had the Award of Merit, given at Chiswick, confirmed at the meeting on the 27th ult.

NE PLUS ULTRA.—The pods of this variety are 4 in. to 5 in. long, shapely, and smooth; and the variety is in every way worthy of extended culture for forcing and early use, on account of its proflic character, earliness, and the flavour of the pods. Messrs J. Veitch & Sons, Ltd., Chelsea; and Messrs. Watkins & Simpson, Exeter Street, Strand.

OSBORN'S FORCING.—The pods are broader, if anything, than those of Ne Plus Ultra, and more straight, but similar in length. Messrs. Damman & Co., Naples, Italy; and Messrs. Watkins & Simpson.

MOHAWK IMPROVED.—This is a longer-podded variety than either of the above, also broader and smooth. It is highly suitable for early work, and might be more often used. Earl Percy (gardener, Mr. Geo Wythes), Syon House, Brentford.

EMPEROR WILLIAM.—The pods in this instance are almost as broad as those of a Scarlet Runner, and rather undulated in outline. But though it will be of no service for exhibition purposes, it is very early, bulks well, and will be serviceable on that account when it becomes better known. Ernest Benary, Erfurt, Germany.

GOLDEN WAX POD.—The pods in this instance are 6 in. long, and broad in proportion. As forced they are smooth, light yellow, and sometimes tinted with green. It is therefore very distinct, and is of excellent quality. Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden.

VEITCH'S EARLY FAVOURITE.—The pods of this variety are long, fleshy, very tender, and delicate in flavour. The plant is dwarf, very early, and prolific. Messrs. J. Veitch & Sons, Ltd.

Narcissus Committee.

NARCISSUS NIAD.—This is a very beautiful hybrid between N. poeticus and N. triandrus, and is intermediate between the two. The segments are white, resembling those of N. poeticus. The cup is very shallow, wide open, and of a charming and delicate lemon of the palest shade. It is well worthy of being included in collections. First-class Certificate. Rev. G. H. Engleheart, Appleshaw, Andover.

VEGETABLE CALENDAR.

A CAREFUL examination of the early sown seed beds of all the Brassicas will be necessary to detect failures; and where the stock of young plants is not equal to the requirements, fresh sowings should be made without delay. Any plants strong enough for transplanting should be pricked out 2 or 3 ins. apart on firm ground. This will keep the plants stocky, and greatly increase the fibrous roots, which will be found a great advantage when the plants are moved into their permanent quarters. Weeds should be removed by hand in their earliest stages of growth, in all seed beds sown broadcast, and in the case of Onions and other crops sown in rows the surface between the rows should frequently be stirred with the hoe, to promote quick growth.

PEAS.—Two or three liberal sowings of the best Marrow varieties should be made during the next month or six weeks, to ensure a full supply during the hottest part of the summer. These mid-season sowings will give the best results when sown in trenches, prepared with a liberal allowance of well-rotted dung mixed with the soil in the bottom of the trench, making the whole firm with slight treading. Draw drills at least 6 ins. wide, and sow thinly at this season, otherwise the plants will spindle away, and be in the worst possible condition to stand against a trying spell of hot dry weather. All crops advancing should be staked before there is danger of the plants falling on one side in the rows, as this often induces a fresh growth from the bottom of the stems and is detrimental to a full crop on the principal growths. When the earliest are in pod, liberal supplies of liquid manure will be of great assistance during dry weather, in prolonging and adding to the weight of the crop.

CAULIFLOWER.—A sowing of these at the present time, and another a month hence, will ensure a supply of plants for filling up vacancies in the vegetable quarters, and an abundant crop during the autumn months. Every encouragement should be given the earliest crop to form good heads. These will stand strong doses of liquid manure, and there is nothing more stimulating for this crop than nitrate of soda. A few applications of this manure at intervals will add much to the size of the heads. Another stock of young plants should now be in condition for transplanting to succeed the autumn sown plants. These may be planted between rows of Peas or other crops that will give a slight shade; but wherever planted at this season the ground should be rich and deep.

LEEKS.—Another sowing should be made for a late crop. A somewhat shaded position will be an

advantage for this sowing, as the young plants may have to remain some time in the seed bed; and will retain a better colour than when exposed to full sun and probably drought. The earliest sown plants should soon be fit for transplanting. Where the finest heads are desired, trenches half filled with manure will give the best results. For an ordinary crop the young plants may be dropped in holes about six inches deep made with a dibber, and one foot apart, giving a slight watering to wash a little soil over the roots.

TURNIPS.—To keep up a supply of young roots, sowings should be made at short intervals, choosing showery weather. Small sowings will be best until the end of the month. Thin out early beds and water during dry weather.—*J. R.*

THE PLANT HOUSES.

The Cool Conservatory.

To keep a show house filled with attractive material throughout the year necessitates not only adequate supplies of suitable subjects with proper conveniences for their accommodation, but also the employment of a deal of careful foresight on the part of those who are in charge. Even with all this it is sometimes exceedingly difficult to avoid an awkward break or two in the succession at various times of the year, and impossible to prevent the exhibit of floral colour from fluctuating.

The present time is one of those natural breaks or changes that cannot well be avoided. The forced material has been having its own way since the decline of the Chrysanthemums, and while we are fully alive to the decorative value of Tulips, Hyacinths, Narcissi, Lilacs, early Azaleas, Primulas, Cinerarias, etc., we cannot keep them always with us, nor would we if we could, for change and variety in a show house is as necessary as colour and appropriate arrangement.

The plants that may appropriately be termed summer subjects are ready to take their part in the proceedings, but it will be well to make some little alteration first. This constitutes a favourable opportunity for giving a general clean up, and the chance should not be lost. Clean plants and a dirty house are not a successful combination any more than dirty plants and a clean house would be. It is possible to keep dirt out of sight during the duller months of the year, but the brighter light of summer renders this exceedingly difficult. All the woodwork and glass that can be conveniently got at, without disturbing the climbers overhead, should be washed; likewise the shingle on the stages.

CLIMBERS, such as Lapagerias, Passifloras, Tacsonias, Plumbagos, etc., will need to be carefully looked after for tying, as they are now growing with great rapidity. Both Tacsonias and Passifloras are prone to making a great deal of growth when they are in good health, and too much of this should not be tied in. Passiflora racemosa, however, does not make nearly so much growth as P. caerulea and P. c. Constance Elliott. Thin out all the weaker growths of these, and allow the ends of the remainder to hang gracefully down, or they may be tied in now, and loosed when they commence to flower.

ROSES.—Where there are large plants permanently growing in beds or borders with their growths up close to the glass a continued watch has to be kept at this time of the year, not only to keep the shoots tied down in good time, but also to prevent green fly from getting a hold. With a houseful of flowering plants it is impossible to syringe or vaporise, and hence syringing with insecticides or dipping the infected shoots become the only available methods of combating the pest. William Allen Richardson and Marechal Niel are favourite varieties for planting in the conservatory, and green fly seems to be especially fond of both.

PELARGONIUMS.—As the earliest plants throw up their flower buds staking must be seen to. Do not let the stakes be more conspicuous than is necessary, and endeavour when inserting them to extend the spread of the plants as much as possible. Feed them liberally now with manurial stimulant. A daily application of manure water will not be too much if the plants are vigorous. As Pelargoniums are notorious for being a congenial refuge for green fly a fumigation should be given them just before the flowers open in order to keep them clean for awhile.

FERNS IN POTS.—Throughout the summer months there are many Ferns that require more heat during the winter and spring than the conservatory will afford that will do in a cool house. In bringing them from the warmer quarters into the cooler ones it will be advisable to keep the side lights closed for a few days, only giving air on the roof, thus inuring them gradually to the change. Although the Ferns do best when given a corner to themselves they are very valuable in combination with flowering plants of various kinds.

FERN NOOKS.—Where these are tastefully planned and properly constructed and looked after there is no more attractive corner of the conservatory. The present time is a good one to renovate such nooks. Pockets made of virgin cork nailed to the wall are easily kept in order, and a wall may readily be covered in this way. A top-dressing of light soil will be of great service to established plants, whilst vacancies may be made good by dropping in fair sized pot plants. Pieces of Selaginella Martensii, S. M. variegata, S. kraussiana, S. k. aurea, and S. uncinata root quickly and soon establish themselves, if kept supplied with water and shaded.

Pits and Frames.

WITHIN the course of the next week, if the weather proves promising it will be possible to transfer a considerable number of the bedding plants that are now choking up the pits and frames to a place outside. A start may be made with the hardiest; but tender subjects like Zinnia, Perilla, Ricinus, and Nicotiana, must be kept under glass for a little longer. Meanwhile more air will be given daily to plants in frames, in order to prepare them for the outdoor shift.

CINERARIAS.—In a few gardens where plants are required to bloom in December, a sowing of seed is made about the beginning of the second week in April. The May sowing, however, is the important one, although it may be supplemented by a sowing made next month to furnish plants for late blooming *i.e.*, in March and April. Sow thinly in shallow pans filled to within an inch of the top of their rims with light soil. Do not bury the seed too deeply, and cover the pans with a piece of glass. Place the seed pans in a gentle heat and shade them carefully from sun. Some people find a difficulty in the germination of Cinerarias, and this is somewhat difficult to understand seeing that the seed dropped naturally from the plants germinates quickly and well. Not infrequently we have noticed that when the seed sown in pans under glass which has had a good deal of trouble taken over it has only produced a few straggling plants, the naturally sown seedlings have made their appearance in scores upon positions where the old plants have been stood.

PRIMULA SINENSIS.—A sowing of Primulas should be made without delay. Drain the seed pans well, and fill them in a similar fashion to those occupied by the Cinerarias. Press the compost down pretty firmly, level it, and water it before sowing. A steady temperature of about 60° will give the best results. As soon as the seedlings get large enough to handle they should be lifted out carefully and potted up in small thumb pots. Primula seed is usually rather irregular in germinating, and by lifting out the plants as they appear and keeping the seed pan as much undisturbed as possible, more plants will be obtained than by pricking out the whole of the seedlings at once and throwing the soil containing the dormant seed away.

ZONAL PELARGONIUMS.—The cuttings taken for the purpose of supplying a stock of plants for winter flowering have now filled the pots of their first shift with roots. It will now be a good time to put them into their flowering pots—32's. A compost of two-thirds of good loam and one part of old horse droppings or dried cow manure with sharp sand will answer well. Pot pretty firmly, as this conduces to the formation of dwarf, short-jointed growth that has a better chance of attaining to the maturity that produces a good show of bloom than the rank and sappy growth. For the next fortnight a place in a cold frame will be necessary, but after that the plants may be turned out of doors.

CYCLAMEN.—The strongest plants will be ready for a shift into large 60-pots by the middle of the month. Use a compost of nearly equal parts of good loam and good leaf soil with a sprinkling of sand, the loam being slightly in excess of the leaf mould. The compost may be made a little heavier at the next shift. Place the plants in a frame on an ash bottom and after they have got over the check of shifting do not attempt to coddle them.

TREE CARNATIONS.—The old plants will pay for overhauling now. Cut away any long straggling stems and growths, and train up the best shoots from the bottom to take their places. A topdressing of rich light soil will render good service. The old soil may be removed to as great a depth as possible without uncovering too many of the roots. The only objection to topdressing is that greater care is needed for some time after it is given to see whether the plants want water or no, for the appearance of the top layer is apt to be deceptive with regard to the condition of the lower ones. By tapping the pots, however, the true state of affairs may be ascertained.

LOBELIAS.—A quantity of the strongest of the blue Lobelias propagated in such quantities for the flower garden come in very handily for conservatory decoration if potted up into 60-pots. Almost any soil will do, and the plants will soon commence to flower.—*A. S. G.*

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

LAELIAS.—For cheapness and general usefulness there is no doubt but that L. anceps comes first. Like all the Mexican Orchids, Laelias enjoy a light airy place close to the glass of the intermediate house. We grow ours in well drained baskets and pans which are suspended from the roof. Here they get all the light possible, and the air that plays about them is drier that it is nearer the stages.

The best time to repot or rebasket the type—that is the dark varieties—is in early spring, when they begin to grow. Most of ours have been done some few weeks, but there are a few late flowering kinds to be done. With these we shall simply pick out as much of the old material as possible, and replace with fresh, without disturbing the roots more than we can help. The compost will consist of the usual material, two parts peat and one of Sphagnum moss.

WATERING.—In the early stages they are very impatient of too much moisture at the root, but when rooting and growing freely, copious supplies should be given, always allowing the plants to get moderately dry between each watering.

The white varieties are of course, very desirable, but they are not so free-flowering, except L. a. williamsiana. Their treatment too, is somewhat different. We repot the white kinds when they begin to root from the base of the newly made up pseudo bulb. This generally takes place during the autumn months. In some cases when done thus early the moss that is used will die owing to the plants being kept—as they should be—dry through the dull winter months. When such is the case we pick out the worst of it when going over the others in spring, and insert a few live heads here and there, without disturbing the bulk.

POSITION.—Where possible they should be afforded a few degrees more heat than is recommended for the type, and placed where they can get enough sunlight to make the growths and leaves hard without burning. With such treatment there would be some chance of flowering them, but not without it; at least, that is our experience.

MANURE WATER.—For some few years now I have advocated the use of some kind of stimulant from the time the plants first show their flower spikes until the flowers are almost ready to expand. Just a pinch of guano, such as you can take with your thumb and finger, in three gallons of water, once a week, when dipping the plants, is all we give them. No one need be afraid to use this small quantity with plants in health; but to those in bad condition and without roots it would probably do more harm than good.

INSECTS.—White scale attacks these plants owing to their being kept on the dry side during the winter; but with a sponge and small brush they may be easily eradicated.

HOW TO MAKE THE MOSS GROW.—In early spring, after the plants are newly re-panned, instead of dipping and saturating the whole mass, stand the plants on the floor, and sprinkle with a rose-can, or syringe them lightly. It rarely fails under these conditions.—*C.*

HINTS FOR AMATEURS.

The Trilliums.—The genus Trillium contains about a dozen species of plants, and has its headquarters in North America, although some of the plants are found in parts of sub-tropical Asia, from the Himalayas to Japan. "American Wood Lily," "Indian Shamrock," "Three leaved Nightshade," and "Trinity Flower," are some of the popular names that have been bestowed upon them from time to time. The last epithet has doubtless been given on account of the number three being so conspicuous in the arrangement of the leaves and parts of the flower.

Trilliums are very handsome subjects for planting in shady nooks of the rockery, and at the present time they are rendering a good account of themselves. They love a deep well drained soil, largely composed, if possible, of peat. During the growing and flowering period an abundance of water will be required. Given these little attentions there should be no difficulty experienced in dealing with them. The leaves will be large and healthy, and the flowers correspondingly fine and showy.

Trillium grandiflorum.—This is probably the most useful of all, and it is certainly the one most commonly to be seen in gardens. In ordinarily strong plants the stems run to about a foot in height, although occasionally vigorous specimens will be seen that exceed this. The whorl of three deep green shining leaves is borne near the top of the stem, and from among these the peduncle or flower stalk rises. This is about two inches in length and bears a single white flower. In the later stages, however, a suffusion of rose is apparent in much the same way as may be observed with white Chrysanthemums when age begins to tell upon them. Trillium grandiflorum has yet another popular name besides those mentioned above, for it is sometimes called "Wake Robin." It has likewise been figured in the *Botanical Magazine* under the name of T. erythrocarpum.

T. sessile californicum.—This is a very handsome form with large, creamy-white flowers, and handsomely mottled foliage. It grows to a height of 2 ft. if favourably situated, and is the tallest of all the Trilliums. It is much more vigorous than the type, T. sessile, which has purple flowers. T. sessile californicum has been awarded a First-class Certificate by the Royal Horticultural Society, so that its merits have not been without recognition.

T. erectum, variously spoken of as Beth-root, Birrh-root, and Lamb's Quarters is the best of the purple-flowered varieties. The flowers are large and rich deep purple in hue, but they possess a very evil odour, and owing to this the plant is sometimes known as T. foetidum. T. rhomboideum, and T. pendulum are other names that have been given it, so that it cannot be claimed that the plant has not been well equipped in this respect. There is a white form of this species, but it is not often met with.

T. stylosum has rosy flowers, and is worth growing for the sake of variety.

Veronica repens compacta is a most charming rock plant which creeps over the stones, and covers them as with a carpet, the large lilac-hued flowers staring boldly up to the sun conscious of their beauty. The type, V. repens is of rather more straggling growth. The flowers, moreover, are scarcely so large, and light blue in colour. For growing on dry banks, rock work, or other places where a dwarf close growth is required both these Veronicas should be reckoned with. The large Alpine garden recently constructed by Messrs. Barr & Sons at Long Ditton is, at the time of writing, bearing witness to their usefulness; indeed, a prettier sight than the stones clothed o'er with the bright green of the foliage, and the delicate hues of the flowers could not well be imagined.

Trollius Orange Globe.—The Globe Flowers or Trolliuses are very showy border plants, but we very rarely see them at their best, because they are usually allotted the same quarters as the rest of the herbaceous element, and this is far too dry for them. Give them a rich moist piece of ground and they are perfectly happy. The word Trollius is supposed to be derived from an old German word *Trol* or *Trolhen*, meaning round, doubtless referring to the shape of the flowers, which are nearly or quite globular. The variety under notice, Orange Globe, is one of the best of them. The height of the plant is about two feet, and when in good health the large deep green and finely divided leaves are handsome in themselves. The flowers, which are very large, exhibit a rich golden yellow colour. Messrs. Barr & Sons have some plants of it growing beside a stream running through their grounds at Long Ditton, and there is no gainsaying their beauty.

Hutchinsia alpina.—Plants of dwarf and compact habit that possess free flowering qualities can be turned to account in a variety of ways. Not only are they a great success in the Alpine garden in small clumps or masses, but they are handy for forming edgings to flower beds. The Hutchinsia under notice is a most valuable plant for either of these purposes. It likes a dry and sunny position on rockwork or in beds or borders where filled with spring flowering plants. In height it runs from 2 in. to 3 in. The flowers are white and produced in corymbs of about 1 in. in diameter, and bear a close resemblance to those of an Iberis, for which indeed it may easily be mistaken. Throughout April and the early part of May the snow-white flowers are very conspicuous, and the plants may thus be utilised in conjunction with Wallflowers, Tulips and other spring flowering subjects as edging. We noticed some fine clumps of it in the rock garden at the Long Ditton Nurseries, for it is a great favourite with the Messrs. Barr.

Violets In Frames.—At this time of the year when there are so many bedding plants to be hardened off preparatory to their planting in flowering quarters out of doors, cold frames of all kinds are at a premium, and every inch of frame space is of value. Violets which were planted in frames last September will now do very well without such a protection, as the bulk of their flowers are over for the season. Accordingly the frames and lights may be lifted off and carried to another position to be made use of in the manner suggested above. Leave the Violet beds intact for the time being, however, and see that the plants are not allowed to suffer for lack of water. The division of the roots and the preparing of the sets may follow at an early date.

Dahlias.—Where the roots were divided at the commencement of the spring and the divisions potted up, some care will now be necessary in watching them. The young growths lengthen with great rapidity, and their tops soon get up close to the glass, where they are in a twofold danger. First of all they are liable to be bent and otherwise injured by pressure against the glass; secondly, if a few degrees of frost come along, they are almost sure to be crippled, for Dahlias are but tender plants, as most of our readers are aware. The lights of the frame, therefore, must be raised by blocking them up in order to secure the necessary room, unless more commodious quarters can be found elsewhere.

Seedlings.—Such plants as Stocks, Asters, Pyrethrum, Golden Feather, &c., which were pricked out from the seed pans into other pans or boxes about the middle of April, and were then returned to a warm house to recover themselves, will now be strong enough to be put into cold frames. Here they will be close to the glass, and will thus not be so likely to get drawn as they would in the loftier houses. Keep the frames close for a few days, then admit air a little at a time and gradually increase it. The weather, too, will be getting warmer, and thus by the middle of May the lights may be pulled off the plants entirely. As long as the seedlings are under glass they will require to be shaded during bright weather, but once they are hardy enough to be fully exposed to the elements all need for the shade vanishes.

Iresines.—The larger plants from which cuttings have been taken usually look rather ragged-looking and bare about this time, the growths having been taken off as fast as they were made to serve as cuttings. Still, these old plants may be turned to good account if they are treated well. A capital plan is to make up a bed of soil in a pit or frame and put the plants in it. Keep the frame close, and ply the syringe pretty freely so as to keep away fly, which is almost sure to make its appearance during the warmth of May. The growth made by the plants under the above conditions will be short-jointed and sturdy, and by the time it is safe to consign them to the beds in the flower garden they will be as fit as possible. Plants of this kind come in finely for filling up the centres of beds, the smaller ones obtained from the cuttings struck this spring being planted in the outside ranks.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Nitrate of Soda.—You are quite right, *Artus*; nitrate of soda is a capital manure for plants, but you must be careful in using it. For a very large plant, half a teaspoonful would be enough to give at once; for a pot 8 in. in diameter, a piece about the size of a hazel nut broken up and spread evenly over the surface would suffice. Every week or ten days will be often enough to apply the nitrate.

Roses.—*Amateur* has had some ill-luck with his young Vines and Tea Roses, and sends us a sample of the leaves of each, together with details of the treatment given them. This appears to be all right, but there is evidently a screw loose somewhere. The Tea Roses are badly attacked with mildew (Sphaerotheca pannosa) a common enemy of Roses. As these are in pots it would be well to take them out of the house before the fungus spreads to other plants. For a remedy dust the plants well with flowers of sulphur, or syringe them twice a week with a fairly strong solution of soft soap. As a preventive of mildew there is nothing to beat the plan of dissolving a little soft soap in the water used for syringing the plants. Green fly is also present. This must be got rid of by fumigation.

Vines.—*Amateur*: The leaves of these present every appearance of having been scalded. The tissue has been totally destroyed in the brown areas. Any leaves that are as badly affected as those sent must be crippled, and will be of very little further use to the plants carrying them. The fact that the injury made itself manifest in so short a time of itself points to this. The burning or scalding is due to the leaves being covered with moisture in the morning, and the hot sun striking them, concurrently with insufficient ventilation. Air should be given earlier in the morning, and what is as important, the temperature must be kept up at night. When a house is shut up in the afternoon at a high temperature, the atmosphere contains a lot of moisture. This, if the temperature is allowed to fall very low, is deposited like dew upon the leaves of the plants. The hot sun next morning will then work results as in this case, unless air is given soon enough. The Vines must have received a severe check, but by careful handling may yet pull through. Under the circumstances it would be better not to overcrop them with fruit this year.

Narcissi in Beds.—I have two beds of Narcissus Empress in my flower garden. The flowers are over but the foliage is still green and looks likely to continue so. Shall I be able to lift the bulbs in time to get the summer plants in at the beginning of June? *X. Y.*

The foliage will not be ripened off sufficiently to warrant lifting the bulbs and keeping them out of the ground, but you may carefully lift them at the time specified and lay them in a bed of ashes to finish off. Of course you must leave them where they are for as long as possible.

Chionodoxa Seed.—*R. L.*: Sow the seed as soon as it is ripe. There is no reason why it should not be good. The seedlings will make good flowering bulbs in about three years time.

Iris laevigata.—I have a stream running along the bottom of my garden. I should like to plant Iris laevigata along by the side of it. Do you think they would do? There is a tall hedge on the northern side of the stream which shelters it from cold winds, but the aspect is an open one on the south, west, and east.—*P. Kellerman.*

The position you mention would suit the Irises to perfection. If planted by the side of the stream in good soil they will be sure to do well. Iris laevigata and its varieties like plenty of water during the growing and flowering season.

Tree Carnations.—Will you please tell me if these require any pruning? My plants are rather straggling, and I want to have them in good condition for next year.—*J.*

If your plants have plenty of shoots on, you might thin them out a little. Take away the weakest and topmost shoots, and train strong ones up from near the bottom of the central stem to take their places

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Temperature for Vinery.—Will Grapes ripen their fruit well in an unheated glass house? *T. L.*

You do not mention what variety of Grape. This makes all the difference. Thus the Muscat varieties would not; but Black Hamburgh would. Naturally enough, the fruit would be late; but in anything like an ordinary summer, it would be of pretty good quality.

Green Fly on Chrysanthemums.—This pest often makes its appearance among the 'Mums at this stage, *A. Charles*, Do not fumigate the plants, for this would be likely to do damage. A better plan is to dust the affected points with Fowler's Tobacco Powder. Leave this on for about an hour, and then syringe it off with clear water. The powder would not hurt the older leaves much, but we have seen the young ones at the points of the stems sadly disfigured by it. Hence you will do well to attend carefully to the after syringing.

NARCISSUS VICTORIA.

In the accompanying illustration we give a very large and distinct Bicolor Daffodil, introduced and exhibited at the London spring flower shows this year for the first time by Messrs. Barr & Sons, of King Street, Covent Garden, and which has attracted our attention and interest in so far as it is so much larger and finer than the well-known trio—viz, Empress, Horsfieldii, and Grandee. Although it would take a great hit to eclipse the three above-mentioned, we honestly believe Messrs. Barr have introduced a variety both distinct and in all points superior to them in "Victoria." It is very vigorous, free flowering, and intermediate between Horsfieldii and Grandee, and has a strong constitution. The perianth segments are very large, imbricated and nearly white, while the trumpet is long, well expanded, beautifully flanged at the mouth, and of a delicate soft yellow. This variety frequently gives from two to three flowers on stout stalks 15 in. to 18 in. high.

APPLE CARDROSS GREEN.

This Scotch Apple is not nearly so well known as it ought to be, considering its good qualities. It is an excellent, sound keeping, kitchen Apple, in season from November to March, and will keep in very good condition well into April (samples sent as proof), loosing very little of its brisk juiciness even then. The tree is very hardy, and comes into bearing soon on either Crab or Paradise stock; and these qualities combined with its fruitfulness, mark it as one that should be in every collection of kitchen Apples. There are many Scotch varieties of Apples, not in commerce, really deserving of better cultivation, because they, as a rule, are hardy, and well suited to our ever-changing climate. The variety under notice was brought into commerce by Messrs. Drummond, of Stirling (if my memory serves me right), and is quite distinct, from Stirling Castle, although some growers class them as one, and the same Apple. Stirling Castle, another good Scotch Apple, will not keep so long without losing its briskness.—*W. Ogg.*

[Our correspondent might have said that this Apple keeps till well into May, at least in the north (where ripening takes place more slowly), for the samples sent us are still in fine condition. The flesh is white, firm, but very crisp and juicy, with a slight acidity which should make it useful for culinary purposes. Those who like the flavour of a brisk Apple will find it very toothsome in the spring months when it has lost sufficient of its acidity to make it agreeable eating. We consider it quite distinct from Stirling Castle, because, though preserving the same general shape, it is often more or less angled. The nearly closed eye is also set in a smaller and more shallow cavity that is slightly wrinkled or rough. Stirling Castle has a wide, deep, and generally very regular cavity at the apex. The longer keeping qualities of Cardross Green should also tell strongly in its favour. The skin is now yellowish-green, but several of the samples have a bright red cheek on the exposed or sunny side. The "Laich" of Murray should be very favourable to hardy fruit culture. Ed.]

Narcissus Victoria.

OUR ORCHID HOUSES AND WHAT MAY BE DONE WITH THEM.*

With the advance of horticulture and the desire to excel in whatever we take in hand in connection therewith, it is necessary that we should have the "best means to obtain the best results," though it may be admitted that Orchids can be grown in any kind of house—in a rough and ready kind of a way—and that house not used exclusively for their benefit. We know of some especially good results under such conditions; but all the same that would not justify me in recommending to you such houses and treatment if we want to make our Orchid houses beautiful and enjoyable; nor to continue that practice if we could obtain equally good results under more enjoyable conditions. I will then assume for my purpose this evening that we are to have houses constructed and devoted to the culture and exhibition of Orchids. It becomes necessary to have more than one house if we are to grow all the sections, and for this purpose we generally have the houses divided into three sections, viz.:—the cool Orchid house, the Cattleya house, and the East Indian house. Do not let this somewhat alarming statement cause those who may be able to grow their entire collection in one house to despair; because if a proper selection is made very much can be done by those who have only one house to grow their entire collection to make that house more enjoyable than we generally find it.

In the paper I had the pleasure of reading before your association last year I dealt with "the arrangement of plants in their growing houses," so as to make their home as attractive and interesting as possible. To-night I desire to follow up that paper and show what may be done in our Orchid houses to make them more attractive than we generally find them. Although some of your members admit Orchids are easily grown—in fact, nothing so easy to grow as Orchids—yet it is not always we find them in that healthy condition in which we like to see them, and which makes the Orchid house so attractive to the grower and owner. The appearance of the plants themselves, unless when in a healthy condition, is not ornamental in the majority of

* A paper read by Mr. A. Wright at a meeting of the Chiswick Gardeners' Mutual Improvement Association, on March 18th

species. They lack that graceful outline to be found in some other plants. Some on the other hand are amongst the most lovely foliage plants we possess in our hot houses. Look at a well-grown collection of Anoectochilus; what more beautiful foliage plants could we desire? Some of the species and hybrids of Cypripediums are also very beautiful in their diversified markings. Yet the Orchid grower who takes an interest in his work sees as much beauty in a healthy Orchid, however stiff the habit may be, as he would see in the most graceful foliage plant, perhaps more, because he can picture to himself what the plant will be when in full beauty later on. Let us, however, return to our Orchid houses, and see what kind of house is to be the most suitable for our purpose.

The large grower who has a number of houses for growing purposes may have an exhibition house for the display of his plants when in flower, and such a house forms a most suitable place in which a pleasing arrangement can be carried out, as it will have the advantage over the growing house, in that it may be kept at a pleasant temperature with a drier atmosphere, without injury to the plants while there; and it would allow plants from the different houses to be brought together for comparison. Although such a house is not within the range of many growers, a look into such a house, if only in imagination, may not be uninteresting, and it may stimulate our minds and encourage us in our pursuit after knowledge in dwelling for a moment over such a scene. Such a house should be arranged in as natural a style as it is possible to carry out. However hard and fast the lines on which such a house is built, the interior should be broken up in such a way as to minimise the evil of straight lines in the internal arrangement. We cannot get very well away from using side stages round the sides of the house, nor do I think it advisable if we could; but the front of the staging can be made ornamental with rockwork and planted with ferns and other foliage plants suitable for this purpose, in which a few flowering Orchids will find a suitable resting-place. Or the front of the stage can be planted with drooping plants, which make a good covering to hide the hotwater pipes underneath. The centre of the house may be arranged with a bold piece of rock-work, with here and there a large palm or tree fern; or it may be an old tree stump, with numerous branches on which some squirrels or other animals are sporting about, or members of our beautiful feathered birds are displaying their lovely plumage; or it may be some of those beautiful exotic moths and butterflies are in company with their native neighbours, and adding variety and finish to a harmonious picture. In such a house as this, with the aid of foliage plants with which to lighten the effect produced by the Orchids in flower, a fairyland may be formed. It may not be the lot of all to have the arrangement of such a house as this, or to live in such surroundings; but where the inclination of our tastes runs in such directions, we may gain many happy moments to ourselves by "building such castles in the air." Rest assured the time given up to such imaginations will not be lost, because ideas so gained and well thought out may be of the utmost value to us in the carrying out of practical work in our after life.

Let us now turn to the more important part of my subject; more important because more often met with, and consider the conditions under which the more general collections of Orchids are grown. There are few places of note at the present time but have a collection of Orchids, of more or less dimensions to be cared for, and where I think much more could be done to make the houses in which they are growing attractive. Where we are already provided with houses for the purpose in hand, it is of course our duty to make the most of them, and it is here the knowledge of the practical grower comes to his aid; and however unsuitable the houses, the good workman can often show good results when another placed under the same conditions might be a failure. To-night, however, I am not so much interested in the unsuitable houses, as I am in the house most suitable for our purpose, because we have the option, to-night at any rate, of building our own houses; and should we then be unsuccessful in the culture of our plants afterwards, a great responsibility lies on our shoulders.

It is, therefore, of the utmost importance that our ideas should be well thought out and the results of our past experience brought to bear on the subject on hand. At the outset we experience some difficulty in deciding which section we are to give preference, and that selection must, however, lie between the Cattleya house and the cool Orchid house. To most people beginninng the culture of Orchids the large handsome flowers of the Cattleyas possess great attraction, and so does the majority of plants suitable for growing in this house; and we find that where only a small collection of Orchids is grown, this is the class most often chosen. Let me, then, take this house first, and well consider what shape and dimensions it is to take. The dimensions, of course, will depend somewhat on the number of plants grown, but the style of house will be much the same. Having decided in our own mind that a span-roofed house is the most suitable for our purpose, let us then turn our attention to its size. As Orchids even as specimen plants, do not attain the size of what may be termed specimens in foliage plants, it is not necessary that we should have large and lofty houses for our purpose. Houses for Cattleyas 18 ft. wide will be found to be the most suitable. This will allow plenty of room for specimens, and yet be well adapted for growing on smaller plants. The eaves of the house may be from 5 ft. to 5 ft. 6 in. high, and the height of house 12 ft. to 13 ft. The house should be light yet strong; and it will be a wise precaution to have sash-bars and rafters grooved for drip. This expense in building a new house is trifling, and the advantage is great. The ventilation should be ample. The roof should be fitted with ventilators on both sides for the convenience of ventilating on the sheltered side in strong or cold cutting winds. The bottom ventilators should open below the stage, and be fitted to both sides of house. This system is much to be preferred to the older system of having the side lights to open direct on the plants.

The heating of the house should receive careful consideration, and enough piping added to keep up the desired temperature without having to keep the pipes very hot. For such a house as I have described there should be six rows of 4-in. piping round the house. Over the hot water pipes we place our side stages which may be 3 ft. wide and 2 ft. 6in. high. There is still a diversity of opinion as to the most suitable stages to use to obtain the best results. I am strongly in favour of a close stage on which can be placed a layer of broken coke or washed ashes, over which may be placed an open wooden stage. Where the expense is no consideration there is nothing in my mind to equal slate stagings, but a neat and durable stage can be made by using corrugated iron instead of slates, which when covered with the ashes or coke is not noticed. I prefer the double staging, as the plants look more comfortable when arranged on it, then when arranged without it.

We now arrive at what I may term the most important part of our arrangement viz:—the centre staging, or arrangement for the centre of the house. If our side staging is to occupy 3 ft. on each side, we will require a path on each side 3 ft. wide, which leaves us 6 ft. for our centre arrangement. This I propose to fill in with rock-work, carrying the centre well up, and leaving plenty of pockets for the planting of Ferns, Begonias, Selaginellas, Ficus repens minima and numerous other foliage plants, which will readily occur to most of you. Numerous receptacles should be left in which Orchids in flower can be placed. By an arrangement like this we can have all the plants in flower arranged in the centre of the house, and we thus get an effect that cannot be produced if the plants are allowed to remain scattered over the house as they come in flower. We can further add to the interest and beauty of the house by the introduction of the finer Palms, Crotons and Caladiums, &c., amongst which the Orchids in flower can be arranged. And there are also a great number of Orchids which can be best grown in baskets, which will come in useful here for suspending from the roof of the house, and add much to the general effect. My reason for this arrangement is two-fold—first to get light, graceful plants to neutralise the stiffness of the Orchid plants, and in the second place to secure a better ground work in which to show off the beauty of the Orchids in flower. The matter of groundwork in which flowers give the best effect, is, I am afraid very often lost sight of in the garden; but it is a point well worth the careful consideration of the gardener, and nothing will surprise many than to find out the effect produced by the same plant against different backgrounds.

The colour most frequently met with in gardens is white lime-wash, one of the most unsuitable colours we can possibly get for a background. We get one almost equally bad if we allow the plants in flower to remain on the side stages with the light for a background. That then is one of the reasons why we find the centre of the house the most convenient place for the arrangement of the plants in flower, and if we keep a green ground work of plants in which to arrange our special favourites our enjoyment of them will be all the better, and the interest we take in them will be greatly enhanced. The general appearance of our Orchid house would be more congenial and inviting and the stiff appearance generally met with in Orchid houses would be considerably minimised, to the satisfaction of all concerned.

Such then, briefly, is the arrangement I would recommend to be carried out in the Cattleya house, where we wish to add as much interest to the plants contained therein, as we do to the most choice specimen amongst the houseful. This arrangement leaves us the roof of the house free for growing purposes, and we find that many of our Cattleyas do best in such a position. When in flower they have only to be lowered so that the full beauty of the flower can be seen. The time at my disposal leaves no opportunity for entering into details as to culture, but you will notice that such an arrangement as this leaves the side stages free to adopt whatever conditions of treatment are suitable for the plants. The syringe can be freely used there if necessary without injury to the flowering plants arranged in the central part. This may appear to some of you an unnecessary amount of trouble to take in connection with the arrangement, but a house so managed will always be attractive even when there are few Orchids in flower. If such a result as this can be so easily obtained it is well worth the trouble, if, by so doing, we can add to the pleasure of our employers in their enjoyment of the cultivation of this most beautiful and interesting class of plants.

(*To be Continued*)

ROYAL GARDENERS' ORPHAN FUND.

ANNUAL DINNER.

The great annual festival of this institution was held at the Hotel Cecil, on Friday, the 30th ult., under the presidency of Sir J. Whittaker Ellis, Bart., when about one hundred or thereby sat down to table. The guests included Messrs. N. N. Sherwood, Harry J. Veitch, Rev. W. Wilks, Sheriff Rogers, Messrs. Geo. Bunyard, Leonard Sutton, J. Gould Veitch, J H. Veitch, Arnold Moss, G. A. Dickson, P. Crowley, W. Sherwood, McKenzie, R. Gofton Salmond, A Tite, W. H. White, W. L. Corry, John Laing, J. Douglas, W. Marshall, A. Marshall, A. W. G. Weeks, J. Asshee, J. Walker, J. Wright, H. Macan, H. J. Wimsett, C. E. Osman, G. J. Ingram, S. M. Segar, W. Y. Baker, A. Turner, H. Turner, D. P Smith, H. Balderson, J. Smith, G. Cuthbert, P. R. Barr, J. W. Barr, G. H. Barr, W. J. Nutting, Whitpaine Nutting, C. P. Kinnell, G. Featherly, A. J. Monro, W. Poupart, J. Taylor, Lynch White, W. J. Brewer, R. B. Gilson, Vaughan, A. P. Barett, Todman, H. Herbst, G. Nicholson, K. Drost, Councillor Turpin, Geo. May, H. B. May, E. Rochford, W. Iceton, D. B. Crane, H. J. Jones, H. J. Cuthush, Wheatley, A. Outram, B. Wynne, T. W. Saunders, H. F. Wooderson, P. Steinmann, C. Moore, Harry Williams, J. McKerchar, T. C. Ward, J. A. Laing, J. H. Laing, W. Denning, G. Wythes, F. Blackwood, G. Reynolds, J. F. McLeod, R. Greenfield, R. Dean, G. Dean, W. H. Holmes, A. F. Penny, W. Cuthush, A. F. Barron, and others.

After an excellent menu was served, the chairman proposed the usual loyal toasts including "The Queen," "The Prince and Princess of Wales, and the rest of the Royal Family," dwelling particularly on the fact that the Princess of Wales was the patroness of the Fund, and would be received with delight by gardeners and all present. They were also patrons of gardening, and that was the most tasteful and civilising of all occupations.

Later on the chairman proposed the "Royal Gardeners' Orphan Fund." No other operations were more beneficial to society than horticulture in its various branches; and while gardeners cultivated the gardens of the earth, he also recommended them to cultivate the gardens of the mind. The object of

this fund was to provide for the orphan children of gardeners, and would be supported by those who studied the welfare of their country. Speaking of such provision reminded him of what he had lately been reading, namely that the time was not far distant when "No one shall have more than he wants, and no one less than he deserves." There was no greater misfortune than when a family loses the father. Every one must admire our grand institutions for the dispensation of charity, and in the making of provision for fatherless children. He was not sure, but that the Royal Gardeners' Orphan Fund was the best of them all, because it allowed the orphan children to be free in their own homes, instead of like hothouse plants, herded together in masses, and amidst uncongenial and unsympathic surroundings. The children were left in the care of their mothers, and he could imagine nothing better.

The Prince of Wales set them an admirable example recently, in the collecting of some £16,700 and over, for a benevolent purpose, by his own personal endeavour. Let the gardener follow this example, and put his own shoulder to the wheel. Let every gardener say to his fellow gardener, there are these children to provide for, let us set about giving our assistance. In that way it would be astonishing what they could do by united effort. He had often taken the chair on similar occasions for the benefit of the needy, and he had seldom been in the chair without urging some cause for the benefit of gardeners. He himself, could look back on the fifty-four years during which he had been an employer of labour, and he was highly delighted that his gardeners and other servants had proved most faithful, true and honest. Nothing gave him more delight than an honest gardener. He believed there was an honest heart in every Englishman and Englishwoman, if sympathy was extended to them. In concluding he said that the end we desire is, "that the fatherless shall be provided for." The Diamond Jubilee Celebration is making a heavy call upon their resources, but he appealed most heartily to their liberality to support this most deserving institution, the Royal Gardeners' Orphan Fund; and he would couple with the toast the name of N. N. Sherwood, Esq.

In rising to respond, Mr. Sherwood offered thanks for the eloquent manner in which the chairman had proposed the toast The supporters of the Royal Gardeners' Orphan Fund could congratulate themselves upon its success during the ten years of its existence. They had spent nearly £5,000 in allowances to orphans, yet they had a reserve of nearly £10,000 invested. They must, nevertheless, continue to make progress. The chairman had overlooked the fact that they had put the whole of the orphans on the Fund without going to the trouble or expense of an election, in commemoration of the Queen's Diamond Jubilee. He read to the audience a few remarks made by Mr. Owen Thomas on the occasion of the annual friendly dinner, in his most eloquent speech from the chair. Mr. Sherwood continued, we should do our level best for the Fund this year in commemoration of the Jubilee. He wanted to see more subscribers to the Fund, and considered that five annual subscribers were better than £100. If gardeners would put this before their employers, he felt sure there would be a good response.

George A. Dickson, Esq., proposed "Gardeners and Gardening." Gardens, he said, did not belong to any country, nor to any king or queen, but were universal in their utility, influence, and power for good. He quoted Cowper's line, "Who loves a garden loves a greenhouse too." He had many pictures in his house, but those relating to flowers appealed to him more particularly. Much money could be spent usefully in gardens and gardening. He coupled with the toast the name of the Rev. W. Wilks.

The latter, on rising, said he could not undertake to return thanks for all, nor so eloquently as he could wish, on account of the weakness of his voice, but he would do his best. The persevering toil they give to gardening was a character of our gardeners. None worked so hard, for they got up at 5 a.m., kept on till 9 p.m., and on frosty nights went to see their fires, it might be at 1 or 2 a.m. On account of the great amount of money that was being spent this year, he was afraid they would have to suffer for it next year. He mentioned instances he knew of £3,000 to £5,000 being diverted from the ordinary channels of charity giving. Every extra penny being spent this year, he considered, should come out of a special purse. The money that the charitably inclined were obliged to spend, must be taken from sources that under ordinary circumstances would have been otherwise dispensed. The garden was the first to suffer, and not the stables. He hoped that a large sum would be placed at the disposal of the Fund, and that it would not suffer on account of the Jubilee.

Mr. W. Poupart proposed "The Chairman." The best man to go to when you want anything to be done was Sir J. Wittaker Ellis, Bart., the head of a renowned firm, and the most useful man to be at the head of every good work. He had one of the finest gardens in the neighbourhood. He was the first Mayor of Richmond, and during his mayoralty he took the chair at the dinner of the Gardeners' Royal Benevolent Institution, and now of the Royal Gardeners' Orphan Fund.

Sir J. Whittaker Ellis replied that some years ago he laid out eighteen acres of a garden, but he had been prevailed upon to move to Richmond, and he regretted that garden with its trees had been brought to ruin. He was now laying out six acres of a garden on the Twickenham side of the Thames. Gardening gets driven out of his head through stress of other duties and he thanked Mr. Poupart for reminding him of it. All interested in gardening, he said, should subscribe to the Gardeners' Orphan Fund.

At this point Mr. B. Wynne read out the list of subscriptions in place of Mr. A. F. Barron, as follows:—

Sir J. Whittaker Ellis, £194 10s. (including £100 Leonard Sutton, £52 10s. Sir J. W. Ellis, £10 10s. Sir James Whitehead); G. Reynolds, £36 1s. 6d. (including Leopold de Rothschild, £10, and Anthony Waterer, £5); Covent Garden friends per J. Assbee, £45 10s.; Rothschilds, £26 5s.; N. N. Sherwood, £38 2s.; Baron Schroder, £25; A. W. G. Weeks, £20 8s.; Alfred D. Rothschild, £10; W. Low, Euston, £10 4s.; Dicksons, £10 10s.; Harry J. Veitch, £10 10s.; J. Veitch & Sons, £10 10s.; Barr & Sons, £10 10s.: D. P. Laird, £9 1s.; W. Poupart, £9; W. G. Baker, £8 8s.; W. J. Nutting, £7 17s. 6d.; F. F. McKenzie, £8 3s.; K. Drost, £7 7s.; J. F. McLeod, £7 5s.; E. Gilbert, £5 10s. 6d.; Geo. Bunyard, £5 5s.; A. H. Smee, £5; A. W. Sutton, £5; J. Walker, £5; T. Whillans, £5 12s. 6d.; P. Crowley, £7 2s.; G. A. Dickson, £5 5s.; Blackwood, £5; Ward, T. C., £5 7s.; G. H. Richards, £5; S. M. Segar, £5; W. H. Holmes, £5 5s.; Geo. May, £4 13s.; H. Eckford, £3 8s.; J. Wright, £3 3s.; H. Balderson, £3 3s.; J. Smith, £3 2s.; P. Steinmann, £3 3s.; Laing & Sons, £3 3s.; W. L. Corry, £3 3s.; H. J. Jones, £3 3s.; R. Dean, £3 3s. Total £670.

Arnold Moss, Esq. proposed "The Visitors." and said that a dinner without visitors would be a tame affair. He hoped that the Fund would continue to grow with age, like a snowball as it was being rolled.

Sheriff Rogers responded in an eloquent speech enlivened with humour. Mr Marshall had instilled into him a love for gardening while looking round his own and Mr. Marshall's garden at Bexley. Mr. Marshall had what he called a "swear-box" and every time anyone used a bad word in conversation he forfeited 2d. to the box in aid of the Gardeners' Orphan Fund. He concluded by saying that the British nation might be termed a voluntary contribution, judging from the method it had of supporting its various institutions. It was, in short, a self-governing, self-conducting nation.

William Marshall, Esq., proposed a vote of thanks to the donors of flowers and fruit for table decoration, and to Miss L. Hudson's assistance in arranging them.

At this point the chairman was obliged to leave, but announced that N. N. Sherwood, Esq., would fill his place. The latter proposed "The Secretary, Mr. A. F. Barron," who had a great amount of work to accomplish every year in connection with the duties of this institution, and hoped he would be able to continue his services for many years. Mr. Barron suitably replied thanking Mr. Sherwood for the way he had spoken of him. Vocal and instrumental music filled in the intervals between the various speeches, and a most pleasant evening was spent. Mr. Herbert Schartau, who had charge of the musical arrangements, made himself extremely popular with his audience.

OPENING OF THE HAMBURG EXHIBITION.

Last Saturday, May 1st, the Allgemeine Gartenbau Ausstellung (International Horticultural Exhibition) was opened.

Previously on April 25th, (Sunday) the committee invited the members of the press to inspect the show, though the flowers and plants were mostly not yet present. They were all full of praise for the magnificent buildings, containing the most wonderful products of horticultural labour. They then had lunch with the gentlemen of the committee, before continuing their walk around the immense place, which is surrounded by large halls to shelter the visitors against rainy weather, and which make up the principal part of the exhibition.

On the 1st inst., great arrangments had been made for the official opening. At 10 o'clock a.m., the entrances were opened for the holders of season tickets, whilst nobody else had admittance. At half past 11 o'clock the invited guests came up to the festive hall, which had been extraordinarily decorated. There were present the senate, the heads of the town, the chief military men and accompanied with their ladies, besides the committee of the undertaking. The band and singers played patriotic hymns and then Senator Dr. Moenkeberg ascended the platform for the first speech:—

"This Exhibition was to be in rememberance o the 60 years Jubilee of the Hamburg and Altona Horticultural Society. Almost every nation has an horticultural exhibition, but they always last but a few days. We have not such intentions, for this great undertaking shall be open from now until Oct., next, which must be well borne in mind. It is not one exhibition, but shall represent the products of the three respective seasons, viz, an exhibition for spring, a second one for summer, and a third show for autumn.

"On December 16th 1895, that is eighteen months ago, the idea of celebrating this Jubilee in such a manner was conceived and submitted to the Hamburg Senate, in order to get a proper and worthy territory granted therefor, and it was in the kindest manner that these gentlemen met this idea and referred the committee to the large field (Heiligengeistfeld, that is, Holy Ghost Field) where in 1889 the great Industry Exhibition took place, and which lies in the centre of the town and of the traffic.

"No doubt, the question will arise, has not too much money been expended for this Jubilee, and have not too many and too wonderful arrangments been made for this undertaking? But these questions, which must fill the mind when walking around the show and when seeing all these astonishing arrangements of all nations and countries, are simply answered to the point that as said above, the show shall remain until October, bringing not one but three different exhibitions and not only has it been exhibited to show German products, but to put them alongside foreign products and to compete successfully against foreign competition. It shall further be a source of teaching children horticulture, which, I regret to say, has been placed and has remained far behind other sciences. We want to bring flowers into the house of the poor labourer again, from where it was driven and our ideal would be to grant every labourer a spot of land from the State that he may plant and cultivate all items both of horticulture and of agriculture. However, I am sorry to state such an idea will never be verified! Scientific lectures will be held in this hall from time to time so as to teach the fond lover of horticulture and the poor man this science. If our people take a real interest therein, and if consequently the success of the exhibition will be verified even if only after centuries,—then we shall know that our work has produced good fruits, and then we shall see that not too many expenses have been made and that not too much trouble has been taken to bring the exhibition to a state worthy of the Jubilee."

He then further thanked the interested parties, viz., the guarantors for their moneys, the artists (painters, gardeners, &c.), for their trouble, the Senate, and, above all, the Hamburg Senate, who kindly granted such undertaking to be carried out in this excellent way; and he concluded his speech with a cheer for the town, in which the assembly joyfully joined.

The band went on with the Hamburg national songs, accompanied by the singers of Hamburg and Altona, who had been engaged for this celebration, and

then Senator Dr. Versmann, Lord Mayor of Hamburg, began the second speech as follows:—

"In the first place I must thank the assembly for the cheers, given in so warm a manner. However, in addition to the speech of Dr. Moenkeberg, I must say that this exhibition is not solely the produce of Hamburg Town and its chiefs, but that it was principally, and, above all, the Hamburg citizens, who produced it, who, for many months past, have spent all their time and their labour for the great undertaking, supported by the sympathy of the Hamburg people and carried out by their enthusiasm. However, I must not fail to mention, that such undertakings can only be carried to an end in a time of peace, when no outside enemy may be feared, and, therefore, it is our glorious Emperor, the true friend of peace, and with him all connected governments, whom we must thank, and who were kind enough to support our undertaking by sending the products of their various countries."

He begged the assembly to join with him in a cheer for His Majesty and the Foreign Majesties, which was gladly done. The chorus singers played the national hymn to the tune, "God save the Queen." He then, as president of the committee, declared the exhibition open. The guests were now invited to walk around the show, and in the first place the still closed chief-hall was inspected. This beautiful, flower-ornamented building resembles a real flower garden, and the visitor finds it impossible to get a sufficient view of all the wonderful arrangements herein found.

At half past twelve o'clock the doors were opened for the general public, who were anxiously awaiting this moment, and an immense crowd rushed in. A walk was then taken around the exhibition. At the entrance of the hall a fine display of bouquets are exhibited. Lovely sights are offered to the visitors here. In the Italian Palm-tree hall they can imagine themselves really in Italy. Everywhere they are overshadowed by trees of most wonderful appearance, and walking on they come to the side halls, that is, those halls which go along the circumference of the whole exhibition and surround the same entirely. There follows the large before-mentioned chief hall (of course, a part of these side halls), with the festive hall, the most wonderful and magnificent flower garden; and so hall after hall follows, showing the products of all nations. Now and then we meet a neat restaurant, the other side again shows first-class restaurants and coffee houses; and at last we come to the "industry halls" where the necessary materials for horticulture and agriculture are exhibited. Here are machines, pumps, garden-furniture, &c. of all sorts and description to be seen and bought. So we reach the point again where we started.

The show is yet, however, very far from complete, and many foreign exhibits have not yet arrived.

MEDINILLA MAGNIFICA.

This when well flowered has a most imposing appearance, and has always when well shown attracted a considerable amount of attention. Introduced from the Philippines in 1848, it soon became a favourite plant with exhibitors, and it is not too much to say that it is one of the most telling flowering plants ever staged, and very distinct from the majority of plants used for the purpose, most of which entail a great amount of labour in training them into shape. This plant is not amenable to any great amount of it, and must be allowed to grow its own way with very little in the way of training. The racemes of flower are principally borne on the ends of the growth, but will often make their appearance on the naked stems below the foliage. They are pendulous and of great size, and the formation of them bears a resemblance to huge bunches of Grapes. The flowers, stems, and the bracts, which form a canopy to the flowers, are all pink. Where there is plenty of space to grow a good specimen, there are few things which will give more satisfaction, for not only is it a beautiful thing, but it has this advantage over many other things in lasting in flower for a prolonged time. In its smaller stages a compost of about half loam and peat with a good sprinkling of sharp silver sand, is the most suitable; but large plants are best with one mainly of yellow loam and sand, and potted firmly. Water copiously when growing, and, after the season's growth is completed, more sparingly. Ripen the growth off by exposure to the sunlight, for upon this depends the freedom with which it will flower.—*W. B. G.*

WHITELEY'S NURSERIES, HILLINGDON.

This celebrated nursery has within the last few years been greatly extended, the last addition being nearly three acres covered with glass. The principal houses are 240 ft. long and 24 ft. broad, and they are everything one can desire for plant growing. The ventilation, heating, and the arrangement for water supply are perfect; and many valuable improvements in these have been carried out under the superintendence of Mr. G. Bethell, the well known manager of these nurseries. He has formerly had great experience not only in England but abroad; and his practical knowledge makes him the very man to manage this gigantic establishment in a thorough business-like manner. The responsibilities are very great, but Mr. Bethell seems to be able to cope with these in a very easy manner.

Palms, &c.

Many houses are devoted to the culture of these, and millions are grown. They are to be seen in their thousands from the seed pod to fine gigantic specimens. Every plant great and small is a picture of health, clean and well formed, the latter, no doubt, attributable to having plenty of room. The plants are not so crowded as they are generally seen. I have seen large collections in many countries abroad noted for Palm growing, but never have I seen a finer lot of clean, saleable stock as that grown at Hillingdon. The most useful varieties suitable for decoration work are here in various sizes, viz., Areca lutescens, 50,000; Cocos weddeliana, 100,000; Kentias, in variety, 500,000; Latania barbonica, 100,000; Phoenix rupicola and Seaforthia elegans, 50,000; and others. A noticeable feature in this enormous stock is cleanliness, not a sign of any insect pest being visible. The robust deep green foliage shows the treatment they receive is the right one. Many houses are devoted to the Palms; likewise to Ferns, which are grown in enormous quantities. Of Adiantums in thumb pots up to 48's, there is about a million—Nephrolepis exaltata, N. davallioides furcans, and Phlebodium aureum are splendidly done, in great quantities. There are upwards of 50,000 Pteris in 48-size pots; the following sorts are the favourites:—P. cretica cristata, P. cristata major, P. tremula, and P. Wimsettii, all of which are good decorative sorts. Other foliage plants such as Aralia Sieboldii, Araucaria excelsa, Asparagus plumosus nanus, A. tenuissimus, Aspidistras, green and variegated, Caladiums, Coleus, Crotons, all best sorts, Cyperus, green and variegated, Dracaenas, well coloured, a speciality, Ficus elastica, green and variegated, Grevillea robusta, Pandanus Veitchii, and Smilax Asparagoides seem to be the principal foliage plants grown for decorative purposes. Suspended from the roofs of the various houses are many useful Orchids, grown principally for cutting purposes. Cattleyas, Dendrobiums, and Oncidiums of all the most useful varieties are pictures of health, many flowering very freely.

Flowering Plants.

Chrysanthemums, as one will imagine, are a big thing here, both for cutting purposes or decorative work. Over 15,000 are annually grown in 48's to 16-in. pots, the following being found suitable;—Boule de Niege, Cullingfordi, Etoile de Lyon, J. Shrimpton, Mrs. J. S. Fogg, Soeur Melonie, W. H. Lincoln, Viviand Morel, &c, Azaleas, Ericas, Cyclamens, Genistas, Heliotropes, Hydrangeas, Marguerites, all the best Pelagoniums, early flowering, Ivy-leaved, double and single, and zonals, Primulas double and single, Solanums, Spiraea japonica and S. astilboides are grown and forced by thousands, and are beautifully done too. Azalea mollis, Deutzias, Hydrangea paniculata grandiflora, Lilac Charles x and Marie Legrange, are forced also in great quantities.

Bulbs.

Lily of the Valley, Tuberoses, Lilium auratum, L. longiflorum, L. speciosum rubrum, and L. s. Melpomene are some of the bulbs grown here. There are upwards of 20,000 Liliums grown in pots alone. At the present time splendid examples of cultivation of L. longiflorum and L. auratum are flowering wonderfully. A good useful plant for decoration work as seen here is Acer Negundo. Large quantities of plants above 5 ft. high, are clothed with bright silvery variegated foliage.

Shrubs and Coniferae.

These are extensively grown for box decoration. Fine dwarf plants of Aucuba japonica in variety, Cornus aurea, Euonymus, green and variegated, Lonicera, variegated, Veronicas, and other small shrubs and Coniferae of the most suitable kinds are well done and nicely coloured.

Fruits, Cucumbers, Melons, &c.

These are grown in large quantities, several houses being devoted to the culture of the above mentioned. Tomatos are a special feature; also of Cucumbers fine crops are showing. The vineries are carrying splendid crops of fruit. Strawberries are grand, and on the various walls out doors is a grand lot of well-trained Peaches and Nectarines of all the leading sorts, looking most promising for producing grand crops of fruit.

Mushroom growing is another feature here. The south wall provides accommodation for a splendid house most suitable for growing mushrooms. It is nearly 200 ft. long. The main block of houses consists of thirty-three houses, each 117 ft. long and 12 ft. wide, equal spans arranged in three sections, with intervening roads. The central block comprises Camellia, Pine, Cucumber, stove, and plant houses, each 12 ft. wide, and 117 ft. in length, with divisions. The remaining block comprises many houses of various sizes, five of which are 266 ft. in length and 15 ft. wide; others 231 ft. long, 18 wide; and four houses 218 ft. by 12 ft. complete this block. The pits and frames in various parts are useful erections; many thousand feet of them are full of various plants—as before mentioned.

To obtain water for such an enormous establishment as this is a great undertaking; an efficient supply is stored in capacious tanks running crosswise through the centre of each group of houses. Into these the rain water is carried, the collecting surface being considerable. Provision is also made in each house for obtaining the water from the tanks. The accommodation for packing is everything that can be desired; large, roomy glass-covered erections adjoining the houses are most conveniently situated. The vans can be run alongside the benches where the many thousands of plants are daily packed and sent to various parts of the country. The heating is done by the Trentham boilers; the stokeries are roomy and light, in fact what they ought to be. There is also ample piping to each house, which renders the heating more easily done. These boilers can be used separately or together as desired. The out-houses, store sheds, stabling, and van sheds are all erected upon the most convenient and model plan, and the office accommodation is everything that can be desired. The whole of this vast establishment is well kept, cleanliness and good order being in strong evidence. Mr. Bethell is responsible for the entire management, which is an enormous task, but which he seems to do in an easy but most businesslike manner. Great quantities of plants are sent daily to the gigantic establishments at Westbourne Grove, also to Covent Garden Market and Brentford Market, where an increasing and lucrative business is carried on.—*Alfred Outram, F.R.H.S.*

ALGIERS SPRING FLOWER SHOW.

A very brilliant exhibition of flowers was opened on the 23rd April, in the Grand Hall of the Palais Consulaire, under the auspices of the Algiers Horticultural Society. The following are the principal prize takers:—

For green plants for decorating purposes, the first prize went to Mme. Allisse. For a group of plants in flower, the Silver Gilt Medal went to M. Franco. For a collection of Roses in pots, M. Giraud received a Silver Medal. For cut Roses a Silver Medal went to M. Sallet. For decorations in cut blooms, a diploma and a Gold Medal went to M. Franco, Algiers; and Bronze Medals went to Messieurs. Loëffel, Allisse, Porcher, and Gifroy. The tables of these decorations were very artistically arranged, and it is with pleasure that we register the success of Monsieur Franco, the only diploma of honour offered having been granted to him.

A large display of new varieties of Roses was shown by the well-known Algerian Rose grower, Monsieur Vuillard, of Boufarik, amongst which we noticed no less than eighty new varieties. This gentleman did not compete as he took at their last show the highest awards obtainable, after which he has been put "hors de concours," or, out of competition.

Black Walnut is less than half the weight of ebony.

APRIL FLOWERING TULIPS.

As a spring bedding plant the praises of the Tulip have been sung times without number, and our public parks and gardens bear witness to the fact that when properly utilised the earlier Tulips have no compeers in their season for brilliant and effective colour. First of all come in the Duc Van Thol varieties. These in themselves present a considerable range of hue in scarlet, rose, crimson, white, and yellow. As pot plants for forcing these are also held in high favour, and they are used to some extent for bedding purposes, although in this case their dwarfness tells against their value, inasmuch as a shower is sure to splash and sully them with mud. In point of time Keizer's Kroon closely follows the Duc Van Thol section. It is certainly the best of the taller, and larger forms, and its brilliant scarlet and gold must be familiar to most if not all of our readers.

Before the lustre of Keizer's Kroon has begun to fade it is joined by a number of other grand forms, which carry on the succession, and join hands with the May flowering varieties. The wealth in point of number, beauty, and value of this section fully reveal themselves to a visitor to the Long Ditton Nurseries, where the historic bulb is given a high position in the favour of the management. It is all very nice to argue about the aesthetic inelegance of large masses of Tulips, but there is no gainsaying their effectiveness as colour scenes; and, moreover, this is the method to test the value of varieties for the massing on a smaller scale in more diminutive beds that is carried on in private as well as public establishments. The undermentioned have been in fine condition with the Messrs. Barr.

To speak of the single-flowered forms first, for they certainly constitute the better part of the display, the double Tulip being a rather heavy and somewhat inelegant production; we were enchanted with a large break of Couleur Cardinal, the bright crimson-scarlet of which glittered bravely 'neath the coquettish influence of an April sun. White Swan, a pure white with a huge cup, has a great length of stem, and is one of the very best whites. Duchesse de Parma is after Keizer's Kroon, but is later, dwarfer, and a more compact flower. Ophir d'Or is credited with being the largest and handsomest yellow Tulip, but, as we saw the two varieties, Aegle d'Or runs it very close for both size and brilliancy of colour. Cottage Maid is appropriately enough a modest flower, the white covered o'er with rosy blushes, but the "Maid," although dwarf, is not afraid to look at visitors. Rose Griseldine is much like Cottage Maid, but the rose hue is slightly deeper Koh-i-Noor is the darkest of all, being of a deep, nearly black, crimson, except when the sun is shining. Prince of Austria is a very handsome and showy orange-red form that is simply gorgeous when looked at in the mass. It is to be preferred to Thomas Moore, which is after the same colour but duller, and closely approaching terra-cotta. Silver Standard, scarlet, feathered and striped pure white, is at once handsome and distinct, while Artus is the best of the scarlets.

Lac Dorée is comparatively rare. When first it opens the flower is a dark cerise with a broad snow-white margin. These colours change in the later stages to bright gold and scarlet. Princess Ida is very distinct. The colour is white, shaded creamy-yellow, and striped deeper yellow.

Amongst the double varieties Imperator Rubrorum is very conspicuous. This is a large crimson-scarlet flower. La Citadelle is rich scarlet margined with gold. The scarlet Tournesol is a close approach to Keizer's Kroon, as it exhibits the same colours and form of flower.

There were one or two species and supposed hybrids also in flower that deserve special mention. Tulipa acuminata is unmistakable with its long, very narrow, yellow and red-streaked segments which give it a rather grotesque appearance. Its native country is unknown. T. retroflexa is often classed with the May-flowering Tulips, but although the flowers last into that month in warmer localities they are expanded in April. The perianth is bright yellow, and the charming way in which the acutely-pointed segments commence to reflex from half their length renders the flower very attractive. T. retroflexa is a garden form, and may possibly be a hybrid between T. acuminata and T. gesneriana. T. fulgens is a very fine early form of T. gesneriana. It has great length of flower stem, and the flowers are of a very deep, rich crimson. T. elegans, which has large dark crimson flowers with reflexing segments, is probably a hybrid between T. acuminata and T. suaveolens. T. elegans variegata is a large and handsome flower striped with gold on a deep crimson ground.

WINTER AND SPRING BEDDING.

A FULL meeting was forthcoming on the occasion of the delivery of Mr. Alexander Dean's lecture on "Winter and Spring Bedding" at the Drill Hall on April 27th. The Rev. G. H. Engleheart presided.

In his opening remarks, the lecturer commented upon the improvements in bedding that had taken place of late years, although even now garish and vulgar effects might be seen. He was particularly severe upon the massing of Tulips in the public parks, and in a sweeping condemnation classed those who preferred the gay pictures on hoardings to the pictures to be found in the National Gallery. At one time, continued Mr. Dean, beds in the flower garden used to be bare for fully half the year. Mr. J. Fleming, of Cliveden, and Mr. W. Wildsmith, of Heckfield, were the pioneers of the spring-bedding movement. Mr. Fleming was the first to use Pansies, Forget-me-Nots, double Daisies, etc., for this purpose. In the palmy days of Heckfield carpet and edging plants were retained through the winter, the places of the tender plants being taken by small Conifers. A small nursery was made to accommodate the plants that were required. In 1890 the Rev. W. Wilks, in a paper given by him before the Royal Horticultural Society, recommended such plants to be grown in pots, as they did not stand the half-yearly transplanting; to quote the reverend gentleman's words, they looked like "broken down beggars." With this he did not agree, for half-yearly transplanting did not yield such appalling results. The nursery should face to the north, and the soil must be deep and well worked. Plenty of water should also be given the plants after their spring shift. Many Conifers showed their distinctive hues better under such a system than they did when permanantly planted. The range of variation covered by Conifers alone was very great, and he had drawn up a list of those suitable for the purpose. This list was not read.

Other suitable subjects were such foliage plants as Mahonias, Ivies, Aucubas, and Euonymus; berried subjects like Skimmias and Pernettyas; and flowering plants like the Forsythias, Daphne Merzereum, and Currants. Vincas, both green and silvery, may be used to advantage to enclose Narcissi, Hyacinths, etc. Conifers should be planted in small groups rather than singly, and the aim should be to produce an illusion as to permanency.

The mixed style of bedding may now be made to look very gay, for there is a much greater amount of material forthcoming with which to work at the present time than there was 60 years ago. Mr. Dean then ran through a list of some of the most suitable and useful subjects. It included Golden Valerian, variegated Comfrey, variegated Cress, Ribbon Grass, Arabis albida variegata, A. mollis variegata, Ajuga, Sedum glaucum, and S acre aureum. The lecturer exhibited a boxful of this golden tipped Sedum, with a view to demonstrate its beauty. Myosotis dissitiflora might be had in flower in spring from seed sown in August. Aubretias might be propagated readily by seed or cuttings. Polyanthuses should be sown in spring, and the plants dibbled out. These pretty flowers were of the utmost value, and the lecturer assured his audience that the grounds of Hampton Court, where about 6,000 were bedded out were well worth a visit Of Violas, Bullion, Lemon Queen, and Archie Grant were good; and the smaller forms like Blue Cloud and True Blue, were also valuable; while Pansies like Blue King, Archie Grant, and Tory were very useful. For early work Sutton's strain of Giant White Pansy was very valuable. In addition, Anemone fulgens, A. nemorosa, N.apennina, A. blanda, Wallflowers of sorts, Trolliuses, Candytuft, and Alyssums were likewise worthy of being included in spring bedding arrangements. Reverting again to planting to obtain huge masses of colour the lecturer averred that this exposed all the trumps in the gardener's hand, and should be avoided on that account.

At the conclusion of the lecture the chairman made a few remarks, during the course of which he expressed his disagreement with Mr. Dean's remarks anent massing. If we avoided this, he said, we should be disregarding one of the object lessons set us by Nature, who oftentimes planted in great masses, as proof of which he instanced the huge stretches of wild Hyacinths in parts of Hampshire. He also commented upon the fine effect produced in early spring by masses of the amethyst-blue of Crocus Imperati. The Rev. W. Wilks also had something to say with regard to the "transplanting" question. He was unconvinced by Mr. Dean's remarks, and adhered to his statements of 1890. He adduced the case of "tree Ivies." "Tree Ivy" was the form taken by creeping Ivy when it reached the top of the wall, where it assumed a dwarf shrub-like form. If these tops were taken off and rooted the tree form would still be maintained, and these plants were of the greatest service for winter and spring bedding. It would be found, however, that "tree Ivies" were strongly averse to disturbance at the roots.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Physalis Franchetti.—*Constant Reader*: Sow the seeds in a box or seed pan, and stand the same in a moderately warm place, such as a greenhouse, vinery, or Peach house. Being a hardy plant from Japan, it does not require a high temperature to raise the seeds, the only difference being that in a low temperature the seeds will take longer to germinate. As soon as the seedlings are up, put them in a cool place. It is a herbaceous plant growing about 15 in. to 18 in. high or more according to vigour. We cannot say whether it will prove quite hardy in your district, though we think it would. When you get the plants large enough you should put some of them in the herbaceous border, or in a bed to try their hardiness. You might keep some of the plants as a reserve in pots to be protected in a cold frame during winter, till you learn whether the others will live out-of-doors. Beds, &c., of it are planted out in the southern counties where it succeeds admirably. The flowers are small, white, and of no value. The large orange calyx (like a Chinese fairy lantern as you say) enclosing a berry is the showy part.

Rosemary.—*Sigma*: The proper name of this is Rosmarinus officinalis, which belongs to the natural order Labiatae (Lamiaceae is not used by any good modern authority). Paxton must have followed some very old and incorrect authority when he referred Rosemary to Athamanta Libanotis. If ever the name was so applied it must have been very locally. The correct name of Athamanta Libanotis is Seseli Libanotis. The old genus had many species referred to it which did not belong to Athamanta. Cochrys Libanotis must be another recorded mistake for it does not occur in the *Index kewensis*. Athamanta belongs to the Umbelliferae, as you say, and cannot have any reference to Rosemary. The specimen you sent was Lamium maculatum an old fashioned border plant, sometimes yet to be found in cottage gardens. It is not a native, though sometimes found as an escape, or perhaps occasionally planted. The golden form is known as golden Archangel, and is often used as a bedding plant.

The Yew Tree Poisonous.—*F. W. Ager*: Frequent reports are made of horses and cattle, especially the former being killed by eating the leaves of Yew. It is said to be most dangerous when the branches have been cut for some days so that the leaves are beginning to get dried up and shrivelled. People frequently eat the pulp of the berries, and though we never heard of any harm from that, the stones are regarded as poisonous, or at least suspicious. It would surely be a very unusual circumstance for people to eat the leaves of the Yew, though under the conditions you name it might probably occur. If the leaves and shoots are poisonous to horses and cattle, we should think they would be equally so for human beings, and should take every precaution to prevent such an occurrence.

Preparing Trees for Transplanting.—*Omega*: This can be done at any time during autumn, winter or early spring. We should not attempt it now, as growth is too far advanced, and the foliage might be greatly injured during the coming summer, particularly if it is a dry one. The best time would be during the latter half of October and the first fortnight of November. Nevertheless, it is frequently done at any time in winter provided the weather is open. After being prepared, say next autumn, the trees should not be transplanted till the autumn of 1898, that is, a twelvemonth after the trimming of the roots. We suppose the trees are large, otherwise you would not require to prepare them in this way. You ought, however, to have stated the height of the trees or the bulk or weight of the head, for it all depends upon those circumstances as to

how far from the stem, the trench should be taken out. Three feet from the stem all round would give a ball of soil 6 ft. in diameter. That should suffice for a tree 20 ft. high, by having the trench cut out a year previous to removal. If you tell us the size of the trees, and the kinds, we can more readily form an opinion, and give you more definite instructions.

Cultivation of the Melon.—*James Crichton*: As far as we know, there is no book specially devoted to the culture of the Melon; but "Cucumber Culture for Amateurs" might suit you. It includes Cucumbers, Melons, Vegetable Marrows and Gourds. The book is in paper covers; price 1s. 2d by post. It is published by L. Upcott Gill, 170, Strand, London. A larger book, "The Culture of Vegetables and Flowers," contains information on Melon growing, and is published by Sutton & Sons, Reading. It is in cloth boards and, we think, priced at 5s.

Roof of Greenhouse.—*Omega*: This may be at various angles of elevation, not too low to prevent its throwing off the rain and snow properly, and not too high to make it inconveniently hot and dry for the plants reaching in the case of climbers up into the ridge. For general purposes we think that an angle of 45 degrees would be the best.

Water Lilies.—*M. M'L.*: We think the best plan would be to offer the firm a proportinate rate for the extra plants under the peculiar circumstances. The best policy is to be as straightforward as the firm in question has proved. Possibly, if you do not require the plants yourself, you might get some neighbouring gardener to give you something for them and thereby make it easier for yourself to square the matter. It is hardly worth while returning them after the extra trouble incurred on the part of the senders. If you think it over from this point of view, you may find an easy solution of the difficulty. In the meantime take every possible care of the plants, to prevent them from deteriorating. Supposing they were a little dry when you got them, such fleshy roots will soon plump up.

Names of Plants.—*Conaglen*: 1, Prunus sinensis flore pleno; 2, Chlorophytum elatum variegatum; 3, Ophiopogon Jaburan variegatus; 4, Ajuga reptans rubra; 5, Berberis Darwini.—*A. L.*: 1, Ulmus montana pendula; 2, Berberis vulgaris purpurea.—*G.*: 1, Adonis vernalis; 2, Doronicum plantagineum excelsum; 3, Tulipa gesneriana var.; Vinca minor; 5, Paeonia tenuifolia flore pleno; 6, Narcissus poeticus recurvus.—*G. T.*: 1, Prunus Caproniana multiplex; 2, Prunus triloba flore pleno; 3, Pyrus spectabilis; 4, Kerria japonica flore pleno; 5, Abies nobilis glauca.—*R. S.*: 1, Dendrobium crepidatum; 2, Odontoglossum ruckerianum; 3, Odontoglossum crispum (a good variety); 4, Cattleya Mendelii; 5, Cypripedium Hookerae; 6, Oncidium sarcodes.—*W. M.*: 1, Berberis Aquifolium; 2, Berberis japonica; 3, Prunus Persica flore pleno; 4, Polypodium vulgare cambricum; 5, Cytisus proliferus; 5, Boronia heterophylla.

Communications Received.—F. Davids.—G. J. Ingram.—M. M'Laren.—Sutton & Sons.—H. J. Veitch.—H. J. Cutbush.—J. Carter & Co.—W. R. Farrer.—H. W.—J. L.—T. B.—W. S.—Geo. Taylor.—Exmouth.—T. Perkin.—R. O.—C. A.—J. R. J.—C. Q.—Y.

TRADE CATALOGUE RECEIVED.

Kelway & Sons, Langport, Somerset, England.—Wholesale Catalogue of Plants, Trees, Shrubs, &c.

The Gardening World.

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COVENT GARDEN MARKET.

May 5th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bnsbel	2 6	8 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100lbs.		
Grapes, per lb	4 0	4 6
Pine-apples —St Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	2 6	4 0
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve	1 6	1 9
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips ..... per bun.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 6	0 9
Bluebells, 12 bun.	1 0	1 6
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	3 0
Cowslips, 12 bun.	1 0	2 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	2 6
Geranium, scarlet, doz. bunches	4 0	6 0
Lilac, White (French) per bunch.	3 0	4 0
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Narciss, various, doz. bunches	1 6	4 0
" double "	3 0	6 0
Orchids, doz. blooms	1 6	12 0
Pansies, 12 bun.	1 6	2 0
Pelargoniums, 12 bun.	6 0	9 0
Polyanthus, 12 bun.	1 0	2 0
Pyrethrum doz. bun.	2 0	4 9
Roses (Indoor), doz.	9	1 6
" Tea, white, doz.	1 0	2 0
" Niels	1 6	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	3 6	6 0
Tuberoses, doz. blooms ...	1 0	1 6
Primula, double, doz sprays	0 6	0 6
Violets (English) per doz. bunches.	0 9	1 0
Violets (Parma) per bunch.	3 0	4 0
Wallflowers, 12 bun.	1 6	3 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Azaleas, each	2 0	3 6
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.....	18 0	36 0
" specimen	3 0	5 0
Arum Lilies, per doz.	8 0	12 0
Cinerarias, per doz....	6 0	10 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.....	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	9 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz.	6 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Spirea.....per doz. ...	8 0	10 0
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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 15th, 1897.

NEXT WEEK'S ENGAGEMENTS.

WEDNESDAY, May 19th.—Royal Botanic Society's Summer Show at Regent's Park.
Sale of Lilies, Show Carnations, etc, by Messrs. Protheroe & Morris, 67 and 68, Cheapside, E.C.

FRIDAY, May 21st.—Sale of Orchids by Messrs. Protheroe & Morris, at 67 and 68, Cheapside, E.C.

THE GARDEN CINERARIA.—The number of cultivators, who have been working upon this race of plants and its allies during the past year or two, is simply remarkable. It should now, however, be pretty well established that the race known as the garden Cineraria has been brought to its present state of perfection by the long continued selection to which gardeners and other cultivators have subjected Senecio cruentus, better known by the name of Cineraria cruenta, since its introduction from the Canaries in 1777. Fifty to sixty years ago the garden Cineraria, now so well known and widely cultivated, does not seem to have excited any particular attention amongst gardeners and writers. Some books even ignore it and express the opinion that the cultivated race admitted as a florists' flower was raised by hybridising such species as C. malvaefolia from the Azores, C. lanata from the Canaries, and C. populifolia from the latter islands. A plant named C. hybrida has also been recorded from the Canary Islands. Notwithstanding these statements, we find that C. cruenta was figured in the *Botanical Magazine*, *t.* 406, and properly described in some gardening books as long ago as 1829. It was said to have purple flowers in season from February to May. The leaves were heart-shaped, angular, toothed, and purple beneath, while the leaf-stalks were winged and auricled at the base. The flowers were also produced in corymbs, and the plant was evergreen.

That this species may readily be crossed with various others, including C. Heritieri, which has lately been brought into requisition, proves nothing beyond the fact that this group of species is closely allied, the one with the other. They do indeed represent a section of the vast genus Senecio, which runs to 900 or 1,000 species, according to the opinions of different authors. It seems to us that it would be a thankless and needless task to try and prove that shrubby species have been used in the procreation of the race known as the garden Cineraria. The description of C. cruenta given many years ago agrees with the modern race in every particular, except the larger size of the flowers, and the much greater breadth of the rays. These improvements, as well as the dwarf and compact habit of the plants, are all due to the persevering efforts of the cultivators, who have devoted themselves to the cause through many generations, with scant approval and little thanks, we are afraid. Loudon, in 1829, described C. discolor and C. populifolia as popular, half-shrubby plants, and C. lanata as the handsomest of the genus, though the rays were white above and vivid purple beneath. All these species have been comparatively neglected since then, and C. cruenta has survived. What then of the hybridity, if we fail to find evidence of the shrubby character of the reputed parents in the modern race? Even supposing they do cross as has been proved, and supposing that the same thing was effected in years gone by, it is easy to imagine that the hybridity became lost or eliminated in successive generations, and C. cruenta, pure and simple, being the most plastic, has given the greatest amount of variation by repeated crossing of the varieties and selection.

THE HORSE CHESTNUT.—Few, if any trees, are more conspicuous in the landscape than the Horse Chestnut during its fortnight of beauty. The flowers are indeed visible and more or less conspicuous during a longer period than fourteen days, but they are in the height of their beauty during that time, and not eclipsed by those of any other. We, indeed, noted open flowers upon this species about the end of March and the beginning of April, in the Royal Gardens at Kew. They occurred on the sheltered side of a precocious tree, but the fact remains that the state of the weather during March and April determines to a considerable extent the earliness or lateness of the flowering season. On what is termed Chestnut Sunday, thousands of people go to see the Chestnuts in Bushey Park on their way to Hampton Court, which is usually the goal, of their journey for the day. The trees in Bushey Park have been in fine condition, for a week past but will be at their best tomorrow (the 16th inst.) provided the weather has not previously injured the blossoms. Boisterous weather is more inimical to them

than anything else, but provided that calmness and a fairly moist atmosphere prevail during the expansion of the blossoms, the latter attain a perfection in our climate that is rarely surpassed on the Continent.

The prevailing colour of the flowers is white, but a large number of trees in this country have their blossoms more or less tinted with pink, including a conspicuous blotch at the base of the large upper petal. This colouring is invisible at a distance, but on close inspection adds not a little to the beauty of the flowers. The Chestnut is a large tree and seldom, therefore, planted in small gardens. Nevertheless, on private domains, it is often planted in greater or less quantity on the sides of avenues, though the long avenue at Bushey Park is probably unique of its kind in the country. In the pleasure grounds of family residences it also facilitates close inspection, so that varieties or individual trees, with pink tinted or blotched flowers, are not to be ignored. The facility with which this tree ripens good seeds puts it almost on the same footing with native trees, and the wonder is that so few self sown trees have been able to establish themselves. No doubt the situations in which the trees are in most cases planted prevents young ones from getting a footing; and the seeds being heavy are seldom transported to a distance. Another thing is that the tree likes a fairly deep and rich soil to produce and maintain a vigorous growth; this ground is appropriated by cultivated subjects, and the Chestnut cannot get a foothold in barren soils where the Scots Fir and the Birch find a suitable home. The species is a native of Asia, and reached this country from South Eastern Europe in 1629. That it should succeed so well in this country is matter for surprise, even in the far north. The only thing it has to fear is damage to the tender foliage, and the flowers by storms of wind in May. When at rest it is perfectly safe.

Late Spring and Early Summer Tints. The fading glories of hardy trees and shrubs in the autumn are often dwelt upon, but the ever varying tints of expanding leafage in spring and early summer must often have struck even the most casual observer who has an eye for the beauty of the objects around him. To say that a tree or a bush is green conveys very little of the actual state of things around us during April, May, and June. The delicacy of the tints of various trees strikes even the rustic in quiet agricultural districts, even where the variety of trees is very limited. The delicate greenery of the needle-like leaves of the Larch reigns supreme for a week or two, but is completely eclipsed by the more ample leafage of old umbrageous Beeches, breaking the spring sunshine, but scarcely shutting out the sun till the leaves attain their full dimensions and assume their wonted dark and sombre hue.

The Lombardy Poplar appears for some time quite of a yellowish or delicate amber hue, and curiously enough it is a full fortnight earlier in coming into leaf than its near relative, the Black Poplar. The former has already assumed a dark green and glittering hue, just as the latter is in the perfection of its spring beauty. The numerous small leaves, as they tremble in the morning sun, present quite a bronzy-amber hue, and this dark colour, contrasted with the White Poplar, no doubt first suggested the name Black Poplar. That the two very distinct forms of the latter should come into leaf at different times is an advantage to the appearance of the landscape at this period of the year. This and the fact of their being rapid growing trees has made them popular subjects for town planting in London and the suburbs. The avenue of the Black Poplar in Finsbury Park is worth seeing at the present time. The Tree of Heaven (Ailantus) and Rhus typhina are just now unfolding their rich bronzy young leaves, aud the former will retain this hue for weeks to come, indeed, until June is well advanced. The panicles of fruit of old trees will assume glorious tints of chestnut, bronze, golden-amber, and yellow in the month of July. The Catalpas are only now plumping up their buds preparatory to bursting.

Hampstead Heath is to be preserved in its wild and natural state, so far as this will not interfere with its enjoyment by the public. A society has recently been formed for the purpose of preserving it.

Miss Alice Rothschild is a large patroness of horticulture, judging from the value of her collection of Roses which is estimated to be worth several thousand pounds. England's national flower must certainly have a charm in her eyes.

The Gas Plant —Seemingly Dictamnus Fraxinella is well known in Canada under the name of Gas Plant. It is also stated to be a virulent poison and a dangerous plant to handle. Notwithstanding this it is well known, much admired and frequently handled by lovers of hardy plants in this country, without any injurious effect as far as we have heard.

Lily of the Valley poisonous.—*Nord-Horticole* says that this favourite flower is poisonous, and that the maceration of it in alcohol produces a poison of which four drops kill a dog in two minutes. The plant contains convallamarine, a poison analagous to that of the Foxglove though less powerful.

The Hurst & Son Cricket Club.—On the neat, folding card containing the printed programme of the season, we note that this well known club is to play at least twenty-one matches during the season from May 8th to September 11th, inclusive. Even in densely populated London, this club manages to secure ground on which to play and which is regarded as the home field of the club which is supported by a large number of honorary members. In crowded London, out-door exercise is even more necessary than in rural districts.

Rabbits and Buttercups.—Opinion so often runs contrary to the reputation of the rabbit that its few admirers will be pleased to hear of some good being attributed to it. Ranunculus acris is so common in some meadows and pastures, and so difficult to eradicate as to be classed amongst bad weeds. It had taken possession of a pasture on the banks of the River Liffey, and belonging to a farmer whose son possessed a colony of rabbits. The latter had been allowed to run about at will on the meadow during the whole of one winter, and in the following summer it was observed that the Buttercups had completely disappeared, and that the rabbits had so excavated the crown of the rootstock that the plants were destroyed.

Syndical Chamber of Belgian Horticulturists.—At the monthly meeting of this society in the Casino, Ghent, on the 2nd inst., Awards of Merit were accorded to Anthurium scherzerianum Prince Albert, Anthurium Veitchi × A. andreanum album and Dendrobium clavatum presented by M. L. De Smet-Duvivier; to Kentia fosteriana fol. var., presented by MM. De Reuse, freres (by acclamation); to Adenandra fragans, exhibited by M. E. Bedinghaus; to Dracaena indivisa fol. var., presented by M. Camille Claeys; to Azalea Mme. Cappe and Azalea Mme. Pierre Dutrie, exhibited by M. Oct. Van der Cruyssen; and to Odontoglossum Souvenir de Fr. Massereel, O. crispum Augustum, and O. crispum hyeanum, presented by M. Jules Hye (in all three cases with the acclamations and congratulations of the jury). At the same meeting, numerous awards were given for culture and flowering, and for culture, as well as two instances of honourable mention. Sutherlandia spectabilis, the jury asked for to be shown again.

Erratum.—At. p. 515 in the thirty-third line from the top, for the latter had "red flowers with a white base," read "white flowers with a red base."

The highest distinction, the Mikado of Japan can bestow upon any of his subjects is the decoration of the Chrysanthemum. This flower also constitutes the Royal seal.

Mildew on Roses.—A good remedy for this evil is to boil nine pints of water for ten minutes, turning into it 250 grammes of flowers of sulphur, and the same quantity of newly slacked lime. Allow the liquid to become clear, decant and put it into bottles. The preparation will keep for years. When about to use it put one and half pints of it into 150 pints of water.

The Birmingham Amateur Gardeners' Association had a meeting on the 4th inst., when Mr. A. L. Wadley read a paper on British Ferns, and said he was surprised that so few people cultivated them, considering that so many of them grew wild in the neighbouring counties. He considered them ideal plants for towns inasmuch as they required only a moderate amount of light, and but little room. A window case would hold a large number of the smaller kinds.

Ink for writing on glass.—Writing upon paper, zinc, or wood, is liable to wash off and disappear. The *Revue de l'Horticulture Belge* gives a formula for the making of an indelible ink for writing on glass. Take 20 grammes of brown shell-lac, and dissolve it in 150 cubic centimetres of hot alcohol; on the other hand, make an aqueous solution of 35 grammes of borax in 250 cubic centimetres of distilled water, and turn the first solution slowly into the second. It only remains to add some colouring matter to the preparation, one gramme of methyl violet, for instance, answering the purpose perfectly. The ink obtained is indelible according to its disinterested promoters.

Lord Tennyson's "Becket."—Will you kindly allow me to announce for the information of the numerous strangers now in London, and of all interested in such matters, that on May 31st Sir Henry Irving will read Tennyson's "Becket" in the magnificently restored Chapter House of Canterbury Cathedral, for the benefit of the Thirteenth Centenary fund? There will be an exceptional interest in hearing Sir Henry Irving read Lord Tennyson's work in the midst of the scenes in which the memorable death of the great Archbishop took place. St. Thomas Becket entered the Chapter House on the evening of December 29th, 1170, only a few minutes before his murder in the adjoining "martyrdom." The restored Chapter House will be reopened by H.R.H. the Prince of Wales on Saturday, May 29th, and will be first publicly used for the reading which Sir Henry Irving is so generously to give. After the reading, which will be at two o'clock, opportunities will be afforded to visitors to see the Cathedral and the very spot where the four knights did their terrible deed.—*F. W. Farrar, The Deanery, Canterbury.*

Eelworms and Daddy long-legs.—Miss E. A. Ormerod has recently been distributing leaflets on some injurious pests of plant life, including stem Eelworms and Daddy-long-legs, which she reckons amongst the four or five of the most important of the pests which injure farm crops, because they occur every year. Those pests are likewise most injurious to garden crops of various kinds, both under glass and out-of-doors. During the autumn, winter, and spring months, the grubs of Daddy-long-legs, known as Leather Jackets, feed just under the surface of the soil, often doing irreparable damage to various useful subjects. During the past year, the disease known as Tulip root or segging in oats and stem sickness in clover has been unusually prevalent, and is due to the presence of microscopically minute eelworms. For the first time in this country Miss Ormerod recorded the presence of the pest amongst Onions, the disease causing them to appear of abnormal size. In Holland the disease is well known under the name of Onion sickness. It is to be hoped that the pest will never become very prevalent here. Oats are most liable to attack, as rye is upon the Continent. Wheat is less liable, and barley not at all. Gardeners will not be pleased, however, to hear that Potatos and Broad Beans are liable to infestation.

The Water Melon was introduced to this country in 1597; but it was cultivated in Egypt in 2,500 B.C.

At the Waverley Market, Edinburgh.—Old lady to gardener's man:—"What's the price of your Pea-pods?" G. M. (snappishly): "The Peas are half-a-crown, and you get the pods for nothing!"—*People's Journal.*

Hydrangeas with blue flowers.—In order to produce blue flowers on Hydrangeas, it is recommended to use 86 per cent. of peat, mixed with 10 per cent. of pounded slate, 3 per cent. sulphate of iron, and one per cent. of ammonia.

Robinson v. Ward, Lock, & Company (Limited.)—The Plaintiff in the above action, on the 2nd day of April ult., obtained from His Lordship, Mr. Justice Kekewich, in the Chief Division of the High Court of Justice, an order perpetually restraining the Defendants from printing, publishing, selling, or disposing of, and from advertising, offering, or exposing for sale any newspaper, periodical, or publication by the name of "*Gardening Illustrated*," or by any other name so similar to "*Gardening Illustrated*," as to induce the public to believe that such newspaper, periodical, or publication is the paper published by the Plaintiff.

Gardeners' Royal Benevolent Institution.—We are requested to state that the 58th Anniversary Festival Dinner in aid of the funds of this institution will take place on Wednesday, May 26th. at 6.30 for 7 o'clock the first day of the Temple Flower Show) at the Hotel Metropole, under the presidency of the Right Hon. Lord Rothschild. As a large gathering is expected on the occasion, the secretary, George J. Ingram, 50, Parliament Street, London, S.W., will be greatly obliged if those friends who desire to be present will intimate their intention to him as early as possible, in order to make the necessary arrangements.

Sutton's Cricket Club.—All work and no play makes Jack a dull boy, and we are not sure that this idea has been at work amongst the staff of Messrs. Sutton & Sons, Reading; but they evidently have acted upon it. Out door exercise is needful both for gardeners who are much confined to glass houses, as well as for those who are not precisely gardeners, but who are connected with gardening establishments and whose occupation is sedentary. Out door exercise is wholesome and always to be recommended. The staff is so large that it has been divided into three teams—A and B, and the Junior team—on the showing of a neat folding card suitable for the waistcoat pocket. The programme of the work to be got through during the season from May to August, inclusive, is fairly extensive, seeing that the three teams are to play in the aggregate forty matches. We presume there will be practice as well in the intervals, though the fifteen matches to be played in June will leave little time for drilling except during the evenings which are not very long even in June.

Another Breathing Space for Cardiff.—The western district of Cardiff is to be blessed with a new park and recreation ground some twenty acres in extent. It is seven years ago since the Cardiff Corporation purchased the land, and plans were prepared soon after by Mr. Harper. It was not, however, until July of 1895 that anything further was done, but at that date Mr. Pettigrew started on the laying out of the park according to the plans accepted. A great deal had to be done for the land was little better than a swamp where skaters rejoiced in winter, and reeds and rushes flourished in summer. In addition to the all important draining a large portion of the surface was raised several feet, the soil for this being obtained from the bed of the Ely river. Now a great change has been effected. Undoubtedly a great factor in the rapid change has been the planting of some very large trees over 40 ft. in height, and includes a Silver Birch, an Elm, a Copper Beach, and a fine Mulberry. All appear to have stood the transplanting remarkably well. The playground specially devoted to the children is two and a quarter acres in extent, the grass being evidently in fine condition. The central feature of the park is a lake, which has been so well devised and constructed that at no point can its whole extent be seen at one time. Round the banks of this lake Rhododendrons, Aucubas, Dwarf Conifers, and double Cherries have been planted in great numbers and the whole of them are doing well.

The Japanese hold their picnics under Cherry trees, millions of people singing and sporting under the trees in June. We speak of a beanfeast; the Japanese speak of "going to see the flowers."

Large Glasshouses.—A horticulturist at Isleworth has built ten huge glass houses, each of them 600 ft. in length by 40 ft. in width. Ploughs and horses are to be used for the preparation of the soil inside for Tomatos.

Potatos and Cabbages can be raised on 22 acres of land in sufficient quantity to support 176 people. On a similar area oats will sustain 88 people; wheat 42; but only one man, if fed on flesh meat, can be supported on that space of land.

The Carrot Fly.—The Board of Agriculture has issued a leaflet containing a description of the Carrot fly and the methods of combating it. The fly is especially injurious in dry seasons, its presence being indicated by the tops of the plants becoming brown and withering prematurely. When these symptoms are noticed, the affected roots should be dug up and destroyed. The fly itself is of a shiny black colour and about a fifth of an inch in length. As soon as it is seen, the plants should be sprayed with a mixture of one gallon of petroleum and ½ lb. of soft soap to ten gallons of water. Another plan is to mix ashes, sawdust, or sand, with petroleum, at the rate of three or four quarts of the latter to 1 cwt. of the former, and strew it about among the plants. Some of the mixture may also be put in the drills with the seed. It is also stated that the laying of eggs by the flies close to the stems of the plants may be prevented by pressing the soil firmly around them.

The Sunflower Crop.—In Russia the farmer considers his Sunflower crop the best paying of any, for in nearly every part of that country Sunflower seeds find a ready market. They are eaten by the poor people, sometimes in the raw condition, at other times crushed into meal and made into cakes. The culture on a large scale of Sunflowers has been recommended by enthusiasts as a profitable undertaking for the British farmer. It is stated that the value of the gross yield per acre will run as high as £82 8s. Some fortunate cultivators are also said to have cleared £49 per acre on the venture. The difficulty, however, would not be in growing the plants, for that is easy enough, but in finding a market for the seed. There is no doubt that the oily seed of the Sunflower constitutes a highly nutritious food for poultry, but the demand is not an extensive one, although, if it could be proved that it would be cheaper than other grain now used, the demand would increase; still it is one thing to grow and another to sell.

Horticulture in Canada.—A new horticultural paper, named the *Canadian Horticultural Magazine*, has been launched on its mission by the Montreal Horticultural Society. The aim of the magazine is to be on the broad lines of education. It will be supported, and all the branches of Horticulture dealt with, by numbers of the best known and ablest of Canadian Horticulturists. The useful and beautiful in horticulture will receive equal attention. The promotion of fruit culture in its several departments and the important commercial interests identified therewith will receive unremitting attention. Reliable information will be furnished by the society to those who contemplate planting orchards. Amateur gardening will also receive attention as well as forests, public parks, and other matters of interest to gardeners, florists and others. In the first issue of the magazine there are articles on the farmer's fruit garden, Plums for the cold north, the orchard, the Delaware grape and some of its recent seedlings, experiences in exporting summer Apples, &c. One of the reasons for the starting of such a magazine is that it will deal with subjects suitable for the climate which of course varies considerably, some parts being favourable to the cultivation of Apples, others to Pears; but much of the Dominion of Canada being at high latitudes, the question of suitable varieties and the treatment necessary for various things are matters of leading importance, and must be dealt with by writers living in the country and having a wide experience of the climate, and horticulture under those conditions. The magazine is under the direct control of the Montreal Horticultural Society, P. O. Box 778, Montreal.

Grapes are still trodden with the bare feet in the wine-producing districts of France, Spain, and Italy, under the impression that the wine is better.

OXALIS BOWIEANA.

THE Oxalis is a rather extensive genus, and although unrepresented in very many gardens, it includes some very useful and beautiful varieties, foremost among which is the subject of this note, which I believe was better known and more widely cultivated some thirty years back than at the present time. It is one of the stemless forms, a free grower, with large trifoliolate leaves of a pale green colour. The flowers are of a bright shining rose colour, borne in umbels on a stem 6 in. to 7 in. in length and measure about 1½ in. across. Considering its native habitat, it is hardier than might be expected. I have known it to survive several winters close to the wall plate of a vinery, receiving no further protection, and flowering better there than under any other conditions; but I would not recommend anyone with a limited stock to run the risk. Our own plan has been to grow it in 4-in. pots, keeping it cool through the winter in a cold pit from which frost is excluded, allowing them to come along naturally, and removing them into the greenhouse or conservatory when in flower. After flowering they are dried off gradually, and before growth recommences they are shaken out and repotted in a mixture of sandy loam with a little decayed manure. A dozen or more pots of this are a most useful and beautiful addition to the conservatory when fully in flower. Another old favourite was Oxalis tigrina of quite a different character being of a trailing habit and well adapted for small baskets. The flowers of this when fully open are white, but when closed they have the appearance of being striped with lines of a deep red.—*W.B.G.*

MANURING WITH SEAWEED.

ON a coast line of 130 miles in Normandy and Brittany, and in a background varying from one and a half to seven miles, two-thirds of the manure employed is seaweed. Its cutting and collection form a special local industry. Only the resident peasantry and the proprietors of lands adjoining the coast can appropriate the seaweed. The latter forms immense prairies in the bottom of the ocean, extending over miles upon miles of shingle, and to which the weed, or, to give it its general, but not accurate name, Varech, is affixed. It is also attached to rocks, and immense quantities are washed ashore after a storm. The seaweed harvest takes place from the middle of July to the middle of October; the dates are limited by the Government to the five days before and the five days after each new and full moon. The hours, sunrise to sunset. Along the beach every man, woman, and child capable of using their legs; every vehicle that can run on wheels; every animal—horses, asses, costermonger, draught dogs—that can pull; every boat that can float—all are drawn up in crowded lines; the adults are armed with scythes and reaping hooks; the tides are neep at the periods selected. A cannon is fired or a bugle blown, and the seaweed meadows are charged by the motley bands. Some of the men wade up to their waist in the tide to mow the crop, which the water maintains in an upright position.

One variety of the weed, having long, fine leaves a quarter of an inch wide, is spread on the downs to be washed by the rain, and when air-dried is made into bales, and sold at 6s. per cwt., as stuffing for palliasses, bolsters, and upholstery. Some is dried, burned, and the ashes are utilised to make kaoline and iodine. The inferior sorts, or drift, when dried, are stocked, and serve as bedding for byres and stables. In the fresh state the weed is frequently plowed down, and a catch crop taken thereon. It is an excellent preparation for winter black Tartary oats, rye, and buckwheat. It is as a compost, mixed with peat, earth, farmyard manure, leaves, etc., employed for topdressing meadows or manuring land for Potatos. Seaweed is much patronised in the Channel Islands as a manure for Potatos. Its fertilising value resides in its high percentage of sulphate of potash—20 per cent. in the ash, and a little nitrogen according to Gay-Luttac and Muntz. No commercial value is attached to the extraction of the potash of seaweed; it could not compete with the kainit mines of Stassfurt.—*Irish Farming World.*

STRAWBERRY PRESIDENT.

NOTWITHSTANDING the introduction of many grand varieties in recent years, this will long continue to hold an important position in the garden. It is one of the best flavoured Strawberries in cultivation, indeed, there are some who look upon it as the best. Others dilate upon the excellent quality of British Queen and Dr. Hogg, and while we admit their refined and delicate flavour, we regard them as varieties which relatively few gardeners can grow successfully. They are poor croppers in many gardens, and in some soils they practically die out before giving any adequate return for the labour spent upon them. Even bad and practically tasteless varieties that have once been boomed for some quality or other, such as Noble for its earliness, long continue to be recommended by some one or other, after they have been superseded by others both in earliness, flavour, and size.

Not only is President an excellent and easily grown Strawberry for outdoor culture, but it is admirably adapted for forcing. This has been recalled by a sample sent us by Mr. J. Mayne, The Gardens, Bicton, who uses Royal Sovereign for his earliest gathering and President later on. The fruits are firm to the centre, juicy, and almost as rich in flavour as they would be later on in the open. The sunshine has no doubt been more plentiful in Devon than in London during the past spring, for it is only recently that we have been favoured with a fair share of that inconstant commodity. Many cultivators continue to use Vicomtesse Hericart de Thury as a forcing Strawberry, and it has the qualities that recommend it; but as far as appearance, size, and flavour are concerned, it is hardly eqnal to President for use in April and May. Mr. Mayne thinks that there is nothing better than President, at this time of the year, together with the special brand of Devonshire cream, and we think there is much to be said in favour of that view.

ORCHID NOTES & GLEANINGS.

BY THE EDITOR.

Cattleya Mossiae Lucienne, *Nov. var.*—Very dark and very light coloured varieties of most of the Cattleyas, including C. Mossiae, meet with most favour as they turn up amongst importations. That under notice is a light variety, the sepals and petals being white, lightly washed with rose. The ground colour of the lip is also white, beautifully mottled and marbled with dark rosy-purple. The orange blotch extends well on to the base of the expanded lamina. There is a coloured figure of it in the *Lindenia*, *t.* 544. A dark variety, named C. M. John Schulz, is shown upon the same page, and indicates by contrast the wide range of colour in this type of Cattleya. The sepals and petals are rich rose-purple; but the lamina is intensified to a rich crimson-purple, very little broken up, but giving place to a broad, white margin. The orange band encircling the base of the tube of the lip externally is rather curious, being much more intensified than usual.

Cattleya Warneri.—A magnificently coloured variety of this old but now uncommon Cattleya appears in the *Orchid Album, Pl 521*. The sepals and petals are nearly of a uniform dark rose-purple. The lip is the darkest, most conspicuous and handsome feature of the flower, for it is nearly of a uniform crimson-purple, slightly paler at the margins. The rich colouring is, however, carried round the edges of the lateral lobes, where it joins the highly coloured tube. The dark orange blotch in the throat is relatively narrow, giving place to creamy-white which covers the greater area of the sides lobes. A whole plant is represented in this illustration, five of the pseudobulbs bearing a leaf, and two more being leafless. Three flowers are borne upon a scape, all being well displayed. The illustration was prepared from a plant which flowered in the collection of Lady Piggott, Wexham Park, Slough, under the care of Mr. Capp. This type is closely allied to the autumn flowering C. labiata, but differs by flowering in spring and early summer, with C. Mendelii and C. Mossiae.

Cymbidium Tigrinum.—The dwarf habit of this species should commend itself to those who are hampered for want of room to grow the better known and tall growing species with their hybrids. A nice little piece is now flowering in the fine collection of R. I. Measures, Esq., Cambridge Lodge, Camberwell. The pseudobulbs are short and uncovered as in an Oncidium, and bear the best leaves on the top. The few-flowered racemes are gracefully drooping, so that the blooms are seen to best advantage when the plant is suspended or stood on a shelf so as to be on a level with the eye. The sepals are of a light olive-brown on the inner face with yellow edges, and the latter colour is more abundant on the petals. The lip is white, conspicuously spotted all over with purple, suggesting the specific name, and the side lobes are dark brownish-red or purple. A specimen which flowered in the collection of H. S. Leon, Esq., Bletchley Park, Bucks., has recently been figured in the *Orchid Album*, *Pl.* 523. In this instance the sepals and petals are much darker on the back than the face, which is olive green. This variety is also pretty, though different from the first-named.

Odontoglossum hunnewellianum grandiflorum.—The typical form of this plant bears small, but very prettily marked flowers. The variety here named and figured in the *Lindenia Pl.* 545 has flowers as large as those of O. luteo-purpureum sceptrum. The sepals and petals are lanceolate-elliptic and of a rich, dark, chocolate-brown, the colouring being more or less broken up towards the base, showing a yellow ground colour. The edges and tips are also yellow, but the dark colours are more or less directed towards the circumference of the flower, leaving the lighter yellow hues in the centre. The lip is several shades paler and beautifully marbled with chocolate spots and specks round the white edges. The typical O. hunnewellianum places the species amongst the smaller-flowered forms of the genus, but the variety under notice lifts the species into a higher plane. Botanically it is allied to O. luteo-purpureum, but more nearly so to O. schillerianum, another little-known Odontoglot. This large-flowered variety turned up in the collection of Messrs. Lucien Linden & Co., at Moortebeek, in an importation from Colombia.

Cypripedium Chapmani.—This is one of the finest of the hybrids which have been raised from C. Curtisii crossed with some other species. In this case C. bellatulum was the pollen parent, and its influence is most apparent in the progeny. As far as the flower is concerned, the seed bearer is most apparent in the upper sepal which is creamy white, shading to green at the base, and lined and spotted with purple. The broadly oblong, declinate petals are densely spotted all over with crimson-purple on a rosy ground. The lip is of great size, and of a dark or blackish-purple in front. The habit of the plant is all that could be desired, and excellent, for the scape is about 9 in. high, bearing a huge, solitary flower. The leaves are broad, spreading near the surface of the pot and of a light green, tessellated with a lighter colour. The speediness with which it was raised and brought into bloom is quite a record in its way, for from the time that the pollen was applied to C. Curtisii until the plants came into bloom, only four years have elapsed. It is now flowering for the second time in the splendid collection of R. I. Measures, Esq., Cambridge Lodge, Camberwell, where it was raised by Mr. Henry James Chapman, the gardener, after whom it is named.

Cattleya Mendelii Cambridge Lodge var. *Nov. var.*—The sepals and petals of this variety are white, while the lip is also white with the exception of a small soft purple blotch on the centre of the lamina, and the customary Yellow blotch in the throat, but which is very much reduced in size, and pale in colour. It has been flowering for the last month or more on a newly imported piece in the collection of R. I. Measures, Esq., but when it has been established and got into vigorous growth the flowers will be much larger than they are at present. It holds the same relation to C. Mendelii as C. Mossiae reineckeana does to C. Mossiae. The delicacy of its colouring makes it a choice thing, for in our opinion many pale varieties of Cattleya are just as charming in their way as the dark varieties are splendid.

Cattleya Schroderae.—There can be no doubt but that this Cattleya maintains its popularity equally as well as the other types in cultivation. This is due to the size of the flowers, the delicacy of their colouring and the large rich orange blotch in the throat which gives character to the whole flower, and reminds us of what occurs in C. Eldorada crocea. A batch of plants from the grand importation recently made by Messrs. J. Veitch & Sons, Limited, has been flowering for weeks past in the collection of R. I. Measures, Esq., Cambridge Lodge, Camberwell, under the care of Mr. Chapman. A dark variety has been in fine condition for the past five weeks. The sepals, petals, and lip are rose, with a large rich orange blotch in the throat of the lip. Close by is another with flowers of delicate hue, so pale, indeed, that the sepals and petals are almost white. The lamina of the lip is of a soft rosy lilac, but the intensity of the dark orange blotch, and its size serve to make the variety conspicuous.

A large Cattleya Mossiae.—At one time 8 in. across the petals was considered large for C. Mossiae, but naturally large flowered varieties under good treatment can exceed even this. A dark variety flowering in Mr. J. Seeger's Nursery, at Bandon Hill, Croydon, measures 9½ in. across the petals, and the lip is close upon 4 in. in length. The sepals and petals are of a uniform rich rose, and show up to great advantage under artificial light, the colour appearing to be intensified.

THE FLOWER GARDEN.

AT this time the preparations for the summer bedding-out naturally absorb a good deal of attention, for in most localities a start may be made towards the end of the month, and when May proves a hot and dry time there is often a great temptation to start to work even earlier, as the watering of so many plants in pots and boxes is a lengthy operation. Meanwhile the hardier plants are being daily turned out of doors and thus various frames are set at liberty. A "protection ground" at this season is a great boon, for it admits of the necessary shelter being given quickly and easily should frost intervene, and the plants are therefore as safe as they would be out of doors. Zonal Pelargoniums should now be all out of doors, and such things as Dahlias the tops of which rapidly get too tall for the depth of the frames will also be better if stood out of doors, although it will not be safe to plant the latter out yet. Coleus Verschaffeltii, Iresines, Heliotropes, Alternantheras, and other tender subjects should be kept in frames for the present as the commencement of June will be here before it will be advisable to trust them to the mercies of the weather.

THE PREPARATION OF THE BEDS is another point that must be seen to. Of course Tulips and Narcissi must be left as long as possible in order to get the bulbs as far forward towards maturation as possible but there will not be time for them to finish completely. They should therefore be lifted and laid in carefully in ashes in a sunny part of the frameyard. Here they will ripen off as well as they would in the beds, and the check will not do them any damage.

WALLFLOWERS.—The value of these in spring bedding arrangements can scarcely be over-estimated. They are certainly well worth the taking of a little extra pains in order to have them in good condition. Not a few people sow the seed too late and thus the plants have not time enough to make good stuff before winter sets in. A sowing of seed should therefore be made now. Choose a sunny border, one facing to the west will answer admirably. The soil should not be too rich, but must be sweet. Sow thinly in shallow drills and transplant the seedlings as soon as they are large enough to handle easily. A good position for the nursery beds is a border with a northern or an eastern aspect, for then the seedlings are sheltered from the fiercest rays of the sun.

DAHLIAS.—These require a deep, rich, and well-worked soil, although the application of manure so late in the season is not to be recommended. The sites upon which it is proposed to plant Dahlias should have been well manured and deeply dug last autumn. If this has been omitted a good digging of the soil will suffice if the latter is in fairly good condition and increased stores of nourishment must be given by means of mulchings of short stable manure and occasional applications of such fertilizers as Guano when the plants are in full growth. Dahlias can be used in a great variety of positions and always with good effect, and although the show and

fancy sections have only, comparatively speaking, a limited stock of admirers the single, Pompon, and Cactus sections are in great favour in the majority of establishments. The Cactus and single varieties are especially valuable for cutting from, and hence a good stock of plants is desirable.

Hollyhocks.—This fine old-fashioned flower, although somewhat stiff in appearance has yet a stately character all its own. Planted in clumps of 5 or 6 in the herbaceous border they always render a good account of themselves, and although the flowers are of no use for cutting they are effective enough on the plants. In the warmer parts of the country the plants were put out about the middle of last month. It will now be safe to plant out where things generally are more backward and where hard frosts may be expected until the spring is well advanced. A stout stake will be necessary for each plant, and this may be given at once if desired.

Mignonette.—Bearing in mind the popularity of this sweet-scented favourite it will be well to make frequent sowings of it in various positions where it may flower undisturbed. Transplanting may certainly be done, but the young plants do not take kindly to it, and as the rays of the sun become hotter and hotter with the advancing season there will be an increasing difficulty in getting them to do. If there are vacancies to be made good, however, the young plants should be lifted with good balls of earth attached so that their roots are disturbed as little as possible. Pretty severe thinning out may be practised as the plants, if allowed sufficient room grow strongly, but this thinning should be gradually performed. Vacant spaces in the mixed border, spaces between Rose bushes, or small shrubs or trees of any description, may be turned to good account thus, and the material thus obtained will be always useful for cutting.

FRUIT UNDER GLASS.

Pot Peach and Nectarine Trees.—As soon as the fruit on these shows signs of colouring every assistance in the way of light and air should be given them. Being in pots it is very easy to shift the plants to a position where this will be forthcoming. Syringing must be knocked off when the fruit commences to get soft. Manure water may be given rather later than would be advisable with planted-out trees, but in the last stages of maturation nothing but clear water must be given. It would be dangerous, however, to diminish the supply of this to any very great extent, for with the limited amount of soil and space such a proceeding would be dangerous to the roots.

In the early permanent house the fruit is swelling fast, and will soon be fit for the table. Carry out the instructions given in the last calendar with regard to syringing and watering, for the trees have now a very great strain upon them. A great deal may be done to assist the fruit in ripening by pushing aside any leaves that are shading it.

Succession Houses.—Here the work of laying in the shoots to act as next season's fruit bearers is actively in progress. Even where disbudding has been carefully and well performed, there are usually a few shoots for which it is difficult to find room. These should be cut out at once, for one good shoot is far better than two moderate ones. Young trees will need particular attention, for in this case they have to be built up, and the larger circle over which this season's growths are disposed will call for two or occasionally more shoots to properly cover the space. Thorough and consistent syringing is of the utmost importance, for it is only by keeping the foliage clean, healthy, and free from insect attacks, that success can be obtained. A specially sharp eye must be kept upon portions of the trees that are near to the pipes, for it is in such positions that red spider first makes its appearance. An occasional fumigation or vapourising may be necessary to keep down black fly. Air must be left on all through the night to some extent both by the top and bottom ventilators. It need not be enough to create a draught, but sufficient to prevent stagnation of the atmosphere of the house.

Early Vinery.—As soon as the Grapes here begin to colour, any plants in pots that are in the house should be moved out, for a drier atmosphere is now wanted for the ruit, and this the pot plants will not like. As soon as the brown of the ripening berries commences to merge into black it will no longer be advisable to give manure water, and the supply of clear water may be considerably diminished. Damping down must cease entirely, and more air must be given all round. The temperature may be kept up to about 70° by night, and this can now be done without much trouble.

Succession Houses.—Here the routine of ventilating, watering, damping down, and pinching of laterals must be proceeded with. Possibly the greatest danger to be feared is that of scorching, but this can easily be obviated by proper attention. Faulty glass may be, and doubtless is blamed in some instances, but good glass is cheap enough now, and thus the one excuse for allowing the leaves of Vines to be scorched is fast vanishing. If the night temperature is kept from falling too low, and the deposition of moisture on the leaves thus prevented, whilst proper attention is paid to airing early in the morning there will no harm result.

Melons in Frames.—It is with a glad sense of relief that many gardeners are watching the gradual clearance of the bedding stuff which in such an infinite variety has been blocking up the pits and frames for some time past. Some of these frames will come in for the accomodation of Melons, which given a fairly favourable season, can be grown successfully in this way. Deep brick pits which were filled up with leaves for early Potatos also answer very well. After the tubers have been dug the soil should be taken out and replaced by some good mellow loam. A barrowful of this placed in the centre of each light will be sufficient to plant the Melons in, an addition of soil being given in the shape of a top-dressing when the young plants have rooted through. Heat from the pipes will also be wanted, through the first few weeks at least, although the sun will supply increasing heat as the summer comes in. Movable frames placed on the top of hot beds will also suit Melons well. The only difficulty is with the syringe, which will need to be used much more carefully than in the houses. A spell of dull weather and a green hand at the end of the syringe will together work a good deal of damage among Melons in frames, although during bright weather the plants will stand copious supplies of water overhead.—*A. S. G.*

THE ORCHID HOUSES.

East India House.—With such cold cheerless weather as we are now getting, it would not do to raise the temperature much above what was recommended in a previous calendar. To do so you would be compelled to have recourse to extra fire-heat, and that is not desirable. As the days lengthen, however, we hope the outside temperature will become more favourable to plant life; then we shall be able to give air more freely, and at the same time keep the heat up to its proper height, without the use of that necessary evil fire-heat.

For the welfare of all occupants of this division great care and attention must be paid to what we call the working of the house, that is, the heat, moisture and air must be so balanced that there is a humidity in the air without being stuffy. Also special attention should be paid to the shading. The exact time of running down the blinds on bright mornings depends greatly on the position of the house. Those running as ours are east and west require the blinds on the south side down by nine o'clock, but for houses running north and south, a little later would be best, as the sun strikes them in an oblique direction. Any tender plants can generally be so protected that no harm would come to them by placing temporarily sheets of newspaper or tiffany over them.

Cattleya House.—This division is becoming gay with the advent of the first batch of Cattleya Mendeli; and as the season will last some time it behoves each one of us to try and set them off to the best advantage so that visitors may view them with ease.

We bring all those that are fully open to one end of the division. Here they are arranged with other things that flower at this season such as Vanda suavis, which makes a fine background, Miltonia vexillaria, Odontoglossom citrosmum, Dendrobiums, &c., with which are mixed a few Palms and Maidenhair Ferns. When damping down, be careful not to allow any water to touch the expanded flowers, as it causes them to spot and to prematurely loose their freshness.

Cool House.—Here, too, it would be much better if the plants in bloom were grouped together, instead of being dotted about here and there. Odontoglossums of the O. crispum type are now plentiful, and when arranged with the brown O. triumphans, O. luteo-purpureum, &c, they produce a charming effect.

It is most unusual for us to use fire heat in this division in the month of May, but so cold are the nights that in one of our houses that is not connected with a warmer division we have been compelled to do so to keep it from running down too low. When connected with the intermediate house this is hardly necessary, as by opening the door the first thing in the morning, the temperature soon runs up to its proper height, and the plants will be in a regular sweat in no time. This just suits Odontoglossums.—*C.*

Gleanings from the World of Science.

The undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on the 27th inst.

Tulips Diseased.—With reference to the Tulips "Golden Crown" sent to the last meeting by Mr. Thomas, of Polegate, the following is the report received from Kew:—"The leaves are attacked by a fungus called Botrytis vulgaris, a destructive parasite to various bulbous plants. The mycelium of the fungus travels down the tissues of the host plant and forms minute sclerotia in the bulb and also in the soil in which the plant is growing. These sclerotia remain dormant during the winter, and commence to grow the following spring when the young leaves appear. Your correspondent is right in supposing that he will get no blooms. The wisest thing to do would be to remove all the diseased plants. It would not be wise to plant bulbs in the soil where the diseased plants have grown for the next two years. If this cannot conveniently be avoided, then let him plant 'trap-plants'—that is, comparatively worthless bulbs—to take up the spores and sclerotia present in the soil, and then remove them early in the summer before more sclerotia or spores are formed."

Podisoma Sabinae.—Mr. E. Pollard, of Colwall, Great Malvern, sent a specimen of Savin having the yellow jelly-like outgrowth from the stem of this fungus. It is dimorphic, the second stage being called Roestelia cancellata, and is found growing on rosaceous trees.

Pinus torreyana.—Dr. Masters exhibited specimens of the large cones of this tree. It was found on the extreme southern coast of California, extending over about three to four miles only, and the group consisted of from 200 to 300 trees. It has since been discovered on the island of Santa Roza off the same coast. It is now in cultivation.

Lilies Diseased.—Mr. Noy, of Brentford, sent some Lilies; some grown on land heavily manured with sewerage matter and ashes; others on land which had not been manured for several years, being a very light soil. They were attacked with a species of Peronospora, allied to the Potato disease; so possibly a treatment similar to that for Potatos might be advantageous.

Tulip with Axillary Flower.—Mr. Townell, of Heaton, Newcastle-on-Tyne, sent a specimen of the Tulip "Proserpine," in which an additional small flower sprang from the axil of a leaf on the scape. It is not a common production, but similar growths occasionally occur.

Cineraria Crosses.—Messrs. James & Son, of Farnham Royal, sent several fine grown plants, which they had raised (1) between Cineraria cruenta crossed with garden forms, and four plants (2, 3, 4, 5,) resulting from this; also (1) again crossed with C. Heritieri (6); also this last true species crossed with the first named (1). It had white flowers, with pink tips to the petals. Of the four plants, numbered 2, 3, 4, 5, No. 2 had foliage more resembling that of C. cruenta, but 3, 4, and 5, that of C. Heritieri, while three had a white ray and pink disc; 5 had both ray and disc of a crimson colour.

HINTS FOR AMATEURS.

The Doronicums.—The genus Doronicum contains about a dozen species of rather dwarf free-flowering hardy herbaceous perennials found distributed in Europe and temperate parts of Asia. The origin of the name of "Doronicum" is somewhat obscure but it is supposed to come from an Arabic word meaning poison. Some of the plants are supposed to be poisonous, more particularly D. Pardalianches, to wild beasts; and leopards are said to be especially fond of the roots and leaves which have the effect of stupifying them. Hence the popular name of Leopard's Bane which is tacked on to the plants.

Whatever doubt there may be about the origin and significance of the name, however, there can be none with regard to the value of the plants from a horticultural point of view. There are several forms that are well worthy of being in every garden, for although yellow is a pretty common colour through the latter part of the summer and the autumn, it is none too plentiful in the spring and earlier part of the summer. Then again, we have to consider the hardiness of the plants and the happy way in which they adapt themselves to almost any soil and to nearly any kind of treatment. Naturally enough they do best on deep rich soils, and it will always pay to give them this if possible, but they will bloom with freedom even on shallow and poor soils, unless they are absolutely dried up. Then again their propagation is so simple that the veriest tyro need not be afraid of trying his hand. All that is necessary is to divide the roots and plant the divisions straight away.

D. austriacum.—This is to be recommended most of all on account of its earliness The bright yellow flowers are unfolded early in spring. As it varies in height from 1 ft. to 1½ ft., but never exceeding the latter, it may be turned to good account in a variety of ways, its dwarfness here being of service. The leaves are large, cordate (heart-shaped), and more or less hairy.

D. plantagineum, or the Plaintain-leaved Doronicum is now looked upon as being wild in this country, although it is doubtless an escape from cultivation since it is not really a native of this country. It is rather taller and stronger growing than D. austriacum, as it reaches a height of about 3 ft. when it is doing well. It commences to flower in March, and lasts for some time in condition.

D. plantagineum excelsum is perhaps the finest of all the Doronicums. It is really, as the name signifies, a variety of D. plantagineum, although it is much taller, of more vigorous growth, and what is still more important, since it lasts in condition from March till October, has a much longer flowering season. The leaves are very large but not quite so broad in proportion to their length as those of D. austriacum. Bushy specimens from 4 ft. and 5 ft. in height, and 3 ft. through are very noble objects in the herbaceous border. It will do equally well in the open and in partial shade, although, naturally enough, it grows rather taller in the shade than it does in the full sun. This Doronicum is thus a great favourite with lovers of herbaceous plants, some of whom are probably better acquainted with it under the name of D. Harper Crewe.

D. Pardalianches, commonly known as the great Leopard's Bane, is like D. plantagineum now regarded as a wild British plant, and also like it is an escape from cultivation. Escapes of this kind are going on to-day, but the long time that has elapsed since Doronicum Pardalianches betook itself to the woods has justified its inclusion in the British Flora of to-day. The plant is not of so tall a habit as D. plantagineum; in fact, it is intermediate in height between the latter species and D. austriacum.

Hardening Off.—Within the next fortnight a start will doubtless be made with the bedding out, that is, if the weather turns out at all promising towards the end of May. Just now there will be a constant shifting of plants from warm quarters to cooler ones until finally they are placed outside. The hardier subjects such as zonal Pelargoniums, for instance, should be turned out-of-doors at once, but as we are not yet out of the wood with regard to frosts they should be stood in a place where protection can be easily given if desired. In many large gardens a permanent wooden framework is considered part of the requirements. This is of about the same height as an ordinary greenhouse, and is boarded up at the sides for about 4 ft. in height, the roof being open. Such constructions usually cover a considerable area, and are capable of containing vast numbers of plants, which while they will take no harm as long as the thermometer keeps up a little above freezing point would be ruined if the mercury dropped a little below it.

Now it is not necessary, nor would it even be advisable for an amateur, who grows but a few plants to go to the expense of putting up a contrivance of this sort, although there is no doubt that it would prove very handy during both the critical seasons of the year, *i.e.*, spring and autumn, when we may expect frosts any evening. A shift may be made by standing the plants against a wall. Spars of wood may be tilted against the latter, and mats or tiffany thrown over the spars. Such a protection will keep away all the frost that we are likely to get now. Be careful to stand the pots level, for neglect of this simple precaution will result in many of the plants being starved for water, which the pots being on one side cannot contain.

Stocks, Asters, Pyrethrum Golden Feather, Marigolds, Tagetes, Sunflowers, and other similar material, which, by this time, should be fairly strong and sturdy, may remain in the frames for about another week during which they must be put through the last stages of their hardening-off drill. Pull the lights off the first thing in the morning, and leave them off until the last thing at night when they may be drawn on and blocked up at the back. If the night is very warm they may be left off altogether just before the shift, but May evenings are rather treacherous, and too much must not be risked.

Alternantheras, Tobacco and Castor Oil Plants, Perilla, Coleuses, Iresines, and other of the tenderer plants which will not be transferred to the flower garden until the hardier element has been attended to should not be hurried out too soon. With Heliotropes again it often, and, in fact, usually happens that the latest batch of cuttings have only just rooted, and have been just potted off singly into small 60-sized pots. These plants would naturally receive a sincere check if taken out of the heat now, and they would not make sufficient growth to render them of any service. They must, therefore, be kept growing away up to the end of May or the beginning of June if necessary, and then gradually hardened off when they will be ready for service by the middle of June, which will not be very late for them. They will require to be pinched once at least.

Tulip Couleur Cardinal.—Of the many fine April flowering Tulips which made their appearance at the last Drill Hall show none were more conspicuous than Couleur Cardinal. The flower is large, compact, and of great depth. In colour it is a rich crimson-red, which needs to be lighted up by the sun to develop its true beauty. Then it literally glows with colour. Planted in bold masses it is at once striking and effective, and we know of no other variety of the same section of colour to equal it at the time of year.

Sedum acre aureum.—The great fault of spring bedding, as usually practised, is that although a great flush of floral colour comes with the spring months, finding its culminating point some time from the middle of April to the middle of May, for the greater part of the winter months the beds are dull and uninteresting. Something may be done to obviate this by employing to some extent plants that are always handsome. Of this section Sedum acre aureum is a most conspicuous member. The tips of the growths are bright golden-yellow, and as the plant like its type, S. acre, naturally takes on a carpet-like habit, a very fine result is obtained throughout the dull time. Although not so hardy as our native S. acre it will put up with a good deal of bad and cold weather.

Narcissus Glory of Leiden.—This Narcissus is valuable not only on account of its beauty but also by reason of the fact that it lasts well until the fag end of the season. Messrs. Barr & Sons showed a number of bunches of remarkably fine blooms at the last Drill Hall meeting. Despite stormy weather the flowers were seemingly untouched, and the colour rich and vivid. The trumpet is very large, spreading towards the mouth where the margin is deeply cut and frilled in a charming, and deep full yellow. The segments are rather dwarfed in size by comparison with the huge trumpet. Those amateurs who have only room for a few good varieties should at least include Glory of Leiden in their collection.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Azaleas.—*Y.*: You must keep the plants under glass to make their growth. Syringe them well, and give them occasional doses of liquid manure. Soot water is especially good. You may put the plants out of doors about the end of June or the beginning of July.

Chrysanthemums.—Last autumn I saw some pretty little Chrysanthemums about 1 ft. in height, and each carrying a single flower. They were in very small pots. The variety was the white Elaine. Please tell me how these are grown, and when the cuttings have to be struck, as I should like to grow some in this way.—*T. Perkin.*

You must take the tops off growing plants and insert them as cuttings in July. You may put four or five cuttings in a pot, and when they have rooted pot them off singly into large 60's. You will find the cuttings strike readily at that time of the year in a cold frame facing the north, but they should be covered with a small hand light, otherwise they will become drawn if the frame is very deep, and they are far from the glass. Disbud each plant to one bud, and you will obtain what you require.

Tying Peaches.—*R.O.*: You were quite right not to tie the newly planted Peaches, for no matter how firm the soil is made at the time of planting it is sure to settle a little. There will be no danger in tying them now, however, three months having elapsed from the date of planting.

Thinning Peaches.—*R.O.*: We are quite aware that some books advise a fruit to the square foot of area as a good crop, but a fairly strong tree is capable of carrying a good many more than that without overcropping. We have seen fully double the quantity on some vigorous trees. Thinning must be done gradually. About two turns would be necessary before stoning, and another look round should be given after stoning is completed.

Rhubarb Flowering.—*C.A.*: Yes, you must cut away the flowering stems as soon as they are observed. To allow the plants to flower would only be weakening them to no purpose.

Tuberous Begonia Cuttings.—I have several very nice double flowered tuberous Begonias which I should like to increase. Will cuttings strike easily? I have a small propagating box in which I can get a good heat. Will cuttings struck now flower this year.—*R.J.*

Begonia cuttings will root quickly and well in a propagating frame, with a temperature of not less than 60° Fahr. The cuttings should be about 4 in. long. Insert them singly in small thumb pots, and plunge the pots to the rims in cocoanut fibre in the frame. The plants will flower this summer although naturally they will not make such strong plants as those that have good sized tubers at the base.

Vines.—Please say what is the cause of the spots on the enclosed Vine leaves and the best remedy.—*Subscriber.*

The leaves have been scalded or scorched by the sun. For the cause of this scorching and the remedy look at the answer to *Amateur* on *p.* 568 of our issue for May 8th. Act upon the advice there given.

Strawberry Laxton's Noble.—*T.B.*: The great value of this variety is its earliness, for it is one of the first to ripen its fruit in favourable localities. In quality, however, it is decidedly inferior to Royal Sovereign, although it boasts of a good appearance. Sir Joseph Paxton is a thoroughly good and reliable variety, but British Queen is only a moderate doer, although its fruits are magnificent quality with regard to flavour.

GROUP OF COELOGYNE CRISTATA. (See p. 586).

COELOGYNE CRISTATA.

This may truly be regarded as a favourite in private establishments, and would also be a good market plant for the sake of cut flowers, provided the latter would carry well, but unfortunately they do not. Their naturally flimsy and drooping habit gives them a graceful appearance when seen on the plant, but if cut and crowded together in boxes they soon present a crushed and faded appearance. For the decoration of cool Orchid houses and conservatories the species, and its several varieties, are admirably suitable, the large white flowers being shown off to advantage against the dark green foliage.

The accompanying illustration was prepared from a photograph of a group of plants in the conservatory of E. H. Watts, Esq., Devonhurst, Chiswick, several weeks ago when the species was in season. There were eight plants of moderate size in the composition of this group, so that their floriferous character may be seen at a glance. Space being at a premium these plants of Coelogyne cristata are as large as is desired here, so that the most is made of them during the period they are in bloom. After that, Mr. James Gibson, the gardener, places them in the Peach house to make their growth, and here they have been for some weeks past. They are now giving evidence or rather promise of making good growth again. Mr. Gibson finds them easy to manage with the houses at command, by shifting them from one to the other according to what is being done in the various plant and fruit houses, and the necessity for change.

The conservatory is used for plants in flower during the season, the tall ones being arranged round the sides. The floor is paved with ornamental tiles of various colours, and a group of plants is occasionally arranged on the floor, as was the group here illustrated. The Kentia formed an admirable background to the dwarf plants. The conservatory itself is a rather high building in direct communication with the mansion by the door seen at the back of the group. It is kept cool and airy, and the large basket plants suspended from the roof give the whole a pleasing appearance, making the place enjoyable to the owner and his family.

OUR ORCHID HOUSES AND WHAT MAY BE DONE WITH THEM.

(*Concluded from p. 570.*)

We now turn to the East Indian house which would be kept 5° to 10° warmer, and in which we find quite a distinct class of plant; and although they may be somewhat lacking in the large gay flowers of the Cattleyas, they will be found quite as interesting. Here we find a home for a great number of Cypripediums, a class of plant that is being largely added to by the aid of the hybridiser. Possibly no other class gives more pleasure to the grower than this genus does. They are perhaps the most easily raised from seed of any Orchid, and the results thus obtained add considerably to the interest of the collection. Here also we find a home for the Vandas, Aerides, Saccolabiums, and many of our Dendrobes like to make their growth here. If we want to make a good selection for the purpose of having showy Orchids, this is the house to show our ability to do so. Although I have not one word to say against those who make a speciality of growing what I may term botanical curiosities, there are so many good showy Orchids to fill this house that I cannot find room for that class of plant here. It is really a question of selection in Orchid growing now-a-days. The species and varieties are so numerous that we have not room enough for all; we must follow the natural law—the survival of the fittest.

The arrangements for this house would be on the same principle as I have described for the Cattleya house. Here the side stages will be a most suitable position for our Cypripeds. The tall growing Vandas can be accommodated in the centre of the house, and many of the Aërides and Saccolabiums can be well grown suspended from the roof, as well as many of the Coelogynes, and numerous others which are too numerous to mention here. Of late years there is not the same amount of interest taken in the cultivation of the Vandas and Aërides that was taken previously. Yet we find the general public, when they see this class of plant in flower, admire it very much, and as a rule they are not bad judges of what is beautiful. Of recent introduction we have in this section of Orchids one of the most beautiful to be found in the whole family. I refer to Vanda sanderiana, and those of you who saw the specimen exhibited at one of the meetings of the R.H.S. last year, can form an opinion of the beauty of the flower. Again in Saccolabium bellinum we have a most beautiful gem. Whatever selection of plants we make for this house, great judgment will be required by the cultivator to place the right plants in the right part of the house. We can also find room here for some of the more choice foliage plants, such as Bertolonias, Sonerillas, Leea amabilis, Alocasias, etc., etc. This house will also be a good place for Cattleya aurea if suspended near the roof while making its growth, as well as some others that require more heat while making their growth. If we are only to have two hot houses for Orchids, of course we must find room for the Dendrobes here, but I would rather prefer having a house for themselves on account of the heat and moisture it is necessary to maintain while making their growth. At the present time there is no class of Orchids having so much attention given to them. Nor is this to be wondered at, for in my opinion it is one of the most beautiful of the genera. Few of you but will remember the first time you saw Den. wardianum, perhaps, the most lovely of the genus. The interest that is being taken at the present time in Dendrobe hybrids is adding considerably to the number, as well as the beauty. Next to the Cypripediums the Dendrobes offer a rich field to the hybridiser, and whenever the opportunity occurs, the grower should embrace it in trying to add to the already long list of hybrids. No fear of adding too many. That law, "the survival of the fittest," will place them all in their right places; but the food for reflection so obtained will be of great service to us, even although it may not always be palatable.

Turning now to our cool Orchid house, a house similar in construction to that described for Cattleyas, will also be suitable for our purpose here; and the same system of arrangement should be carried out. Many of our brighter coloured foliage plants, will, however, have to give place to plants of a more sombre hue, but not less attractive on that account. Although we have few large growing plants in this section, we have nevertheless a very varied and beautiful class of plants to work with to make an effective arrangement. To fill the centre of the house such plants as Cymbidium lowianum, C. giganteum, C. tracyanum, C. grandiflorum, &c., are available, and a fine effect they have when in flower. There is no plant I can think of at the moment that will last so long in flower as those Cymbidiums. I have had C. lowianum in flower from January to May. Although Lycaste Skinnerii is well known as an Orchid that will last a long time in flower, it has no chance against Cymbidium lowianum. There are also the hybrids of C. lowianum and C. eburneum, which may be placed with the above, as beautiful additions to this class of plants. This I have been able to raise from seed, and am looking forward with some amount of pleasure to its flowering. As you are aware, both crosses have been already raised and flowered, but at the same time there is a certain amount of pleasure, when you can say, that is one of my seedlings. It seems to bring the plant into a closer connection with you. It is something you feel you are obliged to take particular care of by watching, and supplying all its wants to obtain the satisfaction necessary to repay the trouble taken.

In this house we would still retain the side stages for growing purposes, and by a judicious selection of species and varieties we can keep the house interesting most part of the year. Although I have recommended the same class of house as suitable for cool Orchids as I have for Cattleyas and the East Indian Orchids, I would, however, prefer for choice, to have in addition a span-roofed house 10 ft. wide with side stages only, and a path down the centre of the house, and that path and floor of house covered with ashes only, so that we can have abundance of moisture in the atmosphere during the growing season, *which extends all the year round.* If then a suitable rockery can be arranged in which to place the plants when in flower, a very charming effect can be produced. In the different sections we have none to rival this either in variety or value of the plants. It is, when one thinks of the responsibility attached to the growing of such plants we feel that the gardener should be better recompensed for his labour. At the same time it is a great honour to think that the remuneration for his services seldom enters into consideration when the well being of the plants under his care demands his careful attention.

There is just one class of house and arrangement, I should just like to say a word or two concerning before concluding this paper. I am well aware we cannot all have the kind of house I have been describing to-night in which to grow and arrange our Orchids. But I think something could be done with whatever kind of house we have, to make that house attractive by the judicious arrangement of the plants grown therein. If we can show, in addition to a well grown specimen, that specimen arranged to the best advantage, then we are adding to the value of the plant, and to the honour of the cultivator in making the most of his surroundings. In the race for something new and pleasing that we are all running, ay! and everyone trying to outrace his neighbour, one thing has struck me as being of the utmost importance, and, that is, if we want to obtain the best effect *we must mass.* Whether it be in the arrangement of Orchids or hardy plants the effect is the same. A few plants scattered or dotted about is not so effective as the same number of plants arranged closer together. Whatever may be the number of plants we want to make the most of, let us try whatever different arrangement may suggest itself. But note carefully what pleases best, and in the future we shall know what to avoid. So we store up knowledge as we travel through our daily lives, anticipating the time when we hope to be able to make the best use of it, both to our own satisfaction and the benefit of our employers.—*Alex. Wright.*

EXHIBITION AT HAMBURG.

The Committee of the Algemeine Gartenbau Austellung (International Horticultural Exhibition) at Hamburg are to be congratulated on the success of the first of the six special exhibitions to be held at stated periods during the forthcoming season. The main building in itself is the wonder of all who visit the show, whether Germans or foreigners, on account of its great extent. The tall Palms, representative of Italy rather than a northern country, give the place a subtropical effect. Plants of a kind are often grouped together so as to catch the eye of the observer at a distance, as well as to draw the visitors for a closer inspection. The various displays are produced by flowering plants here and foliage plants yonder in such a way as to appear massive and extensive. Only the more important of the groups and classes are here enumerated.

Groups of plants for effect took up a considerable amount of space, and the best group in the largest class was shown by Mr. F. L. Stueben, whose tall Palms were very massive, forming a background to the dwarfer subjects. Other foliage plants consisted of well-grown Dracaena Lindeni, Marantas, and members of the Pineapple tribe. He also had Azaleas, Rhododendrons, and varieties of Hippeastrum as flowering subjects in various effective colours, and received a large Gold Medal and 300 marks for his admirable group. Flowering trees and shrubs were a strong feature, and Mr. Sayderhelm, of Hamburg, took the first prize for a fine display of Magnolias, Lilac, Roses, and Prunus triloba with a profusion of rosy flowers. Mr. Rucker-Jenisch also took the first prize in another class, showing Orchids, Caladiums, Pandanus, Alocasia, Anthuriums, Hippeastrums, and other flowering plants, amongst which large Palm trees were again most conspicuous.

Baron Schroder, as announced in these columns some time ago, brought over a splendid collection of his favourite Orchids from England. A grandly flowered plant of Dendrobium infundibulum attracted much attention, but Ludemannia Pescatorea was more interesting to Orchidists because rare. Tall Vandas and the more commonly grown Cypripedinms found their admirers; but the richly spotted Odontoglossums gave a better idea of the richness of this famous collection. He received a Gold Medal for his exhibit, though not competing. Orchids were not so plentiful as might have been expected, but a fine collection was shown in the class for 100 plants, by Dr. Nanne of Hamburg who was awarded the first prize. Messrs F. Sander & Co., St. Albans, was successful in obtaining a first prize of 400 marks offered by Baron Schroder for a group of Cattleya Schroderae. Many fine varieties were placed in the group, and well deserved the honour they received.

The rich colours of Anthurium scherzerianum had a lively effect owing to the brilliancy of their colour

and their numbers for there were many groups in different places, and the varieties good. The best group of twenty-five plants was shown by Mr. Otto Thalacher who had vigorous and well-grown samples of moderate size. Mr. Otto Dehne exhibited a larger group, consisting of fifty specimens but the spathes were not so fine. Being the best in this class he got the first prize. Mr. Otto Thalacker also took the first prizes for groups of Carnations, and Hippeastrums. The dwarf plants, large flowers and rich colours of the latter showed that the exhibitor understands their cultivation. The group of Cinerarias shown by Mr. H. F. Kirsten contained plants of a first-class race, judging by their dwarf, close habit and large blooms in various brilliant colours. The plants were outlined by Funkias forced in hothouses.

The groups of Azaleas were without doubt a fine feature of the exhibition on account of the size and quantity of the flowers and their brightness at distances as far as the eye could see them. Mr. C. Petrick, of Ghent took the first award for a group of a hundred plants, and well sustained the honour of his country where Azaleas are so superbly grown. The large flowers and their handsome colours, admirably mixed, were well worthy of the first prize. Many of the plants were trained in the shape of a dome. In the class for fifty smaller plants he was also first, his evidence of cultural skill being well maintained. The plants had spreading heads on single upright stems. The hundred plants of a new Azalea shown by Messrs. Reichers & Son, of Hamburg secured the first prize easily. The variety was named Frau Amalia Reichers, and had beautiful salmon and white variegated flowers. From the same establishment came groups of larger plants, which took more than one first prize. Along with these groups, which formed one display, were hardier kinds, such as A. mollis and the yellow A. pontica; and it must be said that the whole was very effective. Other exhibitors showed that much attention is given to this class of plants and that skilled cultivation is given them.

The quantities of forced shrubs cultivated in pots would indicate a big industry in this class of plants. Several of the exhibits were very effective and telling with their various bright colours. Mr. F. Harms took several first prizes. The Lilacs, both single and double, exhibited by him were proof of good cultivation, and treatment generally. Mr. T. Kitzinger exhibited an effective and handsome group of Lilacs, Magnolias, flowering Currants, and other hardy subjects. He got the first prize. Mr. F. Munchmeyer was equally successful with his Tea-scented and La France Roses, the latter being dwarf bushes. Mr. F. W. Böttcher received the first prize for flowering and fruiting Oranges.

Messrs. F. Sander & Co. were awarded 300 marks for a group of newly introduced plants. Very conspicuous amongst them were large plants of Licuala grandis; Dracaena godseffiana with spotted leaves like an Aucuba, also Heliconia illustris rubricaulis, Caladiums and Sander's variety of Araucaria excelsa. The same exhibitors received a Gold Medal for a group of new Orchids, some of which were very fine. Various groups of Palms and other foliage plants were also exhibited.

PEAR PIERRE TOURASSE.

This Pear was raised by the late M. Pierre Tourasse, of the Basses-Pyrenees, and who was considered by his countrymen and others as a philanthropist and pomologist of the first order. He raised some thousands of seedlings and was fond of crossing varieties of Asiatic and European Pears. It is stated that the above named sort was raised from William's Bon Chretien crossed with the pollen of a Japanese variety, but does not retain the astringent juice of Kieffer's Seedling and others of Japanese origin. The tree is of good moderate vigour and somewhat after the style of Baltet Père, Beurré de l'Assomption and Colmar d'Aremberg. It is amenable for culture in pyramidal, bush, candelabra, and the vertical cordon form, even when grafted on the free stock. The fruit is large, sometimes very large, and variable in form from turbinate to pyriform, and very much swollen or widened at the top end. The skin is of a bright fawn, spotted with russet upon a clear yellow ground, washed with orange and saffron. In these respects the fruit bears a considerable resemblance to Beurré Clairgeau. The flesh is fine, very melting, juicy, and richly sugared with an agreeable flavour. The fruit ripens about the middle of September and keeps in season till the end of October. It is an exquisite fruit in the opinion of divers arboricultural and pomological committees, who have judged it at different times since the 25th October, 1886, and before whom it has been placed at Paris. The opinion prevails that it is a fruit that will worthily occupy a place amongst Pears that will carry well. The above opinions of it are endorsed by M. Ch. Baltet, and a good coloured illustration of it is given in the *Bulletin d'Arboriculture, de Floriculture etc.*, for January last.

ROYAL BOTANIC SOCIETY.

The large conservatory of the Royal Botanic Society at Regent's Park, is at the time of writing especially gay with Azaleas, and Rhododendrons. It seems very problematical whether gardeners generally will ever cease to make a distinction between the two, and so we will refer to them separately out of deference to a widely established custom.

A large collection of Azaleas is grown by the society, but the kings of the collection are the huge specimens of A. indica alba that are just now a mass of white flowers. One of the largest of the plants measures from 9 ft. to 10 ft. in height and fully as much in diameter, and it would not be easy to describe to the full the magnificent show that such a giant makes when clothed from head to foot in a mantle of snowy white. We were informed that these plants flower in much the same style year after year. Amongst other fine varieties we found in fine condition Souvenir de l'Exposition, rose edged with white, and spotted with cerise; Gloire de Belge, white, striated pink; and Carminata, rich carmine. Mrs. Gerard Leigh is a rather small-flowered variety, but the rosy magenta blooms are produced very freely, and taken as a whole the plant is very attractive. Mrs. Turner has large bright pink flowers heavily spotted on the upper segments with rose-magenta. Stella is one of the prettiest of the semi-double flowered varieties. The flowers are very large and bright rose-magenta in hue. The floriferous character of the plant renders it peculiarly valuable for conservatory decoration.

Of the Rhododendrons, certainly the most conspicuous feature in the house was a grand specimen fully 20 ft. high with a fine spread that was carrying a great number of large trusses of the bright rose flowers. We were told that this selfsame plant did not flower last year, but it has evidently made up for it this season. R. arboreum, a species which was introduced from the Himalayas in 1820, has been largely used for hybridising purposes, most of its progeny being early-flowering forms. Rhododendron Gibsoni is a native of Khoosea. It has flowers of medium size, white, and flushed slightly with pink. The leaves are small, about 2½ in. long, and oblanceolate in shape.

R. henryanum is a garden variety of great merit. The leaves are small, and lanceolate in shape. The flowers, which are produced in twos at the extremities of the matured growths, are fully 4 in. in diameter. The colour is white, with a conspicuous yellow blotch at the base of the tube internally. There are considerable flushings of pink externally. The perfume of the flowers is powerful and peculiar, although not unpleasant.

Dwarf Plants.

One of the peculiar features of gardening in the far east is the extent to which the dwarfing of various trees and shrubs is carried. The cunning Jap seems to revel in the fact that he can produce such libels upon nature as the dwarfed, gnarled, twisted, and distorted specimens, in which he delights, exemplify. Western ideas of "the art that does mend Nature," do not favour such malpractices, and yet there is no denying the fact that such caricatures exercise a kind of fascination upon those who see them by reason of their very grotesqueness.

Probably one of the most extensive collections in England is now to be seen in the long corridor leading out of the large conservatory at Regent's Park. These plants have been lent to the society by H. M. Beddington, Esq., and Claude Beddington, Esq., the majority of them having been imported recently. In all there are upwards of sixty of these quaint-looking objects, representing a considerable variety of material.

Conifers are in the majority, although they appear to have suffered much more from the long voyage than the deciduous element, not a few of them exhibiting no signs of life. One specimen of Thuya obtusa, stated to be a hundred years old, is about 18 in. in height, and about 2 ft. through at its widest part. It is accommodated in a bowl that would not hold any more soil than a 7-in. pot. For the most part the grower has favoured flat pans varying from an inch to 2 in. in depth for the roots to run in. Larix leptolepis appears to have gone to its long home at the age of twenty-five years, during which it had grown to about a foot in height. Pinus Bandaisho, also twenty-five years of age, is in the last stages of this life, whilst a healthy old tree of Ginkgo biloba some 15 in. in height is covered with large fine leaves, and yet it is only growing in a pan 1½ in. in depth. Taxus cuspidata and Pinus parviflora have also been experimented with, the latter having stood the ordeal for seventy years. At one point in its stem where a huge twisted knot occurs it measures fully 10 in. in diameter. Juniperus rigida has 120 years weight upon its devoted head, and is thus the patriarch of the family, but there's plenty of life in the old 'un yet.

Acer palmatum, Jasminum sieboldianum, Punica Granatum, Ilex integra, Buxus japonica, Ribes fasciculatum, and Crataegus cuneata are a few of the other plants that have been subjected to the same kind of treatment, and all of them are weird monuments of the skill which the gardener of the far east has brought to bear in inducing the plants to forsake their birthright and assume the shapes that have seemed to him best.

RHODODENDRONS AT KEW.

The grouping together of various classes of plants, so as to form distinctive features, that has been carried on at Kew under the present directorate has been highly successful in more than one respect. Not only does such a system display to the fullest extent the value of certain classes of subjects as a whole, but the result from a scenic standpoint is excellent. The Rhododendron Dell is a notable instance of this. Great taste has been displayed in its construction, and a most enjoyable promenade has thus been afforded the public; moreover, the gathering together on a large scale of a vast number of forms, exhibiting a corresponding vastness of range in floral colour, and season of blooming, cannot fail to be instructive to those who wish to see what can be done with Rhododendrons alone.

At the present time the "Dell" is in its brightest mood; possibly it gains something by virtue of the complacent feeling with which the human is prone to regard the efforts of spring to adorn Mother Earth, although the Rhododendrons may well be taken on their own merits.

The most distinguished occupant is Rhododendron kewense, a hybrid between R. griffithianum and R. Hookeri according to the pedigree upon the label. Curiously enough, a plant that is in flower in the Temperate House contemporaneously with those outside, states the parentage to be R. Aucklandii and Hookeri. Of the beauty and value of the plant, however, there is not the slightest doubt. Half-a-dozen fine specimens are situated at the western end of the Dell. The flowers are large and vary slightly on the different plants from white to flesh pink. The trusses are of immense size, rather loose, and as the pedicels are long the individual flowers have a drooping appearance. The leaves are about 6 in. in length by 2 in. in width, lanceolate in shape, very leathery in texture, and of a dark, shining, green hue. The habit seems to be naturally dwarf and bushy, and all the plants are very symmetrical. Flowering at this time of the year the plants have a good chance to escape the blighting spring frosts with which April only too frequently visits us; they thus escape the fate of more precocious blooms.

Amongst a number of other fine varieties which should commend themselves to favourable notice the following are a few of the most conspicuous:—R. Francis Thiselton Dyer, bright Rose, a very large and showy flower; R. Smithi elegans, deep crimson, a small flower but a compact and conical truss; R. Corregio, bright rose-crimson; R. Mirandum, rosy-cerise; R. Albiflorum, pure white, with a few light yellow spots on the upper segment of each flower; and R. Luscombii, mauve pink.

The Rhododendron Dell is well worth a visit

HARDY TREES & SHRUBS.

FOLIAGE EFFECTS.—While it is a very common, and in fact a usual thing to plant trees and shrubs in such relative positions as to best display their beauties of foliage during the spring, and again in the autumn months to the greatest advantage, there does not seem to be so much desire to utilise the natural characteristics of various fine foliaged shrubs. An excellent object lesson of what might be done in the direction is to be seen at Kew in a small plantation in close proximity to the Acer collection, which is close to the refreshment pavillion and not far from the Temperate House. Acer palmatum var sanguineum and Philadelphus caronarius foliis aureis are the two subjects whose association has there produced such an effective display. The former is represented by some shapely little plants about 3 ft. in height, the dark various red of whose foliage is thrown into striking relief by the bright golden Philadelphus. The latter is naturally of dwarf habit, and tends to form a dense shrubs from two to 3 ft. in height with a very even outline. A bed filled entirely with it on the western side of the mound at Kew, still further illustrates the highly ornamental character of the plant.

MAGNOLIA SOULANGEANA.—In several parts of the gardens at Kew this handsome Magnolia has been flowering very freely of late. The fine specimen in the Azalea garden, and the plant on the right of the entrance leading to Kew green are two of the most noteworthy, and they have certainly not hid their charms from the eyes of beholders. Magnolia soulangeana is a supposed hybrid between M. conspicua and M. obovata. According to "Loudon" in "Trees and Shrubs of Great Britain," "it was raised at Fromont, near Paris, from the seeds of a plant of M. conspicua which stood near one of M. purpurea in front of the chateau of M. Soulange-Bodin; the flowers of the former of which had been accidentally fecundated by the pollen of the latter." Whatever its immediate ancestry, however, its own merits entitle it to a place in every garden. The flowers are large, white, and flushed with pink externally, and, as they expand before the leaves, are most conspicuous. The ring of stamens has red filaments and these are by no means unornamental.

MAGNOLIA LENNEI is a very handsome form that is also well deserving of extensive recognition. This is likewise of supposed mixed descent, M. conspicua and M. obovata discolor being the parents. It will thus be seen that it is closely related to M. soulangeana. The flowers are of great size and depth, white, and shaded and flushed externally with pink.

MAGNOLIA OBOVATA, a nativa of China and Japan, from which latter country it was introduced in 1790. The flowers are large, white, fragrant, and Tulip shaped. Both it and its variety M. o. discolor are met with under the name of M. purpurea. The M. purpurea of "London" referred to above in connection with M. soulangeana was evidently M. obovata.

PIPTANTHUS NEPALENSIS.—This is a rare and exceedingly handsome leguminous evergreen shrub, a native of the temperate Himalayas from whence it was brought to this country about the year 1821. In exposed or northern localities it needs the shelter of a wall. At the time of writing a fine specimen is flowering freely against a wall facing east in the herbaceous ground at Kew. The flowers are yellow, and produced in short terminal racemes. The standard is large, nearly obicular in shape, and inclined to reflex. The calyx is of considerable length with sharp triangular teeth, and is thickly covered with down, thus giving it a dirty white appearance. The leaves are trifoliolate, the leaflets being lanceolate in shape, and disposed as in three fingers of a human hand. They are bright green on the upper surface, but exhibit a glaucous hue beneath.

NEVIUSIA ALABAMENSIS.—Flowering close by the Piptanthus is another rarely met with plant, Neviusia alabamiensis. The genus, which is monotypic, was named in honour of its discoverer, the Rev. R. D. Nevius, of Alabama. The date of its introduction is given by some authorities as 1882, by others 1879. The flowers are produced in panicled corymbs all along the branches. Their chief feature is the long numerous stamens with their white filaments, which impart a very feathery and graceful appearance to the plant. The leaves are ovate-lanceolate in shape, acuminate, and have serrated margins. This plant is hardy, but likes a sheltered position, such as against a wall. Sometimes it may be seen treated as a greenhouse plant.

CYTISUS KEWENSIS.—This is a vastly pretty hybrid form, the result of a cross between C. Ardoinii and C. albus. The plant is prostrate in habit, and should be exceedingly valuable for the Alpine garden. The flowers are of about the same size and colour as those of C. praecox, viz., a light sulphur yellow. The leaves are inclined to be hairy, but not so hairy as those of C. Ardoinii. This plant is certainly one of the most noteworthy from a garden point of view of the many that Kew has given us.

SOCIETIES.

ROYAL HORTICULTURAL.—*May 11th.*

THE tables were well filled at the meeting on Tuesday last, a large proportion of the material consisting of hardy herbaceous plants, including fine collections of Tulips. Orchids were more abundant than they had been at several of the previous meetings, and occupied more than one table. Roses, both plants and cut flowers, were also shown in splendid condition for this season of the year. Cut sprays of flowering trees and shrubs were also a feature.

A large group of Orchids was staged by Messrs. J. Veitch & Sons, Ltd., Chelsea. Large and profusely flowered specimens of Oncidium sarcodes, O. ampliatum, Brassia verrucosa, Dendrobium dalhousieanum, D. infundibulum, Odontoglossum Hallii, and others occupied the back row, amongst graceful specimens of Cocos weddeliana. Maidenhair Fern was much used as a groundwork. Very beautiful and interesting were such hybrids as Laelia Latona, Laeliocattleya Hippolyta, L. Ascania, and others. They had numerous varieties of Odontoglossum crispum, often richly blotched. Cattleya Schroderae and the hybrid C. Philo were also pretty and handsome amongst their kind. (Silver Gilt Flora Medal.)

Messrs. F. Sander & Co., St. Albans, exhibited a mixed group of Orchids, including Cattleya Mossiae, C. Wm. Murray, a very fine hybrid, C. Schroderae alba, C. Skinneri alba, and various other subjects. Maxillaria sanderiana, and Oncidium godseffianum were also noteworthy.

Messrs. Hugh Low & Co., Upper Clapton, N.E., set up a large group of Orchids consisting of many fine varieties of Cattleya and Laelia. Very fine were C. gaskelliana alba, C. Mossiae, C. Mendelii, C. Schroderae, C. Skinneri, C. Schilleriana and Laelia purpurata. The curiously coloured, green and black Coelogyne pandurata, attracted attention, as did numerous dwarf and well-flowered pieces of Dendrobium Bensoniae. (Silver Flora Medal.)

Messrs. B. S. Williams & Son, Upper Holloway, also staged a group of Orchids, set up with Palms and Ferns. Cattleya Mendelii was represented by several varieties, Odontoglossum crispum, O. Edithiae, O. cirrhosum, Dendrobium devonianum, and D. dalhousieanum luteum, were also good. Very pretty is the uniformly yellow Oncidium concolor. (Silver Banksian Medal)

A large and showy group of Orchids, was exhibited by A. H. Smee, Esq. (gardener, Mr. G. W. Cummins), The Grange, Carshalton. Cattleyas were the most prominent feature of the group, including numerous and very fine varieties of C. Mossiae and C. Mendelii. Laelia purpurata was also fine, as were several species of Odontoglossum. One of the finest of the forms of Cattleya Mendelii was C.M. Her Majesty. Odontoglossum triumphans aureum is distinct and pretty. (Silver Flora Medal.)

Walter C. Walker, Esqr. (gardener, Mr. Cragg), Percy Lodge, Winchmore Hill, also exhibited a showy and well flowered group of Orchids, including fine panicles of Oncidium marshallianum, long racemes on the well grown plants of Cymbidum lowianum, fine varieties of Laelia purpurata, Cattleya Mendelii Laelia grandis, Odontoglossum crispum and various others. The plants were so numerous that a little more space would have been highly advantageous in displaying the mass of flowers. (Silver Flora Medal.)

Messrs. F. Sander & Co., showed Cypripedium Oakes Ames, notable for the enormous size of its flowers. S. Cooke Esqr. (gardener, Mr. W. Buckell), Kingston Hill, showed a large and well flowered piece of Masdevallia harryana. The Marquis of Camden (gardener, Mr. A. Methven), Bayham Abbey, Kent, exhibited a plant of Cattleya Mendelii, bearing seven flowers on one spike, quite a record in its way. Laeliocattleya Hippolyta Dulcote var, was shown by Walter Cobb, Esq. (gardener, Mr. Howse), Tunbridge Wells. Sir F. Wigan, (grower, Mr. W. H. Young), Clare Lawn, East Sheen, showed Laelia purpurata Ethel Grey. Chas. L. N. Ingram Esq., (gardener, Mr. Bond) Elstead House, Godalming, exhibited Laeliocattleya Sir Wm. Ingram and Cattleya Rajah.

R. I. Measures, Esqr. (gardener, Mr. H. J. Chapman), exhibited Cypripedium Chapmani magnificum, a grand new hybrid variety. Some Orchids were shown by J. Forster Alcock, Esqr., Northchurch, Hants. Cypripedium bellatulo-vexillarium was shown by Mrs. Briggs Bury, Bank House, Accrington. Frau Ida Brandt, (gardener, Mr. T. Schlecht), Brunnenhof, Riesbach, Zurich, exhibited the rare Oncidium Warneri, Vanda lamellata Boxalli, and several Odontoglossums.

Messrs. Thos. Cripps & Son, The Nurseries, Tunbridge Wells, exhibited two large and well-flowered plants of Cypripedium caudatum, a small one of C. c. Wallisii and a good piece of C. Roebelini. They also had a fine group of the hybrid Deutzia Lemoinei in 60-sized pots and beautifully flowered. It is superior both to D. parviflora and D. gracilis from which it was raised. (Silver Banksian Medal.)

Messrs. J. Cheal & Sons, Crawley, Sussex, exhibited sprays of hardy flowering and foliage trees and shrubs. They included samples of Acer Schwedleri, Sambucus aureus, Genista biflora alba, Akebia quinata, Berberis vulgaris purpurea, Ribes aureum, and a host of other showy subjects. A stand of cut blooms of Violas occupied the centre of the group. (Bronze Banksian Medal.)

A number of bouquets, wreaths, and other floral devices came from Messrs. Kemp & Wilson, 85, Mortimer Street, W. A large spray hand bouquet was the masterpiece here, the execution being capital. (Bronze Banksian Medal.)

Hardy Alpines and herbaceous plants in considerable quantity were contributed by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. Saxifraga, Paeonies, Primulas, Irises, Iberis Little Gem, and Trolliuses were very gay and bright. (Silver Flora Medal.)

Near the entrance to the hall appeared an extensive exhibit of Roses from Messrs. Wm. Paul & Sons' Nurseries, at Waltham Cross, Herts. The greater part of the group was formed of pot plants some very tall standards of Medea, Duke of Edinburgh, and the Polyantha form Claire Jacquier were in the background, and in front of these were well grown bush plants. Gustav Piganeau, Jules Margottin, Violette Bouyer, Captain Christy, and Victor Verdier were some of the finest varieties Some nice cut blooms were likewise included. On the other side of the door was a small semi-circular group of pot Rose Enchantress sent by the same firm. The excellent habit and floriferous character as well as the individual excellence of the blooms of this fine variety were again demonstrated. (Silver Gilt Flora Medal.)

Messrs. Barr & Sons, King Street, Covent Garden, were extensive exhibitors of hardy cut flowers. Tulips formed a large part of the exhibit, a comprehensive collection of the May-flowering section being on view. Single flowers of special forms of these were staged on showboards with a background of white-paper. Annie McGregor and its rectified form, Kate Connor (breeder), Sir Joseph Paxton, and Dr Hardy were some of the best of these, although the flowers were rather smaller than some the Messrs. Barr showed last year. The major part of the Tulips, however, were shown in bold bunches when they produced a grand effect. Parrot forms like Perfecta, Amiral de Constantinople, and Crimson Beauty, and Darwin varieties like The Sultan, May Queen, Queen of Brilliants, and Queen of Roses were in excellent condition. Cottage Tulips, a new name for the May-flowering varieties used as bedders, including T. gesneriana and its many varieties, T. platystigma, T. Haageri, T. billettiana, etc., were in strong force and formed the brightest part of the exhibit. A Silver Flora Medal was deservedly awarded for this praiseworthy effort.

Messrs. Wm. Cutbush & Son, Highgate, N., had a meritorious little group of hardy flowers, for which they received a Bronze Banksian Medal.

Messrs. A. W. Young & Co, Stevenage, Herts, had a group of Gloxinias set up with Adiantum cuneatum (Bronze Banksian Medal).

Mr. Geo. Mount, The Rose Nurseries, Canterbury, again gave an effective demonstration of his powers as a Rose grower. It would be difficult to overpraise the blooms shown in this instance, varieties like Mrs. John Laing, Ulrich Brunner, Prince Arthur, Captain Hayward, The Bride, and Catherine Mermet, were enough to rejoice a rosarian's heart. Catherine Mermet cut with stalks about 18 in. long was very noteworthy. A Silver Gilt Flora Medal was awarded in recognition.

Sprays of flowering shrubs were sent by the director of the Royal Gardens, Kew. Every portion of this exhibit was noteworthy. It included Rhododendron Fortunei, R. cinnabarinum, R. kewense in two shades, Cytisus kewensis, and Amelanchier alnifolia.

Nine dozen superb Marechal Niel Roses came from Mr. J. Walker High Street, Thame, Oxon.

Mr. John R. Box, West Wickham, had an extensive display of Gloxinias. The strain which they represented was a good one, and the range of colour was considerable.

Messrs. James Veitch & Sons, Ltd., Chelsea, staged a large collection of cut Tulips comprising most of the leading May flowering forms. An exhibit of Tritonias of various colours, and the white Iris florentina was also very interesting. (Silver Banksian Medal).

A group of miscellaneous plants was forthcoming from Messrs. Paul & Son, The Old Nurseries, Cheshunt. It included well-flowered plants of Rhododendron caucasicum ochroleuchum, Trollius europaeus, and Saxifragas and Phloxes in variety; likewise sprays of the grand Rhododendron Fortunei (Silver Flora Medal).

A Silver Banksian Medal went to Messrs. Kelway & Son, Langport, Somerset, for cut blooms of Paeonies. The blooms were large and of good substance, whilst the colours generally were good.

Mr. B. Ladhams, Shirley Nurseries, Southampton, had samples of the new perpetual flowering Pink, Diamond, a group of it being edged with Phlox amoena in full flower. Mr. Ladhams also contributed a quantity of cut blooms of Tulipa flava. A vase full of grand flowers of Himenocallis macrostephana arranged with their own foliage and sprays of Asparagus was sent by Mr. Hudson, gardener to the Messrs. de Rothschild, Gunnersbury House, Acton. Messrs. J. Veitch & Sons, Ltd., had cut blooms of Rhododendron Manglesii, and sprays of Rubus deliciosus. A basketful of Carnation Admiration, a large yellow-flowered form, came from Mr. T. Whillans, gardener to the Duke of Marlborough, Blenheim, Woodstock.

The work of the fruit and vegetable committee was not so great as that of the floral and Orchid committees.

Mr. J. M. Empson, gardener to Mrs. Wingfield, Ampthill House, Ampthill, Bucks, received a Silver Knightian Medal for an excellent collection of vegetables. It comprised Peas in pots, Tomatos, Asparagus, Broccoli, Turnips, Leeks, Onions, new Potatos, French Beans, and Saladings of all descriptions, the Cucumbers being specially good samples.

Mr. Wythes, gardener to Earl Percy, Syon House, Brentford, was awarded a Cultural Commendation for a dish of Peach Hale's Early, and and dishes of Figs St. John and Brown Turkey.

Mr. James Barkham, Longford Gardens, Isle of Wight, made an extensive exhibit of Cucumber Longford Hall. Mr. Russell, Halfield, Farnborough, Hants., sent two boxes of fine Strawberries. The variety was Russell's Early Giant.

There were eight dishes of Apples submitted for the Veitch prizes. Mr. J. C. Tallack, Bury St. Edmunds, was first with Court Pendu Plat; and Mr. A. J. Reid, Farnham Chase, Bucks, second with Golden Reinette. There were no Pears shown, which is not surprising.

OBITUARY.

Mr. Robert Owen.

It is with much regret that we announce the untimely death of Mr. Robert Owen, the well known nurseryman and florist of the Floral Nurseries, Castle Hill, Maidenhead, Berks., on the 8th inst. Those who knew him personally, would readily have predicted a long and useful life for him; but he passed away quite suddenly in the midst of his work last Saturday afternoon at the age of 57. The suddenness of his decease indicates pretty plainly that he had been suffering from heart disease.

Few men were better known than the late Mr. Owen. Being a fellow of the Royal Horticultural Society, and a member of the Floral Committee, he attended the meetings frequently. He was also a member of the Floral Committee of the National Chrysanthemum Society, and that again brought him frequently to London, where he came in contact with gardeners, amateurs, and nurserymen from all parts of the country, who had come up to exhibit their Chrysanthemums, or to see the exhibits of others. As an exhibitor he was best known for the numerous new varieties which he brought before the public every autumn.

Mr. Owen had several specialities, but latterly, at least, the Chrysanthemum was his favourite flower. As it became known that these plants could be raised from seed in this country he soon became a leading exponent of this art, and at many of the meetings of the National Chrysanthemum Society, he proved himself the most successful exhibitor, taking the lion's share of the First-class Certificates for new varieties till other cultivators took the field in earnest. He introduced many American varieties of a high standard of merit, and settling himself to cross some of the finer types succeeded in raising quite a number of first-class exhibition varieties, very largely of the incurved Japanese type. Robert Owen, Viscountess Hambleden, Lady Esther Smith, and Rose Wynne, will attest the truth of this. No less important amongst the Japanese types were Thos. Wilkins, Wilfred Marshall, Graphic, Richard Dean, Eva Knowles, G. C. Schwabe, Col. Bourne and others. Amongst the incurved types he raised Wm. Tunnington, Robert Petfield, Owen's Crimson, Lord Rosebery, John Fulford, Baron Hirsch, Bonnie Dundee, and others. Nor did he forget the decorative class, for several of which he received awards.

His nursery at Castle Hill was almost wholly devoted to the raising and proving of new varieties.

Tuberous Begonias were another of his specialities to which he devoted a considerable amount of attention in the early days of their improvement, though latterly they were largely displaced in his favour by the absorbing work of raising new Chrysanthemums. A fine strain of Chinese Primulas also demanded some space and attention in his nurseries. The Ivy-leaved Pelargoniums also recall his labours in several fine varieties which he put into cultivation. To meet the wants of his customers, Mr. Owen also grew Palms, Cyclamens, Ferns, Conifers, and other subjects; but undoubtedly his memory will long live in the names of the handsome varieties of Chrysanthemums which he called into existence, and put into commerce widely.

At the meeting of the Floral Committee of the Royal Horticultural Society on Tuesday last, the chairman, Mr. Marshall, called the attention of the members to the loss they had sustained by the untimely death of this well-known benefactor to the horticultural community. The deceased leaves a wife and a family, some of whom are still quite young and unable to care for themselves. The funeral took place at Maidenhead on Thursday last at 11 30 a.m.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Pulmonaria.—*J. T. Thurston*: The species you sent was P. officinalis, a native of Britain, but very scarce in the wild state. It belongs to the Boraginaceae, with which you will find it agrees in character. The species has been cultivated in gardens from time immemorial, being formerly used medicinally by the herbalists who thought it a cure for the lung disease; but it is now entirely disregarded in that respect, and is merely grown as an ornamental border plant, flowering early in the season. It used to be more grown in cottage gardens than at the present day, probably because more showy kinds are plentiful. The white flowered specimens (Arabis albida) are common in cottage gardens and valued for early spring flowering and easy cultivation. The species is a native of Tauria and the Caucasus, and has been cultivated for many years. Its botanical characters refer it to the Cruciferae.

Exhibitors' Handbook.—*E. S. Merrett*: It is about two years since this book was reviewed in our columns, not merely some months. The full name is "Horticultural Handbook and Exhibitors' Guide." It was published in 1895 by Messrs. Wm. Blackwood & Sons Edinburgh and London; in paper covers it is 2s., and in cloth covers 2s. 6d. A pamphlet more recently noted by us was "Rules for judging, and suggestions to Schedule makers, judges and exhibitors." It is published by the Royal Horticultural Society, 117, Victoria Street, Westminster, London, S.W. It may be obtained post free for 1s. 1d.

Pseudobulbs of Coelogyne cristata shrivelling.—*Cobweb*: It is no unusual thing for the pseudobulbs of this Orchid to shrivel more or less after flowering, some varieties of it being more prone to it than others. Provided they are not excessively shrivelled, they will plump up again by and by. Excessive shrivelling would mean that the plants had been kept too dry for a long time previous to and during the flowering period. After this is completed the plants begin to grow again, and this is an indication that they require a greater supply of moisture. They should, in fact, never be allowed to become dry after renewed activity sets in. An increasing quantity of water should be given at the roots, and on fine days or when the weather is mild outside, the plants should be lightly syringed overhead during the afternoon. They must not be kept in too high a temperature.

Potting Azalea indica.—*Azalea*: You have done right in not being in too great a hurry to repot your plants. From what you say, the plants do not yet require a shift, provided the soil is still in good condition. No doubt they have recently been put in the pots in which they were when you got them. The plants will ultimately occupy the whole of the soil in the pots provided you keep them in a healthy position. Seeing that they have already made their growth you are too late this year in any case. The best time to repot this class of plants is when they are just commencing to make fresh growth, not after it is finished, unless by any mischance the plants or the soil should have got into a bad condition. You cannot very well reduce the ball of soil in this class of plants without doing them injury, so that you should wait till the whole of the soil is getting crowded with roots. Then as they have finished flowering and are commencing growth, repot them into a slightly larger size of pot, using good fibrous peat and pressing it down firmly.

Carpet Bedding.—*Diagram No. 2*: We think the diagram you have sketched out would answer admirably with a slight re-arrangement of the plants you intend using. The broad bands or figures marked No. 1 may be planted with Iresine Wallsi; but No. 2, would look better, we think, if planted with Mesembryanthemum cordifolium variegatum. This would leave you at liberty to use Mentha Pulegium gibraltaricum as a ground work for the space marked No. 3, and would be continued round the whole circumference of the bed as well as in the space between No. 1 and No. 2. The dark green of the Mentha would show all the other colours off to the best advantage. No. 4 might very well be filled with the Echeveria you name, provided the plants are just sufficiently large to show themselves clear above the surrounding plants. No. 5, we understand, would consist of four isolated plants, or at least not more than three in a group of Pachyphyton bracteosum, that is, two plants or two groups on each side of the bed. If of fair size, say 6 in. or 8 in. high, we consider that one plant would be sufficient, Thus, four of the different plants mentioned would be distinct from one another, and more so from the ground work of Mentha.

Names of Plants.—*J. T. Thurston*: 1, Pulmonaria officinalis; 2, Arabis albida (see under Pulmonaria). *T. A.*: 1, Ornithogalum nutans; 2, Scilla hispanica alba; 3, Scilla nutans alba; 4, Fritillaria imperialis; 5, Omphalodes verna; 6, Anemone fulgens.—*A. K. M.*: 1, Masdevallia Veitchi; 2, Masdevallia Lindeni; 3, Odontoglossum luteo-purpureum sceptrum; 4, Cypripedium Sedeni; 5, Odontoglossom crispum andersonianum.—*M. G.*: 1, Cytisus purpureus; 2, Berberis stenophylla; 3, Kerria japonica flore pleno; 4, Pyrus Malus floribunda; 5, choisya ternata; 6, Picea Smithii.—*J. C. S.*: 1, Crataegus coccinea; 2, Crataegus punctata; 3, Luzula pilosa; 4, Luzula campestris; 5, Carex vulgaris.—*G. W.*: If the spikes of your Cymbidium are drooping it is C. pendulum; if erect it would be C. sinense, as the two are closely similar; but we incline to the former. We hope to be in your neighbourhood in the near future and to call upon you.—*H. R.*: 1, Odontoglossum crispum andersonianum; 2 and 4, forms of Odontoglossum crispum ruckerianum, differing from the former, only in the rose ground colour; 3, Odontoglossum cirrhosum; 5, Odontoglossum Pescatorei. All are handsomely blotched and well worthy of cultivation; but you must remember that there are varieties with broader segments and therefore considered finer.

Communications Received.—J. Mayne.—J. Peed.—J. Cypher.—W. L. Lewis.—W.K.—H. J. Jones.—T. B.—A. L. M.—S. J.—R. A.—E. T. C.—Ward.—Signalman.—X.Y.Z.—F.G.—H.C.—M. M'L.—H. B.—George.—C.S.—B.

TRADE CATALOGUE RECEIVED.

THOS. S. WARE, Hale Farm Nurseries, Tottenham, London.—Catalogue of new and other Dahlias, Begonias, &c.

MESSRS. J. PEED & SONS, Roupell Park Nurseries, Norwood Road, London, S.E.—Peed's Caladiums.

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May 12th, 1897.

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Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs.		
Grapes, per lb	2 0	3 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	2 6	4 0
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet ..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers ..... doz.	2 0	3 0
Celery ..... per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs ..... per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ... per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions ..... per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes ... per dozen	1 6	1 3
Seakale ... per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos ..... per lb.	0 6	1 0
Turnips ..... per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 6	0 9
Bluebells, 12 bun.	1 0	1 6
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	3 0
Cowslips, 12 bun.	1 0	2 0
Eucharis ... per doz	3 0	4 0
Gardenias ... per doz.	1 6	2 6
Geranium, scarlet, doz. bunches	4 0	6 0
Iris, various doz. bun.	6 0	18 0
Lilac, White (French) per bnch.	3 6	4 6
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Narciss, various, doz. bunches	1 6	4 0
" double "	3 0	6 0
Orchids, doz. blooms	1 6	12 0
Paeonies, French doz. bun.	5 0	9 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	6 0	9 0
Polyanthus, 12 bun.	1 0	2 0
Pyrethrum doz. bun.	2 0	4 9
Roses (indoor), doz.	9	1 6
" Tea, white, doz.	1 0	2 6
" Niels	1 6	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	3 6	6 0
Tuberoses, doz. blooms ...	1 0	1 6
Violets (English) per doz. bnches.	0 9	1 0
Violets (Parma) per bnch.	3 0	4 0
Wallflowers, 12 bun.	1 6	3 6

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Azaleas, each	2 0	3 6
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.	18 0	36 0
" specimen	3 0	5 0
Arum Lilies, per doz.	8 0	12 0
Cinerarias, per doz....	6 0	9 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	9 0
Heliotrope ... per doz.	6 0	9 0
Hydrangeas per doz.	8 0	10 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia ..... per doz.	4 0	6 0
Marguerite Daisy doz.	6 0	12 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ... doz.	9 0	15 0
Spirea ..... per doz. ...	8 0	10 0
Scarlets ..... per doz.	3 0	8 0
Roots and bedding out plants plentiful and great variety.		

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BEGONIAS.

10 Grand New named singles, H.J.J. set for 1897. The best ever seen, 30s.
12 Grand unnamed single kinds, 18s.; 6, 10s.
12 Very fine single unnamed kinds, 12s.; 6, 6s. 6d.
12 Very good single unnamed kinds, 6s.; 6, 3s. 6d.
12 Fine mixed double and single for bedding, 3s. 50, 10s.; 100, 16s.
12 Grandest double kinds, 26s.; 6, 14s.
12 Very fine double kinds, 15s.; 6, 8s.
12 Very good double kinds, 10s.; 6, 5s. 6d.
12 Very good double mixed colours, 6s.; 6, 3s. 6d.

CHRYSANTHEMUMS.

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12 Good Early Flowering Japanese for Pots or Garden, 4s.
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12 Beautiful single kinds, A1 for cuttings, 4s.

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12 Best Cactus kinds, 3s. 6d.; 6, 2s.
12 Best Show and Fancy, 3s. 6d.; 6, 2s.
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12 Best Singles, 3s. 6d.; 6, 2s.

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6 Finest spotted, 3s.; 6 Finest Selfs, 3s.

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PELARGONIUMS.

12 Show and Decorative kinds, grand stuff in 5 inch pots, 12s. (these will make a big display)
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12 Finest new Single Zonals, 1896, 10s.; 6, 5s. 6d.
12 Finest Single Zonals, 1895, 6s.; 6, 3s. 6d.
12 Finest Single Zonals, 1894, 4s.; 6, 2s. 6d.
6 Finest Single Zonals, Souv. de Mirande Type, including Mdme. J. Chretien, 3s.
12 Finest Double Zonals selected from 1897, 1896, and 1895, to include Apple Blossom, Golden Gate, and Double H. Jacoby, 7s. 6d.; 6, 4s.
12 Very fine double Zonals, 4s.; 6, 2s. 6d.
6 Grand New Double Ivies including Achievement, cross between a Zonal and Ivy, and Mrs. C. Bick, magenta distinctly shaded blue, 7s. 6d.
12 Grand kinds, 4s.; 6, 2s. 6d.

DOUBLE PETUNIAS.

12 Finest named kinds including Mrs. D. B. Crane, the Electric Blue, 6s.; 6, 3s. 6d.

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SPECIAL PRICES TO CLEAR.—Lady Hume Campbell, Neapolitan. New York, Marie Louise, Comte Brazza (white) 6/- per 100; Wellsiana and Blue Czar, 3/-, Bertha Barron, the best dark double blue, and Princess of Wales, largest single blue 30/- White Czar 15/- per 100.

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Grand Yorkshire Gala, YORK,

JUNE 16th, 17th, 18th, 1897.
£750 Offered in Prizes.

£300 for Orchids, Stove, and Greenhouse Plants, &c.
£200 for Pelargoniums, Carnations, Begonias, &c.
£160 for Roses, Cut Flowers, &c.
£90 for Fruits and Vegetables.
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The Royal Caledonian Horticultural Society.

AUTUMN SHOW, 8th & 9th SEPT., 1897.

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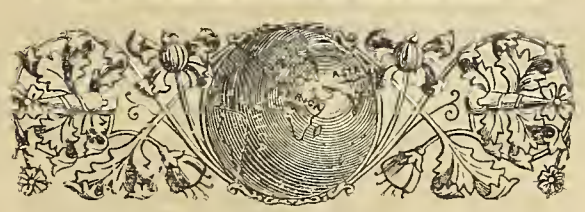
Schedules to be obtained from the ASSISTANT SECRETARY, 18, Waverly Market, Edinburgh.



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 22nd, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, May 24th.—Anniversary Meeting of the Linnean Society.
Opening of a four days Show at Southampton in connection with the Bath and West and Southern Counties Society.
TUESDAY, May 25th.—Orchid Sale by Messrs. Protheroe & Morris.
WEDNESDAY, May 26th.—Opening of a three days grand show in the Temple Gardens, London, in connection with the R.H.S.
Fifty-eighth Anniversary Festival Dinner in aid of the Gardeners' Royal Benevolent Institution, Lord Rothschild in the Chair.
Sale of Lilies, bedding plants, &c., by Messrs. Protheroe & Morris.
FRIDAY, May 28th.—R.B.S. Lecture. Orchid Sale by Messrs Protheroe and Morris.

A REVIVAL OF INTEREST IN TULIPS.—Several circumstances have combined to make Tulips the idol of the hour—we say hour because the pretty long season is now getting towards a close, and the flowers, like the Arabs will presently drop their petals and silently steal away. Their popularity may, however, be continued for a number of years, the outburst of popularity being renewed annually during the flowering season of the different races: but that remains to be proved. For some weeks past Tulips have been used for personal and other decorations at all sorts of functions, festivals, and even at the court Drawing-rooms. Ladies on bicycles have taken to carrying them in bunches while taking an airing in the modern style. After a lapse of fifty years, a Tulip show and conference has been held in London, ostensibly to revive the interest in the true English florists' Tulips, but of course various other May-flowering species, varieties, and hybrids were shown. Of course this is only the revival of an old love, for while the London florists of fifty years ago gradually abandoned the feathered and flamed roses, bybloemens, and bizarres, the midland and northern florists have remained consistent votaries of the English amateur florists' Tulips.

Linnaeus classed the Tulip amongst barbarous names, as it comes from the Persian *thulyban*, a turban. The French corrupted the name to *tulipan*, from whence comes our word Tulip. From Persia it found its way to Constantinople in 1559, where its cultivation and use amidst the splendours of the court of the Sultan soon developed into something like a craze. From Constantinople it was carried to Germany where it got the name of Tulipa gesneriana, after the botanist Gesner, of Zurich. In 1577 it reached our shores. About a century after its introduction to Europe it became an object of considerable commerce in Holland. Everyone has heard of the remarkable tulipomania or Tulip craze that reigned in the Netherlands about this time. This bit of romantic history reached a climax between 1634 and 1637, when the Dutch as a nation became, practically, Tulip mad. This was of course too fierce a love to last, for it induced people to give fortunes for a single Tulip. In those days £500 would change hands for a bulb which might or might not exist. Gambling was really carried on where no bulb existed, and the national love for Tulips died as quickly as it developed. The commercial interest in the flower remained, and has continued to this very hour; for Holland may be said to supply Europe and America, more or less, with bulbs. The taste for Tulips in this country reached its maximum development about the end of the seventeenth and beginning of the eighteenth centuries. After this a fashion arose for collecting new and rare plants from foreign countries, putting the Tulip in the shade.

Loudon speaking of the Tulip in 1829, said it "may be called the king of florists' flowers, having been a prime object of attention with this class of cultivators for nearly three centuries. It is, however, like the Auricula, Pink, &c., more the poor man's flower than that of the botanist or country gentleman." Speaking of the king of florists' flowers and the poor man almost in the same breath recalls the quotation often cited for its incongruous medley, namely, "lords, fiddlers and bishops." Referring to Tulips generally, we may say at present that they are the flower of the people, rich and poor alike. This is no doubt due in a measure to the ease with which they may be cultivated, and in a larger measure to their varied and dazzling beauty. If it is true as stated that there are upwards of 4,000 species, hybrids and varieties in cultivation, it shows how the wants, fancies and tastes of the people, are being catered for. This vast amount of variety is, undoubtedly, a most important factor in determining the prevailing popularity of this class of flowers. We would no doubt have a different statement to make if the growers of bulbs were to confine their attention to the cultivation of the florists' varieties alone for the delectation of the public. We have nothing, however, to urge against this particular strain, for there are some remarkable combinations of colour amongst them, and many varieties of exceeding beauty both amongst the self or breeder, and the rectified sections. While their feathered and flamed markings appeal to the specialist, they are capable of producing excellent effects for bedding purposes. The selfs appeal more decidedly to the public taste, just as in the case of Carnations.

Tree Pruning at Ealing.—The London Plane trees in the Mall and Uxbridge Road, Ealing, have undergone the usual hacking, which for the sake of courtesy and politeness, goes by the name of pruning. They have practically been beheaded, and their deplorable aspect is to be regretted when so many beautiful trees and shrubs may be seen in the villa gardens from which the Ealing Urban District Council might well take as a pattern. We hope they have not been taking an example from the contorted and stunted monstrosities of the Japanese plantsmen. It is foolish to plant very large growing trees in places where there is no room for their development, but it is worse when they are annually subjected to a barbarous hacking where there is plenty of space for them.

The Bee Line.—When a man goes off in a bee line, it is generally supposed he has one in his bonnet.—*Snagg's Philosophy.*

"The Botanists of Philadelphia and their work" is the title of a book about to be published by Mr. John W. Harshberger, of that city. It runs to 500 pages, and contains 50 full page engravings.

Mr. John H. Cumming, who has been gardener and steward to Viscount Gough, St. Helens, Booterstown, for the last ten years, has been appointed to take charge of the gardens of Lady Stewart, Grandtully Castle, Ballinluig, Perthshire.

An unusually fine Bouquet of white Niphetos and yellow Catherine Mermet Roses came from Cardiff to the Queen's Drawing Room on the 11th inst. It was expressly made for Miss Mabel Hill, daughter of Col. Sir Edward Hill, M.P.

Violet Amiral Avellan and Sulphurea.—These two quite new Violets are amongst the most distinct that have been placed before the public for some time. The flowers of Amiral Avellan are plum-purple and in this respect quite unlike the blue, violet and lavender shades, hitherto so prevalent. The flowers are deliciously fragrant. Those of Sulphurea are equally distinct in their way, being of a pale yellow, but certainly yellow, and may possibly in the near future give rise to something finer in the same direction.

Gardeners' Royal Benevolent Institution.—We are requested to state that the 58th Anniversary Festival Dinner in aid of the funds of this Institution will take place on Wednesday, May 26th, at 6.30 for 7 p.m. (the first day of the Temple Flower Show) at the Hotel Metropole, under the presidency of the Right Hon. Lord Rothschild. As a large gathering is expected on this occasion, the secretary, George J. Ingram, 50, Parliament Street, London, W.C., will be greatly obliged if those friends who desire to be present will intimate their intention to him as early as possible, in order that the necessary arrangements may be made.

Victorian Era Fund.—Now that we are entering upon a season, when flowers are plentiful, might I suggest that flower show committees throughout the country adopt the means that our members hope to carry out? The Liverpool Horticultural Association have kindly placed at our disposal sufficient space to arrange a stall for the sale of plants, fruits, flowers, &c., the proceeds to be devoted to the above. The exhibition will be held at Sefton Park, on July 31st, and August 2nd. We have already many offers of assistance as to the furnishing of the stall, and we look forward with every hope that our efforts will be liberally supported by visitors to the show. Could not this suggestion be generally adopted throughout the country? Rose shows especially should prove excellent opportunies to help to realise the £5,000 that the treasurer asks for, and which should not be asked for in vain.—*R. G. Waterman, Secretary and Treasurer, Woolton Gardeners' Mutual Improvement Society, Liverpool.*

Mr. David Wylam.—By occupation this Tyne-side man is a collier, but an amateur in horticulture and a very successful one. During the last 20 years or more, he has been an ardent exhibitor at various shows in the northern counties. Sometimes after becoming a resident in the mining village of Shankhouse, near Cramlington, he acquired a love for horticultural pursuits, and like most amateurs commenced cultivating his garden. Then he took to a higher branch of horticulture, growing and devoting the whole of his spare time to the cultivation of stove and greenhouse plants in the hothouses he built in his garden attached to the colliery residence. At one show at Cramlington he carried off no less than 27 first and 17 second prizes, making a record which would be difficult to beat. Owing to the kindness of his employers, the coal-owners, he gets a holiday, during the show season which enables him to put in an appearance at most of the shows between York and Berwick. He competes both in the amateur and open classes with great success, spreading dismay in the ranks of both classes at many shows. The success of the Cramlington show owes much to Mr. Wylam and his exhibits.

International Botanic Garden.—A movement is on foot in America to establish an institution of this description on one of the islands in the Gulf of Mexico.

Begonia weltoniensis is one of the most easily cultivated of window plants, and if placed in a well-drained pot of light, but rich soil, merely requires to be regularly watered and thoroughly exposed to the light to become an ornament of the first water.

Rapid Growth of Eucalyptus.—Some trees of E. globulus, the well-known Blue Gum Tree of Australia, planted in Florida, grew to a height of 40 ft. in four years, with a stem 12 in. in diameter. Very similar results have taken place in Guetamala, where some trees have grown to a height of 120 ft. in twelve years. Both instances indicate that growth must have taken place at the rate of 10 ft. annually. In our relatively cool climate and short season, the tree, when planted out under favourable circumstances, will make 4 ft. to 6 ft. of growth during summer.

Ivy-leaved Pelargoniums and heaths of various colours are taking the place of scarlet Pelargoniums, Calceolarias, and Marguerites which have hitherto monopolised the windows of the wealthy in the west end of London, rather too exclusively. Ferns and Palms are also more or less used. Creeping Jenny will be difficult to displace from dingy and shaded windows. The plan of using Crotons, Tillandsias, and other plants of that description by the late Mr. John Wills, does not seem to be adopted by others. The windows are now gay, however.

Sutton's Cycling Club.—Under this title a cycling club is formed at Reading consisting of members of the firm of Messrs. Sutton & Sons, and employees only. There are club rules and road rules which must be respected. During the season from May 19th, to September 15th, inclusive, arrangements have been made for 15 Wednesday afternoon runs to various places, such as Moulsford, Windsor, Burnham Beeches, Newbury, Streatley, &c. In offering timely advice, we should advise the members to be economical of the tyres in the interest of the plants that produce them, and of the "tires" in their own interest.

The Marechal Niel Rose was named by Empress Eugenie in the days of her splendour. When General Niel returned from the Franco-Prussian war, a poor man gave him a basket of yellow Roses. In remembrance of the gift, the general struck a cutting from the stem of one of the blooms. When it grew into a good sized bush he took it to Empress Eugenie, who was delighted with the gift and the donor, but was surprised the plant had no name. She said, "I will give it a name; it shall be the Marechal Niel." In this manner it dawned upon General Niel that he was promoted to the office of Marshal of France.

International Horticultural Exhibition at Ghent.—The fourteenth international exhibition (the 163rd of the society) of the Royal Agricultural and Botanical Society of Ghent will be held from the 16th to the 24th April, 1898, under the high patronage of their Majesties, the King and Queen, of the Government, of the province and of the city of Ghent. Prizes consisting of Gold Medals (value 100 francs, and 50 francs) framed Silver Gilt Medals, and others without this arrangement, and Silver Medals of the first and second class will be awarded to the winning exhibitors in the 716 classes in which they are offered. Numerous classes are set apart for groups of various new plants, obtained in gardens or imported; for groups of Orchids in flower, as well as Orchids remarkable for their culture or flowering, for stove plants; for collections of Aroids consisting largely of Anthuriums, species and hybrids, Alocasias and Caladiums; also for groups and collections of Palms, Cycads, Pandanus, Ferns, flowering and non-flowering greenhouse plants, many of which are specified. Hardy forced shrubs also receive particular attention, together with hardy evergreen perennials, alpines, soft-wooded plants grown in greenhouses, hardy and tender, bulbous and tuberous plants, Azalea indica, Camellias, Rhododendrons, Agaves, Yuccas, succulent plants generally, Conifers, fruits, bouquets, horticultural art and industry, &c.

Lime is a name applied to two trees belonging to different families, namely, Tilia, belonging to Tiliaceae, and Citrus Limetta, belonging to Rutaceae, the latter tree being the rightful owner, though this is usually ignored.

A pie served to Charles II. contained a heterogenous mixture of potatos, chestnuts, mace, currants, barberries, pepper, nutmeg, cloves, sugar, wine, lemons, eggs, artichokes, oysters, citrons, lettuce, sparrows, and eryngo root.

Fruits turning red when ripe.—According to *Pearson's Weekly*, the reason for the fruits turning red when ripe is "to attract the attention of the birds and thus secure the dispersion of the seed." The same remarks would apply to all the colours exhibited by fruits when mature. Red is probably the most conspicuous colour, hence we see it developed most frequently in fruits in order to insure the attention of the birds which eat the pulp surrounding the seeds. The pleasure which some animals, the human included, experience on beholding colours most probably originated in the utilitarian experience that certain bright colours meant food.

French Strawberries for this Country.—The Strawberry industry at Plougastel in France is a thriving one, and of great importance to the growers who make a fair profit upon their enterprise. Instead of sending their fruit by way of St. Malo to this country, the growers formed themselves into an association, and chartered the small but fast English steamer, the *Resolute*, to convey their products direct from Plougastel to Plymouth, whence they were sent to London, Birmingham and other large towns where they found a ready market, and being in good condition owing to this rapid transit they commanded a higher price than when they were carried a more roundabout way. Twelve voyages were made by the above steamer and one by a French vessel, carrying in the aggregate 282 tons of Strawberries, green Peas, small Onions, and Potatos, of the respective value of £2,962 for the Strawberries, and £241 for the vegetables. The result was very satisfactory to the shippers, and the service is to be increased during the coming season.

A Basket of Orchids for the Princess of Wales.—The Prince of Wales visited Cheltenham on the 13th inst, when he had an enthusiastic reception, and a loyal address of welcome. There was also a procession through the crowded streets and a yeomanry review. Following the route of the procession, the first thing to be noticed was a choice display of the products of Mr. James Cypher's nursery. On each side of the road a column had been erected in a very novel manner, at various stages of which towering and spreading Date Palms, beautiful flowers and foliage plants lent enchantment to the view. Hydrangeas and Ivy-leaf Pelargoniums were there by the score, together with Lilies and other flowers. At the apex of the roof of each greenhouse a flagstaff had been erected, carrying the royal banner, while the motto, "God Bless the Prince of Wales," expressing the wish of all his fellow-townsman, had been placed by Mr. Cypher in a very prominent position. When the Prince was taking his departure and had arrived at the door of his saloon carriage, he turned and shook hands with the Marquis of Worcester, Gen. Russell, M.P., Gen. Luck, the Mayor, and Dr. Ward-Humphreys. Mr. Cypher was present with a charming basket of the most choice Orchids, and having communicated his desire to Captain Holford to present them to the Prince, was accordingly introduced, and asked his Royal Highness if he would accept the flowers as a gift for the Princess of Wales. The Prince smilingly consented, and said he should be pleased to take it home to the Princess, and that it was very beautiful. The basket was loosely arranged with long spikes of Odontoglossum Alexandrae and O. cirrhosum, and had long sprays of Oncidium obryzatum majus turned over the handle, with elegant sprays of Asparagus. There were also included in the basket a few flowers of Cattleya Mendelii, Laelia purpurata, Cypripedium Rothschildianum, and C. grande. The basket was handed into the saloon, in which his Royal Highness at once took his seat.

The Lilac was flowering freely in and around Plymouth about the end of April, and the Horse Chestnut made a display by the beginning of May.

While gathering flowers over the railway at the mouth of a tunnel, a Chatham boy missed his footing and fell. When picked up he was found to be dead.

The Wooden Harmonicon, one of the most ancient instruments, is still found in a very primitive form all over Africa, as well as parts of Asia and Oceania.

The Cotton sowing is now completed everywhere all over the country according to a telegram from Cairo. The acreage is up to that of last year and the plants are reported to be very healthy.

Mr. Herbert Newton, who used to be general foreman to his father at Campsall, has now gone to Doncaster to begin business as a grower for market and nurserymen in the nursery bought by his father a few years ago. His father, who died on the 31st March last, from a very painful illness, lasting seven weeks, was gardener at Campsall for 28½ years. Previous to that he was at Hooton Hall, Chester, Tedworth House, Salisbury, and Blankney, Sleaford. He began his career with Messrs. Charles Sharpe & Co., Sleaford, and was for some time with Messrs. J. Veitch & Sons, of Chelsea. We wish his son, Mr. Herbert Newton, every success in his new venture. His present address is 8, Cartwright Street, Doncaster.

The Temple Show.—For the tenth time the Royal Horticultural Society will hold its Great Annual Flower Show in the Inner Temple Gardens, on May 26th, 27th, and 28th. There is sure to be a marvellous display, judging from the very large number of entries which have been received, and there is reason to believe that some of the exhibitors will show something original this year in the way of displaying their plants. The judges will meet in the secretary's tent at 10.30 a m.; the Fruit, Floral, and Orchid Committees will assemble at 11 a.m., and the show will open to the public at 12 30 p.m. An interesting feature of the Catalogue will be an article on the "Royal Horticultural Society," from the pen of the president, Sir Trevor Lawrence, Bart. P.S.—Owing to the great pressure upon the society's officials, plants for certificates cannot be entered on the morning of the show.

Forest Gate Chrysanthemum Society.—The monthly lecture of the society was held at the Norwich Hall, Forest Gate, when Mr. D. B. Crane discoursed upon Violas. The chair was occupied by Mr. Louis Sinclair. Mr. Crane pointed out the differences between the Viola and the Pansy, and illustrated his remarks by a number of specimens. He spoke of the fine effects that might be obtained by massing the plants and dealt in a practical manner with the best methods of cultivation. At the conclusion Mr. Sinclair testified to the value of the information that had been given them by Mr. Crane, and said that by cultivating and improving the Viola they were not only improving the good things Nature had sent them, but they were also improving themselves. During the evening the secretary announced that £21 of the proceeds of their recent concert had been handed over to the West Ham Hospital; that the annual summer excursion would be to Tring Park, on July 17th; and that the Duchess of Teck had consented to open their Chrysanthemum Show,

Crops Destroyed by frost.—Over a wide area of Western Europe, including the British Isles, the weather was very cold during the last and the previous weeks. In the suburbs of London, the tops of early Potatos have been destroyed and the Strawberry blossom seriously injured wherever they had been left unprotected. Naturally the cold has been more severe in Scotland with more or less heavy falls of snow, sleet and hail, and damage to fruit trees and vegetation generally has been reported. Heavy snow fell in most of the provinces of Austria during the 12th and 13th inst. causing enormous damage to crops grown for seed, as well as fruit trees. During the same period there were from 6° to 9° of frost in various parts of France doing irreparable damage to the vineyards which are regarded as ruined for the season. The damage to vines, fruit trees and vegetable crops is estimated at £800,000, possibly more, when the damage comes to be fully realised. The outlook for the natives is very gloomy indeed.

STRAWBERRIES.

The Strawberry crops in the north (like the south) always excite great interest, and when any new sort is lauded by the press (or otherwise) it finds its way into most gardens, especially in Scottish ones. It was with amazing rapidity that Royal Sovereign became established in Scottish gardens, and that fine variety is giving great satisfaction to many who make Strawberry culture a speciality. Many others have been proved of late years, but are scarcely found in any gardens now. Noble belongs to this class. Perhaps no Strawberry in Scotland has given more satisfaction than President, a variety which has many admirers in the south as well; and I can endorse all you say of it at p. 582. For outdoor culture and for forcing I have none better. While once inspecting a large Aberdeen nursery and purchasing Strawberry plants, I was told that President was not in favour with many of the large growers in the district, and I may add that I had to get rid of the several varieties which I purchased for trial, as they did not do in Stirlingshire any more than at Aberdeen. Garibaldi is much grown in Scotland.—*M. Temple, Carron, N B.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Dendrobium wardianum album.—When the true form of this turns up it should have pure white sepals and petals, the customary purple tips having disappeared. The lip should be entirely without the usual two maroon blotches at the base. This variety has recently turned up in the collection of the Marquis of Camden, at Bayham Abbey, Lamberhurst, Kent. A short time ago we recorded the occurrence of a fine subvariety of D. wardianum to which we gave the name Marquis of Camden's var. Now both of these choice things turned up in a recent importation, and the owner is to be congratulated. D. wardianum album has a rich orange blotch covering the whole area of the lip with the exception of the tip and a narrow marginal line of white. D. w. candidum Marquis of Camden's var., we consider the finer of the two on account of the great size of the lip and the conspicuous character of the blotch. Mr. A. Methven understands Orchids and will no doubt nurse these importations into size and beauty.

EUCHARIS LOWII.

Forms of Eucharis continue to turn up amongst importations, and every now and again puzzle cultivators as to what they are. Ernest H. Krelage in a review of the Eucharis in *Tijdschrift voor Tuinbouw* about two years ago, made out a list of six species, three hybrids and five varieties. Eucharis Lowii is by him regarded as a variety of E. grandiflora, but we fail to see how such a view can be taken whether E. Mastersii be regarded as a species or a hybrid, for both are intermediate between E. grandiflora, and E. Sanderi differing chiefly in the size of the flower and the disposition of the segments. E. Lowii takes more after E. grandiflora than E. Mastersii, which inclines towards E. Sanderi in the smaller size of the flowers and the ascending direction of the inner segments.

After consulting various illustrations, some of which were taken from the same lot of plants of E. Lowii, we come to the conclusion that the different draughtsmen employed to sketch the flowers give quite a varied aspect to one and the same thing. Possibly the taking of flowers from different bulbs might account for this; because if each bulb represents a different seedling from one or more pods of seed resulting from a natural cross, there might be variations amongst individuals just as occurs when artificial hybrids are produced. The flowers of E. Lowii are as large as those of E. grandiflora, and the corona has a narrow, free rim above the tube with two triangular teeth between every two filaments. The figure in The Gardening World, Vol. x. p. 7, shows that the three inner segments are incurved at the sides. *The Gardeners' Chronicle* for May 6th, 1893, p. 539, shows much less of this incurved character to the inner segments. At the same place the flowers are shown to be sessile, that is, without pedicels to the flowers, yet the description of Mr. J. G. Baker, of Kew, says that the pedicels are very short. Some flowers of E. Lowii were shown by Mr. W. Bain, gardener to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, at the meeting of the Royal Horticultural Society on the 11th inst. The pedicels in this case, or some of them, were ⅜ in. long. The flowers differed from those illustrated in 1893, chiefly by the inner segments being often nearly erect and recurved at the edges instead of being incurved. We scarcely think this sufficient to warrant a distinguishing name, as individual flowers differed more or less from one another, and they may not be exactly the same when the bulbs next come into flower. We prefer to regard these variations as individual differences amongst the seedlings of a natural hybrid. Mr. Baker, of Kew, did, indeed, suggest that E. Lowii might prove to be a hybrid between E grandiflora and E. Sanderi.

THE FLOWER GARDENS OF VICTORIA (AUSTRALIA).*

Most people I have met in England seem to have an idea that Australia is a scorching sun-baked land, ever thirsty and parched, and seem filled with incredulity when told that it can grow the lovely flowers and plants that it does. Now this state of things is much to be deprecated and wondered at, for with so many hundreds of persons passing between England and Australia every week, it is time the folk here had a brighter, pleasanter, and at the same time more correct idea of the place they may be merely going to visit, or perhaps think of making their future home, so that when they bid farewell to this fair land they may not leave with a sense of saying "good-bye" to all that goes to make up an English home, and especially an English garden.

However, I shall endeavour to give you a layman's ideas or remembrances of average gardens in and around the suburbs of Melbourne, and in certain country districts where it has been my good fortune to have been, when I had a good opportunity to judge how imported flowering plants behave in their adopted country. I propose first of all to give some slight idea of our climate in the colony of Victoria, as a preface, so that you can understand some of the external conditions under which our plants and flowers grow.

Briefly then, we have two very warm months—viz., January and February. These form our midsummer. Beginning to get warm in November, December gradually becomes warmer as the days slip by. Flowers and shrubs commence to wear a jaded look. January comes along, and we find this condition increasing, until in February the thermometer generally reaches its highest point, which varies according as the season be a mild or severe one, as in any other part of the world. Now the gardens and country generally look distressed, the earth is baked hard, and Nature, save in some instances, appears worn out with struggling against long odds, and is only saved from downright death by a timely change and a good shower, which puts enough vigour into plant life to sustain it. Of course, by the plentiful application of hoses and sprinklers, for the use of which there is a small tax, hundreds of gardens are kept in proper state, and the dews at night, along with this and the humid atmosphere, make things grow in a semi-tropical manner.

Then again the heat is not continuous, and sudden cool changes occur after a few days heat; rain falling, the earth is cooled, and it seems as if these changes were sent to keep things going. But alas! in many places inland the long-looked-for change may not come for weeks or months, and then comes a drought, which seems to recur periodically. I am, however, speaking of places which are within one hundred or two hundred miles from the coast and not too hot for the aboriginals. So, to sum up the summer—it is a very warm or hot season, the temperature going up at times to 105° and 106° at rare intervals near the coast, with an average of about 90° Fahr., varied by several cool days together and a recuperation. For instance, we read of the present summer of birds dropping down dead off the branches from the great heat, and then a few days

* A paper read at a recent meeting of the Horticultural Club by Dr. Ernest D'Ombrain, of Melbourne.

later so cold that all are wearing winter clothes and are burning fires in their houses. One thing I have forgotten to mention, and that is the burning north winds, which blowing from the sun-baked interior, swoop down over Melbourne and suburbs, parching up everthing for the time being. Strange to say these are becoming of less intensity, and do not last as long as in the earlier times, a phenomenon evidently due to civilisation and alteration of the surface of the country.

At length in March a change begins to be appreciable. Hot days grow less frequent, and autumn creeps on apace. Lovely days with gorgeous sunsets become the order of the season, and April sees the first of the wintry rains, but not till May is well upon us do we get the cold weather. Rains are frequent and wet days plentiful, and the earth seems to have taken a new lease of life. In June we have the true winter weather. Cold, clear, sharp nights, rain, hail, and frosts, and last year snow fell heavily. Growth is, of course, slow, or arrested almost, and not till July is gone and August is with us does the earth seem to re-awaken and respond to the voice of spring.

Many of these winter days are lovely in the extreme. Perhaps fogs (but not of the smoky London sort) and frost at night, cold, sharp mornings, but lovely sunshiny middays and afternoons. Days in which one loves to bask in the warm sunshine and enjoy the clear atmosphere with a sky as blue as that of Venice. These are the days one feels glad to be alive, for they are charmingly exhilarating.

(*To be continued.*)

NOTICE OF BOOK.

The Country Gentleman's Catalogue of Requisites for the House, Field, Farm, Garden, Stable, Kennel, &c. Printed and Published by Eden Fisher & Co., 6, 7 and 8 Clement's Lane, Lombard Street. Price 3s. 6d. 1897.

This book contains such a medley of subjects, notes and advertisements mixed up in about an equal ratio that it would be difficult for readers to refer to its contents if it were not for the copious index, and an alphabetical directory of the names of the advertisers. The wares the latter have got to sell give a pretty sure indication of the requirements of the modern country gentleman. Sport and pastime are served by tables of Yacht Clubs, cricket fixtures, stag and fox hounds, race meetings, &c. Under the heading of "Our Note Book" are placed a great number of short notes on a great variety of subjects, but without any attempt at classification. The reading of them may be regarded as a sort of pastime, for some of them are useful, and some merely interesting to most readers.

The so called Century Plant still holds on its old course of fabulous romance for those who can permit themselves any longer to believe it. The hundred years are now, however, reduced to seventy or fifty years, and we hope will be reduced to ten or five in the next edition. When planted out in a suitable climate, Agava americana fairly rapidly attains the flowering stage by virtue of the greater amount of root run and a more abundant supply of nourishment. In a semi-starved condition in pots and tubs it takes many years to get strong enough to produce its giant flower stem. We have a good instance of this in the dwarfing and starving of trees and shrubs by the Japanese.

A good deal of information is given relative to farm crops and manures, in the form of short notes; but comparatively little is said of gardening pure and simple. Well, the best farmers are frequently said to be the worst gardeners, but whether that is the reason for the relative neglect of the garden we do not pretend to say. Applications of lime, gypsum, magnesia, or potash, help the plants affected with what is termed clover sickness, but the compiler judiciously advises the farmer to abstain from sowing the crop too frequently upon the same land. Useful as well as interesting are the notes concerning the amount of seed of any subject required for sowing an acre; the standard weight per bushel of any crop will prove useful to seedsmen and farmers, particularly those just entering upon their respective occupations. The book contains 239 pages of well printed matter, and though there are few illustrations, the letter press leaves little to be desired.

THE LATE MR. OWEN.

Being now in a position to give an illustration of the late Mr. Robert Owen, whose sudden decease we referred to in our last issue, we do so with the object of giving readers at a distance from London an idea of this noted raiser of new and improved Chrysanthemums. He was well-known personally to a wide circle of friends and patrons, however, and in the intervals between busy times at home, he travelled considerable distances, and to our knowledge has been in various parts of Scotland. Though latterly a successful nurseryman, he commenced as a gardener,

Mr. Robert Owen.

like many others before him. The last private establishment in which he served was at Yewden Manor, the residence of G. C. Schwabe, Esq., after whom, the well-known Chrysanthemum is named. When the latter gave up Yewden Manor he assisted Mr. Owen right liberally in starting and establishing the Floral Nurseries at Castle Hill, Maidenhead, and was highly satisfied with the industry and success of his former servant.

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

Lycaste Skinneri.—I do not think, considering the ease with which it can be grown and the uses it can be put to that I should be justified in leaving this out of the twelve.

Of all the known species the one under notice is the most variable, producing varieties ranging in colour from deep pink to pure white. It is generally considered to be a cool house Orchid, and may be grown with the Odontoglossums; but I think a few more degrees of heat are necessary if you are to keep it in good health for long. Therefore, we would recommend the coolest end of the Cattleya house as being the best position; here they should be shaded from strong sunlight or the leaves will turn yellow.

Pots or pans, according to the taste of the cultivator, may be used. In any case they should receive ample drainage as the plants will take—and must have—any amount of moisture at the root when growing; and at no time should they be allowed to become dry, or they will soon suffer and lose some of their leaves.

The compost should consist of peat to which may be added a little leaf mould, loam, and silver sand. Pot moderately firm, and when the operation is finished give a gentle watering with a rose pot. The best time to pot them is after they have done flowering in the spring.

For the decoration of the drawing-room this Orchid has no equal, and if properly prepared before taking it into the house, and by well looking after it whilst there, no harm will result. When the majority of the flowers are expanded, the plants should be placed into a cooler atmosphere, such as is afforded by the greenhouse. Here they may remain for a week, taking care that they are well shaded during the day if the weather is bright. After such time it would be quite safe to place them in the dwelling house. Here they will require watering at intervals of a few days when the room is kept warm by the use of fires and gas, otherwise once a week would suffice. Sponging the leaves every other day helps to keep them fresh and in good condition. When the flowers fade again place them in the greenhouse for a few days before finally transferring them to the more genial and warmer temperature of the Cattleya house.

After such treatment it becomes necessary to give them a good soaking at the roots and a general clean up, after which they will soon resume activity and break away into strong growth, apparently well pleased at having helped to brighten up house and make one feel that after all life is worth living.

Insects.—Like most things when growing strongly they are very rarely attacked with insects of any kind. Of course thrips will attack the healthy plants as well as those out of condition, and must be kept under by fumigation. Scale sometimes attacks them, but this is an evidence that the plants are waning, or that the atmosphere is too dry. Careful sponging of the plants and a judicious use of the syringe about the plants will effect a change for the better.—*C.*

PLANTS RECENTLY CERTIFICATED.

The awards mentioned hereunder were made by the Royal Horticultural Society on the 11th inst.

Orchid Committee.

Odontoglossum andersonianum bogaerdianum. *Nov. var.*—The sepals and petals of this grand variety are elliptic and white, with very large chocolate blotches from the middle downwards on each, those on the petals being the smaller and more numerous. The tip also has a chestnut-red blotch in front of the white and yellow crest. The variety is one of the finest of this type, on account of its blotches, and very distinct. Award of Merit. De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks.

Cypripedium Chapmani magnificum. *Nov. var.*—This was raised between C. bellatulum and C. Curtisii, the former being the seed bearer; and it is undoubtedly the finest of this section. The upper sepal is orbicular, marbled, and spotted with deep purple, on a creamy white; it is also lined with dark purple along the veins. The petals are very broadly oblong, slightly declining, and densely spotted all over with blackish-crimson on a rosy ground. The lip is blackish-purple in front. The influence of C. bellatulum is the most evident, but C. Curtisii can be traced on the back of the sepals. The leaves are broadly oblong, and irregularly tassellated with gray in thin lines. The seed was only sown about three years ago. The flower on the whole is massive, and the texture good. It was raised and exhibited by Mr. H. J. Chapman, gardener to R. I. Measures, Esq., Cambridge Lodge, Camberwell.

Laeliocattleya Hippolyta Dulcote var. *Nov. var.*—The sepals of this fine hybrid variety are bright orange-scarlet, and the petals dark orange. The lip is of a rich crimson, with an orange tube. It is a handsome variety, and very much darker than the type. Award of Merit. Walter Cobb, Esq. (gardener, Mr. Howse), Dulcote, Tunbridge Wells.

Cypripedium bellatulo-vexillarium. *Nov. hyb.*—The reputed parentage of this hybrid is indicated by the name. The upper sepal is roundly ovate, and rich rose-purple, shading off paler in the centre. The petals are oblong, declinate, and finely spotted with purple on a white ground. The lip is deep purple. Award of Merit. Mrs. Briggs Bury, Bank House, Accrington.

Cirrhopetalum elegantulum.—The pseudobulbs of this species are about the size of small Cherries. The flowers are borne in a half whorl on scapes only 2½ in. long. The dorsal sepal and the base of the lateral ones are dark purple, the rest of the lateral ones being yellow, faintly lined with purple. Botanical Certificate. A. H. Smee, Esq. (gardener, Mr. W. G. Cummins), The Grange, Wallington.

Oncidium Warneri.—The flowers of this species are of medium size with purple sepals and petals, lined and edged with yellow. The lip is four-lobed and yellow, with an orange blotch. Botanical Certificate. Frau Ida Brandt (gardener, Mr. T. Schlect), Brunnenhof, Rieshach, Zurich.

Floral Committee.

Anemia rotundifolia.—This beautiful species is a native of South Brazil, and evidently quite new to cultivation. Several species coming from that quarter can be grown in a greenhouse temperature, but A. rotundifolia, on account of the leathery character of the fronds, will require a stove to bring

it to perfection. The barren fronds are arching and pinnate with roundish pinnae towards the base, the greater number of the others being oblong with a few cuneate ones at the top, but all are cut away on the lower edge. The veins radiate in a fan-shaped manner. The rachis is prolonged at the apex, and roots at the extremity like a Strawberry runner. The fertile fronds are erect, with a short, spreading leafy branch, and two upright spore-bearing panicled ones, like the so-called flowering Ferns. The young fronds are of a deep, bronzy tint. First-class Certificate. Mr. Wm. Bull, F.L.S., 536, King's Road, Chelsea.

LILAC SENATOR HOLLAND.—In this we have a double variety with huge densely compacted flowers that are purple in bud and pale lilac when open. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

RHODODENDRON PINK PEARL.—Both trusses and flowers of this hybrid form are of huge size, the latter being wide open without any tube, and of a warm, rosy-pink, spotted with red at the base of the upper segment. The leaves are elliptic-oblong and moderate in size. Evidently R. griffithianum was one of the parents. Award of Merit. Mr. John Waterer & Sons, Ltd., Bagshot, Surrey.

STREPTOCARPUS ACHIMENIFLORUS —This new type was raised from S polyanthus crossed with a white variety of Veitch's hybrid strain. The leaves are broadly ovate, almost triangular, deep green, and 6 in. to 8 in. long. The flowers are abundantly produced in cymes on the top of scapes, just under or about 1 ft. in length. They are sky-blue with a white eye, and twice or three times as large as those of S. polyanthus, of which they have the form. Award of Merit. Messrs. J. Veitch & Sons, Ltd., King's Road, Chelsea.

TROLLIUS NAPELLIFOLIUS.—The Globe Flower has deeply divided leaves, and is much taller than T. europaeus. The flowers are very large, rich yellow and globular. Award of Merit. Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden.

VEGETABLE CALENDAR.

TENDER crops raised in heat, such as Tomatos, Marrows, Dwarf and Runner Beans, should now be sufficiently hardened by full exposure on all favourable occasions, to stand any fluctations of temperature, short of actual frost. With a change in the wind from its present northerly direction, we may hope to have passed all danger during the present season ; and the first favourable opportunity should be taken to get them planted out. All favourable positions on walls and fences should be planted with Tomatos, and any remaining should be placed in a position fully exposed to the sun. Secure the plants to stakes, to prevent injury from wind, and water and mulch with short strawy manure to start them into growth quickly. The Marrows, being most sensitive to cold, should be covered with boxes, or handlights, to prevent the plants getting a sudden chill, during changeable weather. Where the land is heavy special preparation will be necessary for this crop, by filling the positions the plants are to occupy with a barrow load of prepared compost, consisting of equal parts of decayed manure and light loam.

THE BEANS, both Dwarf and Runner, should have warm positions and light land selected for them to hasten early cropping.

CELERY.—The earliest plants should now be strong enough for planting out. Trenches should be prepared 3½ ft. or 4 ft. apart, taking out the earth a good spit deep and 18 ins. wide, with a slight slope to catch the rain. An abundant supply of well-rotted cow and stable dung mixed should be blended with the bottom soil in the trench, and a little fine soil should be laid on the surface of the manure to prevent evaporation of the goodness of the manure, and to assist in filling in round the roots of the plants at planting time. All suckers must be carefully removed from the plants, and these placed 9 ins. apart in the rows, giving a good watering and mulching with a thin layer of old mushroom dung. Later crops will need attention in preparing beds on a hard bottom, and pricking out as soon as fit to handle.

LETTUCE.—Hardly any crop gives more trouble transplanting during hot weather than this ; and it is good policy after the present month to sow in the position where the crop is intended to occupy until fit for use. In this case a good breadth should be sown in rows at least 1 foot apart. This will form a seed and also a permanent bed, as the thinnings can be planted during favourable weather, and these will form a succession crop. Deeply cultivated and well-enriched land should be selected for Lettuce during the hot season. Crops advancing must be assisted in blanching by placing a tie round them, and well-watering them during dry weather.

CABBAGES.—The present is a good time to make a pretty liberal sowing of these, with a view to having a good supply in the autumn. A sowing may also be made of Coleworts, as nothing is more useful for filling up vacant ground or inferior positions under fruit trees. Sow in rows 9 ins. apart, to enable the hoe to be used in keeping the beds free from weeds during growing weather. Plants crowded in earlier sown beds should be pricked out to prevent them getting weak and drawn. The autumn sown crop now growing rapidly may be assisted in forming hearts quickly by placing a tie round the forwardest. *J. R.*

THE PLANT HOUSES.

The Stove.

WITH the advent of warmer weather the daily routine of airing, watering, damping, shading, etc., becomes of the utmost importance While there are some stove plants that may be kept fairly dry during portions of the year, the majority of them must not be allowed to lack moisture at the root at any time, and now when they are, or should be, in full vigour of growth it is astonishing to see how much water they will take. Air, too, may be given more freely, but the exact amount will depend upon the condition in which the plants are. If they are making a lot of young growth, it will be advisable to keep the house fairly close for a while yet, not giving a great deal of air until after midsummer has turned.

GARDENIAS.—Spring struck cuttings should now be of a sufficient size to warrant potting them off into 4 in. or 5 in. pots A compost of two-thirds of good loam and one of peat, with a fair sprinkling of sharp sand and the addition of a little charcoal broken up to about the size of Hazel-nuts, or a little larger, will suit Gardenias well. The soil should be made pretty firm. Later and smaller cuttings may be potted into 3 in. pots now, and may be given a further shift presently. In all cases firm potting is essential, for if the soil is at all loose, rank growth will be the result. By dint of feeding well and growing the plants in small pots, plenty of bloom may be obtained, and as more plants can thus be got into the space at disposal, the results are rather more satisfactory than they are when larger pots are given. If the Gardenias are to be grown in the large stove throughout the summer they should be given a corner to themselves, where they can be syringed at least three times a day.

SPECIMEN COLEUSES.—The 8 in. and 10 in. pots into which the plants were put at the end of March are now filled with roots, and feeding with manure-water must commence. Cow manure and soot will suit Coleuses well, and an occasional sprinkling of Clay's Fertiliser will greatly assist in putting colour in the foliage. Continual pinching of the growths will be necessary, not only to keep the plants in good trim, but also to prevent flowering. Some of the strongest plants that are now in 32-sized pots may also be given a shift on with a view to their taking the places of the earlier plants presently.

BERTOLONIAS.—Those who aim at having a representative collection of stove plants cannot afford to neglect the Bertolonias, True, they will not stand rough treatment, and on that account their value is much diminished, but there can be no two ideas as to their beauty. As the large stove would be too airy for them, they should be accommodated in a small hand frame, or case, through which they can be easily seen. In such a position the close atmosphere they revel in is forthcoming, and they do well. Propagation may easily be effected by cuttings, which strike readily enough in a sufficiently high temperature and moist atmosphere. A compost of peat, leaf-soil, and sand will suit them well. The following forms will be found very handsome and well worth growing :—B. Comte de Kerchove, B. Souvenir de Gand, B. Van Houttei, B. Madame Van Geert, B. E. Pynaert, B. argyrea, B. pubescens, and B. punctatissima rosea.

TALL ADIANTUMS are very effective plants in a roomy stove if they are properly looked after. A. aethiopicum is one of the most useful, but in order to have it at its best it requires very careful staking. This must be seen to without delay, as the young fronds soon form a thicket-like mass which can only be disentangled with a great deal of difficulty and not a little danger to the fronds themselves, for the stipes are exceedingly brittle, and a very little pressure will snap them. A. polyphyllum, often called A. cardiochloena, and A. trapeziforme are two other species that reach a good height and are very effective. Their fronds are large and heavy, and some of them require support.

SELAGINELLAS.—The best receptacles for these are shallow pans, which give what is most required, viz., a great deal of surface area, without too much depth of soil. Once the Selaginellas get in the fruiting stage the plants are of very little further use. Accordingly it is well to put in cuttings at intervals to take the places of the older plants when they have got past it. Some of the stronger forms such as S. canaliculata, S. erythropus, S. flagellifera, S. Galeottei, S. haematodes, and S. inaequalifolia are very handsome and effective when grown in masses in pans of the sort described. Make the soil light and sandy, and the cuttings will not be long in rooting if kept close.

MICONIA MAGNIFICA.—The Miconias are, as a rule, rarely found amongst ordinary collections of stove plants, and yet there is no foliage plant that can boast a finer appearance than M. magnifica. The leaves are of great size, and exhibit a deep olive-green flushed and shaded with a bronze hue, and with prominent ribs. The plant is seen at its best in its earlier stages, the colouring being then more vivid. Cuttings may be taken now, if desired, and struck under a bell glass or in a propagating frame with a brisk heat.—*A. S. G.*

Gleanings from the World of Science.

Spraying Potatos to Check Disease.—The results of experiments for checking the Potato disease, at Bramford, in East Suffolk, as carried out at the County Council Agricultural Station, is given in *The Journal of the Essex Technical Laboratories* for March and April. A photographic view of the field at Bramford where the spraying operations were carried out shows the two sides of the question pretty plainly. The half of the field of Potatos that were sprayed shows the latter to be well furnished with foliage, whereas the unsprayed Potatos are represented by naked and straggling stems. Sulphate of copper and lime, known as the Bordeaux mixture, was the remedy used, at the rate of 20 lbs. of sulphate of copper and 10 lbs. of unslaked lime to 100 gallons of water.

A table of results shows the weight of produce obtained for each of the four years from 1893 to 1896, inclusive, but some of these years cannot be taken as conclusive tests owing to the relative absence of disease. The total weight of crop fluctuated from year to year owing to various circumstances, but the sprayed portion gave an excess of 15 cwts. over the unsprayed portion in 1893. In the following year the excess was 2 tons; in 1895 it was 1 ton 8 cwt. 2 lbs.; and in 1896, there were 16 cwts. 1 lb. to the advantage of the sprayed portion. The difference in the average of four years was 1 ton 5 cwts.

The increased duration of the life of the plant enables it to produce a greater weight of tubers. What is of greater importance, it was discovered that the food value of the tubers from the sprayed plots was higher than the unsprayed portion: To prove this fact, no less than 480 tubers were analysed. The increased food value would indicate a greater storage of starch and other constituents of human food. The saving from destruction of the foliage would enable the plant to carry on its functions over a longer period, in fact, till the stems and foliage reach maturity naturally. The increased average yield of 1 ton 5 cwts. per acre, at the current price of £2 per ton, would amply repay the cost of spraying at the rate of 15s. per acre.

HINTS FOR AMATEURS.

Show Pelargoniums.—The earliest plants are just commencing to open their flowers, and before long will be a mass of bloom. At such a time the advantage of having a few old plants will be appreciated, for although these have a gnarled and rather ugly appearance between the time when they are cut down, and the time when the spurs are furnished with greenery, there is no word of complaint about them now. An old plant that has been well cared for, potted in good stuff, watered well, trained properly, and kept free from insect attacks will take the shine out of the smaller and younger ones. The individual flowers may not be quite so large, but there are more of them, and thus the plants as a whole are very effective objects in the conservatory.

Staking is a most important part of the routine; indeed, it is wonderful to see what a change may be wrought in the appearance of a plant by a little time judiciously spent in staking and tying. Now is the time to see about this, just when the first buds are opening and before the expanded flowers make special care necessary in order to avoid bruising them. It is not easy on paper to give full directions for staking the plants, a practical demonstration would be necessary, but there are a few hints that may be given, and these will be of some service. Whether it is possible to make a good job of the plants or no will depend upon the treatment previously dealt them. If they have been coddled, and given too much fire heat and too little light and air, they will have become drawn and sickly looking, and it is almost impossible to make these look well even by careful training. On the other hand, if the plants have healthy foliage of good substance, and the growths are firm and short-jointed, there should be little trouble.

First of all, the stakes should be as thin and neat as is consistent with the required rigidity and strength. They must not be too long, but may reach to the base of the flower trusses. As the stems lengthen they will then be hidden, but they will give all the support required. The lower growths should be pulled down towards the rim of the pot, the others being distributed evenly over the area of the head, which should be a hemisphere. A well-trained plant will present such an outline and the flowers will stand a few inches above the foliage, and will likewise be equally distributed. It is only large, old plants that make plenty of breaks that can be made to form such large semi-circular heads.

Watering—As there is now a very great strain upon the plants which are, moreover, growing in small pots as compared to the quantity of roots they make, there is urgent necessity for a plentiful supply of water. Manurial stimulant must likewise be liberally given. Many plants, as for instance Chrysanthemums, must not be fed after the flowers are about half open, because to do so would shorten their lives; but there is a great deal of difference between these and Pelargoniums, which continue to produce flowers over a considerable period. Soot water, liquid cow manure, and guano suit the plants well, and by using first one and then the other, a change of diet is afforded the plants that they greatly like.

Shading.—The sun of May, when it makes its appearance, is so bright that it materially shortens the lives of the flowers if allowed to reach them directly. Accordingly, pretty close shading is imperatively necessary, not only to preserve the flowers from falling, for as long as possible, but also to enable them to develop their brightest colours.

Later Plants.—These will also require to be shaded, but not nearly so heavily as those plants which are in flower. A cold frame, if it is of sufficient depth, is the best place for them. On a bottom of ashes in such a place they can be kept cool and moist, which conditions they enjoy. Give them plenty of room, and air pretty freely. The greatest pest is green fly, which makes its appearance year by year with wonderful regularity, and increases at an alarming rate. Occasional fumigations or vapourisings are the best methods of combating it. These should be followed up by especially heavy syringings. The latter are in addition to the morning and afternoon syringings that are given day by day.

Small Ferns.—The number of uses to which small Ferns can be applied is legion. Within the dwelling rooms, both of cottages and the more pretentious villas, there are usually to be found ornamental pots or other receptacles of more or less queerness of shape, which it is possible to fill with little Ferns when other plants would not be suitable. Various odd nooks may be beautified in a similar manner if only the requisite material is forthcoming. Now the raising of Ferns from spores is by no means a difficult operation, as those who have tried their hand at it have found. A few spores saved from a mature frond, say of Adiantum cuneatum or Pteris cretica, will give plenty of young plants. Indeed, it does not seem necessary to sow them, for in a house where pot Ferns are growing the sporelings come up all over the place, under the stages and trellises, in other pots, and wherever they can find a little soil and the necessary moisture. These may now be lifted and potted up. Use small "thimble" pots and light peaty soil. After potting put the plants in a handlight or other small frame placed inside the greenhouse. Keep this frame close and well shaded, and the little plants will soon pick up. After a while they will be strong enough to be brought out into the greenhouse, and the frame may then be removed or filled with another batch of plants. It is almost impossible to have too many of such pretty little plants for the ladies of the household, who generally take more delight in Ferns than in any other class of foliage plants.

Astilbe (Spiraea) Japonica.—The plants which have been grown in a cool house through the winter, and allowed to come on naturally have now seen their brightest days, and may be as well turned out. Perhaps their end has been hastened by neglect as to watering, for we often see plants in windows with the edges of the leaves touched in a way that tells unmistakably of the dry times that the poor plants have passed through. Bearing in mind what thirsty subjects these are it will be well to plant them out in the open ground straight away, and thus save some of the labour of watering.

Aspidistras in Rooms.—During the winter months the only way in which the leaves of these could be washed was by sponging. Now that the warm weather has come, however, they should be taken out occasionally, daily if time can be found, laid upon the grass, and given a good syringing. Only clean soft water should be used. Dirty or chalky water leaves a deposit upon the leaves, which not only disfigures them, but stops up the breathing pores, and is thus very detrimental to the health of the plants.

Narcissus Mrs. Walter Ware.—For culture either in pots or in the open there is no more beautiful section than the "white winged bicolor" Trumpet Daffodils, and the form Mrs. Walter Ware is surpassed by none of its relatives. The only drawback to its extensive cultivation is the price, for this is prohibitive to all save those who have the proverbial long stocking to draw from. The trumpet is large, expanded at the rim, and of a golden hue, whilst the perianth segments are broad, massive, and pure white. Messrs. Barr & Sons do it well, as, indeed, they do all other Daffodils.

Uvularia grandiflora.—The Uvularias or Bellworts are not commonly met with. The genus includes four or five species, all of which are of North American origin. U. grandiflora is perhaps the best of them all and may well be given a place in a nook in the rockery where the soil is light and sandy, and a partial shade is obtainable. The plant is about a foot in height, and to a certain extent resembles Solomon's Seal in general appearance. The flowers are long, drooping, and pale yellow in colour.

Asperula odorata.—This is a common British weed in that it grows wild in many parts of the country. According to Bentham, in his "Handbook of the British Flora," "it is found in woods and shady places throughout Europe and Russian Asia, except the extreme north; abundant in Britain." Popularly this is known as the Sweet Woodruff, and surely if ever a plant deserved the name of sweet it is this. The perfume does not become apparent while the plant is in a green state, but only after it has been dried. Then the odour is very strong, closely resembling that of new mown hay. This scent is credited with the power of keeping moths, etc. at bay, and housewives in some districts have great faith in its virtue in this direction. Although a wilding, the plant is well worth cultivating, for when grown in masses in shady parts of the rock garden it looks very pretty. For planting amongst hardy ferns nothing could be more suitable. The white flowers borne on the stiff erect stems above the whorls of stiff looking leaves are decidedly quaint. —*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Mildew on Roses.—The Roses are badly affected with mildew, *S. Ennerton.* In this case the vegetative part of the fungus, or mycelium as it is technically called, is chiefly on the outer portion of the leaf, although minute strands of the mycelium penetrate through the epidermis or skin of the leaf and feed upon the tissues beneath. There are several remedies. The best is to mix half an ounce of sulphide of potassium in a gallon of water and spray the foliage with it. This will kill the fungus and will not do any more harm to the plants than clear water. In cases where only a spot or two of mildew is observed a timely dusting with flowers of sulphur will prevent it spreading farther.

Strawberries.—*Amateur*: Pot Strawberries which have been forced this year may be induced to fruit again in the autumn. Make up a bed of soil in a frame, knock the plants out of their pots and plant them about a foot apart each way, and keep them well syringed and watered throughout the summer. They will flower and fruit again in the autumn, and the lights may then be put on to shelter them. You may also put the plants out in an open border if you wish, and cover them with handlights in the autumn if they should require it.

With regard to the second question, it is usually quite early enough to layer the runners after the fruit has been plucked from the plants. We are aware that some growers advocate pegging down the runners from a special plantation where the plants are not allowed to fruit. This is done when very early forcing is needed. We have always found, however, that the layers made good enough plants if pegged down after the fruit has been gathered. The great point is to select strong layers and discard the weaker ones; then the rest is easy.

Roseleaves Falling.—*Q*: There is very little doubt that it is the fumigation that has caused the Rose leaves to fall. You gave too strong a dose, or let the house become charged with sulphurous fumes by letting the tobacco paper flare. Try Richards XL-All Vaporiser; it is safe, and effective as far as the fly is concerned.

Jobbing Gardener.—*A. A. P.*: We do not know what the rate of wages are in your district, and, moreover, there is a great deal of difference between men. Some jobbing gardeners, or those who call themselves so, would be dear at any price, but for a fairly good workman who can tidy up your garden and put things straight all round from 4s. to 5s. per day would not be too much.

Planting Apples.—Please say is there any use in digging a hole 3 ft. wide and 3 ft deep, and in putting in 6 in. of drainage for Apple trees; or would a drain do without an outfall?—*Subscriber.*

If the soil is very heavy, i.e., a stiff clay, it would be better to plant on the surface, spreading out the roots of the tree and covering them with good loam, thus giving them the appearance of having been planted on mounds. If the soil is hard and poor, but not so heavy, the holes may be dug as you suggest, but a width of 3 ft. is too little; this should therefore be increased to 4 or 5 ft. Loosen the sides and bottom of the hole before putting in the drainage. The water can then soak away, and an "outfall" will not be necessary. The danger of digging holes where the soil is very stiff is that they form basins which hold the water, and this means death to the trees; but if you follow the advice here given such a contingency need not be feared.

Tree Carnations.—You are rather late with your cuttings, *Q*, but you may grow them on for next year. Pot them up now singly into small 60-sized pots, using equal parts of loam and leaf soil with sand.

When they have filled these pots shift them on into 48's which will be quite large enough for them for the winter. They may produce a few flowers, but the winter will be well advanced by that time.

Lilium auratum.—Could you tell me the cause of Lilium auratum buds shrivelling up. The plants are in 7-in. pots, and the bulbs appeared sound and healthy when potted. They throw up a stem about 18 in. long (rather weak), the buds barely form, then after a time they shrivel and the stem dies down. They were started in frames, and then taken into the greenhouse to flower.—*G. C.*

You do not give details of the cultivation. Have you top-dressed the plants and thus provided something for the ring of roots at the base of the young stems to root in. This is of great importance. We are inclined to think, however, that the reason of the failure is that the bulbs were immature when they were packed. This, combined with the effects of the journey would account for the weakness of the stems and the dropping of the buds. Unfortunately unripe bulbs arrive here apparently sound and good, and it is almost impossible to discover any signs of injury. We have had Liliums fail in much the same way and could assign no other reason than this. The only thing to do is to buy bulbs from a good reliable firm to which after-representations might be made with a view to their making good the loss.

Narcissus Empress.—I should like to plant Narcissus Empress on a grassy bank facing the west. The bank is overhung to a large extent by Lime trees. Would this variety do?—*George J., Reading.*

Unless the bank in question is too much shaded, the bulbs will grow and flower well enough.

Ridding Loam of Wireworm.—*Ajax*: Certainly you must not pot the Chrysanthemums in soil infested with wireworms. Lay the soil out thinly and turn it occasionally, catching and killing all the wireworms you can see.

BERTONERILA MADAME TREYERAN.

The generic name, Bertonerila, has been compounded of Bertolonia and Sonerila which represent a beautiful and interesting group of fine foliage stove plants. The accompanying illustration represents the hybrid under notice, showing the general disposition of the variegation. It does not, however, show the reddish hairs which cover the surface of the leaves and give them a velvety appearance, but which are absent from others of the same cross. This pubescence greatly increases the decorative value of the leaves which are of a dark, greenish, brown-red. The midrib and base of the secondary nerves are strongly variegated with a silvery green, and contrast admirably with the other warm and lively tints of the leaves. The lower surface is rose, stained with a very dark wine colour, and shaded with clear green in the middle. The plant originated in a batch of seedlings from which six of the best were selected. The hybrids were raised by Messrs. Linden, Parc Leopold, Brussels, who supplied the illustration.

Bertonerila Madame Treyeran.

GARDENERS' WAGES.

I was very pleased with the leader in the Gardening World of the 1st inst. It did not run away on the wages question (when criticising its contemporary) to the other extreme of too low wages, but hit the nail squarely on the head.

I would like to make a few remarks, however, on Mr. Temple's comments on the same subject (p. 565). He says gardeners "can give as good a record of themselves as any employees in this country." They certainly do not show the same business capacity as other bodies of employees do, on the present subject—the wages question. There is scarcely a trade now but has its union to look after its interests and maintain its independence, but gardeners have not advanced as far as that yet. Mr. Temple, even in these days of keen competition, seems to cling to the old "milk of human kindness" idea instead of the market value of the labour the gardener has got to sell. When the baker's van goes to his door, he does not offer the baker 6d. for his four-pound loaf when the market value is 4½d., and the baker does not expect it; but this is the way he would expect gardeners to be treated in the selling of their labour to their employers; there is nothing manly or independent in it. Depending on the generosity of our employers does not pay, and gardeners' remuneration at the present time is evidence of the fact. Before gardeners' wages can be improved they must have a union. Attempts have been made in that direction which have always failed up to the present time.

Another proposal that some are building hopes upon, is the granting of certificates of ability by some authoritative body, such as the R.H.S. These certificates would not improve the wages, because the certificated man would need to work for as little as the uncertificated, and would continue to do so, as long as the attitude of the public to horticulture is what it is. Meanwhile, we must be content with the old system of "the survival of the fittest," viz., the man that can live on the smallest wage.—*W. K.*

Why some of the high class journals go out of their way to decry gardening and gardeners in particular is one of those things which we sometimes have a difficulty in understanding. Surely the writer of the article you alluded to has a very limited acquaintance with the subject. The £100 per annum places might justly be called the special prizes which are, unfortunately for the profession, only too special. When a young man enters the profession fully determined to make his way, it would be well if he recognised this—that gardening resembles the clerical profession in this one thing, that there are a few prizes which he may possibly attain to, but a great many blanks with one of which he may possibly have to content himself. I am thinking just now of an old friend, who has passed away, with every quality which would have fitted him for any one of the few prizes, but who, we believe never had more than the 25s. weekly, which you only too truly fix as the more general average of gardeners' wages. My own sire was a gardener, and in my boyhood's days, a head gardener was considered to receive as good wages as an ordinary

mechanic. At all events there was not that disproportion which at present exists, and which presses most heavily upon suburban gardeners, the majority of whom have to hire houses for themselves at rents which a mechanic can well afford to pay if he is of steady habits, but the poor gardener, unless he is blessed with a better half capable of doing something to bring grist to the mill, is often in a dilemma. The difference in the rate of remuneration accorded to the two classes arises mainly, I contend, from the fact that garden labour is paid for in accordance with the laws of supply and demand, and that of workmen in building and other trades is largely augmented by the action of their trade unions.—*W.B.G.*

THE TULIP CONFERENCE.

As is stated on p. 604, the conference was held in the Museum and Lecture Room of the Royal Botanic Society. The chair was taken at two o'clock by Mr. John Wright. Three papers were announced, and as these were short and pithy, the conference was not a lengthy one. A fair audience was present.

In rising to open the proceedings, the chairman said that there was very little doubt that this had once been a Tulip country, and he had hopes that it would be a Tulip country again. He was glad to see, therefore, that the Tulip had got into the morning papers, as this was a sure sign of its growing popularity. Speaking of the value of the Tulip for decorative purposes, he mentioned Tulip dinners, where the tables had been solely decorated with Tulips; also a Tulip ball, where the noble flower held a similar position, 2,000 blooms having been furnished for the purpose from the Long Ditton nurseries of Messrs. Barr & Sons. Any knowledge he possessed of the flower he owed to a very large extent to his deceased friend Dr. Hogg, who was the only man he had ever met that had given £90 for a single bulb. He himself had grown Tulips when a boy, and had learned to love them then. In conclusion he remarked that although naturally the Tulip was a flower of the east the most beautiful forms of it in the wide world had been evolved by the loving care and skill of the western florists.

The History of the Tulip.

Upon this phase of the subject a capital paper was contributed by Mr. J. W. Bentley, Stakehill House, Castleton, near Manchester, who briefly sketched the history of the Tulip from the middle of the 16th century. The flower was held in great esteem, said the essayist, by the Turks, and was cultivated by them as far back as the year 1554. Gesner, after whom T. gesneriana was named, planted Tulips at Augsburg from 1577—1579. Parkinson in 1629 enumerates 40 varieties cultivated in this country, and speaks highly of their grace and beauty. In a publication made by John Ray in 1665 no fewer than 184 varieties were enumerated, this number being subsequently raised in the next edition to 300.

With regard to the Tulipomania, he would not go into details, since it was but a curious form of gambling. In this country large prices were also given for bulbs, instances of this being given in the "Tattler," in the year 1710. In that publication it was also stated that a bed of Tulips 20 yards long was worth more than a hundred acres of the best land in England.

The so-called Dutch Tulips which found such great favour in England subsequent to that date, however, were probably French seedlings, which, owing to disturbances in France, had passed into the hands of the Dutch growers.

Up to the beginning of the present century varieties of continental origin were held in the greatest favour, but after that time our own florists began to raise seedlings. South countrymen were the fathers of the English Tulip, for, until the year 1840, the men of the south had it nearly all their own way. Men like Hedley, Willison, Storer, Parker, Jackson, and Dymock raised many seedlings, and laid the foundation of the present collection of florists' Tulips that were available. Then northern growers stepped in, and although since 1840, and until recent years, Tulips had to a great extent gone out of fashion, the northern growers had stuck to the flower, and men like the Rev. F. D. Horner and Mr. Thurstan had done and were doing much to improve the flower.

The florists' Tulip, continued Mr. Bentley, is considerably taller than the Dutch, the flowers are larger and of better shape, and fully three weeks later. A good flower should have a strong stem, capable of holding it erect. It should have six segments of equal size, and when expanded should be in shape like the half of a cricket ball. The ground colour should be clear yellow or pure white, and the base should be a stainless circular area next to the ovary of pure white or clear yellow.

Passing then into the classification of florists' Tulips, Mr. Bentley divided them as usual into the three classes, viz., Roses, Bybloemens, and Bizarres. The Roses should have a ground colour and base of pure white, the other colour being rose, scarlet, or red. The Bybloemens also must have the white base and ground colour, some shade of purple or black being the overlying colour. Bizarres have a yellow-ground colour and base, with scarlet, black, or brown markings

These three classes are again subdivided into "breeders," "feathered," and "flamed" varieties. A "breeder" is a seedling of uniform colour which has not rectified or broken. No one knows exactly why a "breeder" breaks or rectifies, and although some theories had been advanced none are satisfactory. Some forms that are very handsome as "breeders," moreover, are of no use after they have broken.

In the feathered varieties the colouring is confined to the edge, whilst the flamed forms have a broad beam running down the centre of each segment.

Tulips may be increased by offsets, and in such a case it is necessary when purchasing to see that they come from a good strain. The same varieties exist in all three states, but are not all alike good in the three. Thus Glory of Stakehill is only good as a "breeder." Dr. Hardy, on the other hand, is good in two states, and Sir Joseph Paxton in all three.

In conclusion, Mr. Bentley assured his audience that although there were risks to be encountered in the cultivation of Tulips, the procuring of offsets from a good strain, and careful cultivation would reduce the risks to a minimum; and the bewitching mixture of anticipation and delight, although it might be tinged with disappointment, that resulted from Tulip growing was sufficient reward for labour expended.

The Cultivation of the Tulip.

As a cultivator of Tulips Mr. C. W. Needham has made a great name, and hence anything said by him on this subject is well worth listening to. He gave a most practical exposition of the culture that brings success, untarnished by any theorising or flights into the realms of fancy.

The Tulip, said he, is easy to grow both in town and country. The position should be sheltered from the cold north and east winds. The beds must be well drained, for the bulbs are very impatient of a waterlogged soil, and should be raised above the level of the surrounding ground to a height of 6 in. If the bed is not well drained naturally the soil should be taken out to a depth of 2 ft., and a layer of rubble or brick rubbish placed in the bottom, connecting this with a drain. The soil ought to be rather porous than stiff, and he advised the use of good garden soil that has been well manured, and has borne crops. Green manure is very harmful. Loam that has been stacked for twelve months is also good.

The bulbs may be planted in rows 6 in. apart, one or two bulbs being placed in each hole. Four and a half inches of space each way, continued Mr. Needham, is not too much if the bulbs are planted singly, whilst, on the other hand, they may be grown in clumps, and may then be planted quite close to each other. The covering soil should be changed each year, and mulchings of short well decayed stable manure would also suit them well. It is a mistake, continued the essayist, to grow the bulbs in rich soil year after year, for they become unduly large, and the blooms are correspondingly coarse. A sprinkling of salt or quicklime acts as a corrective for unduly fat land. For manures kainit, nitrate of soda, and superphosphates may be given, but only in homoeopathic doses. The old growers were well aware of the effectiveness of growing the plants now and again in poor but sweet soil, and spoke of starving them into purity.

With regard to the time of lifting the Tulips;—this might be done when the middle of the stem can be bent by the fingers without snapping. In lifting it is very necessary to avoid exposing the bulbs to the action of the sun, for even a minute's exposure means the scorching of the outer tunic, and decay is then sure to follow. The bulbs must be stored in a cool dry place, with sufficient ventilation, until needed.

The chief enemy of the Tulip, said Mr. Needham, is the hailstorm. The hailstones bruise the tender tissues, and decay invariably sets in in the injured areas. The rays of the sun striking upon the frozen foliage are also highly injurious, and protection of some sort is therefore urgently needed. An awning of thin calico or tiffany stretched over the plants forms an effective shelter. The most critical time is when the leaves are showing above the ground with the young flower bud enfolded in their axils. The latter form a sort of cup which catches the water. If this freezes the delicate leaves are injured by the pressure between the expanding water from within, and the expanding earth from without, and the result is very often death.

Mr. Needham, in his finishing remarks, expressed the opinion that by the exercise of care and perseverance even the veriest tyro might be successful in the "cultivation of the Tulip."

A lively discussion followed the reading of this paper. The chairman spoke of the Tulip disease, which at one time had cost Dr. Hogg nearly the whole of his collection.

In reply to a question put to the essayist by the chairman on this point, the former said that he had seen some of Dr. Hogg's Tulips that had been affected by the fungus, and found that they presented the same appearance as his that had been injured by hailstones. This he believed to be the true cause, the fungus which afterwards stepped in and took possession being an effect rather than a cause. In his experience he had found that slugs, dogs, cats, pigeons, etc., were some of the worst enemies the plants had. Mr. Bentley corroborated this view, and in reply to another question as to whether there was any theory as to the cause of "breaking," said that all the theories that had been brought forward were nonsense.

Mr. J. W. Barr spoke to the truth of the description of the injury done by frost and hail upon the plants given by Mr. Needham. He thought, however, that six ins. apart was much too wide to plant the bulbs. He preferred a distance of three or four ins., for he had found that thickly planted bulbs were less liable to injury from hailstones, the leaves mutually helping to protect each other. He also advised lifting when the stem was limp enough to be bent without breaking.

Mr. Chater also expressed an opinion that the disease was the result of injury done to the leaves by frost and hail. He had found that Bybloemens and Roses took the disease quicker than the Bizarres.

Mr. R. Dean attributed the disease to something in the soil. In certain localities certain diseases, fungoid or otherwise, attack plants, and render it exceedingly difficult to grow them. Thus upon some land at Bedfont he found it impossible to keep Sweet Williams. Mr. Dean also asked if any one knew of a rectified Tulip returning to the breeder stage. In reply Mr. Needham said such a thing had never come under the notice of himself or Mr. Bentley, although the markings would sometimes become so bad, owing to the spreading of the colour, that the bulbs were useless.

In summing up, Mr. Wright stated that the whole matter simply resolved into a question of cultivation. We should endeavour to keep our plants so healthy that they would not form a suitable reception ground for the fungus.

The Hybridisation of Tulips and the Raising of Seedlings.

An excellent treatise upon this interesting part of Tulip culture was submitted by the Rev. F. D. Horner, whose name will for ever be connected very closely with the improvement of the noble flower. Certainly no one within the confines of "Tulipdom" is better qualified to speak upon the crossing of Tulips than he. The reverend gentleman was unable to attend in person, and his paper was read by Mr. J. W. Bentley.

In selecting the parents for the desired cross, said the essayist, the best rectified or breeder forms should be chosen. The exact stage in which the blooms are, whether breeder, flamed, or feathered does not matter, as the change is innate, and certain to occur sooner or later. The parent flowers must be

of good form and substance, the petals being smooth and with unbroken margins. The ground colour must be intense, and the base pure from stain or splash of any other colour, whilst the class markings must be accurate and well defined.

The aim of the hybridiser, said Mr. Horner, should be to intensify the class markings by crossing. To do this it is essential that both parents should be taken from the same class, otherwise there would be a mixing up of colours, and a confusion of markings that would be far from satisfactory. The stigmas of flowers that are to be crossed should be shielded from the influence of undesirable pollen by laying over and around them a light protecting pad of cotton wool. When artificial impregnation is performed this layer could be removed, a new one being subsequently substituted.

After fertilization is well advanced, the long stigmas must be cut off, otherwise they are very liable, by catching the water, to cause the seed vessel to rot. The seed is ripe and fit for gathering when the pods begin to open in August. If the bulb bearing the seed is valuable, the bulb itself should be gently detached from the plant and the latter treated as an annual.

The best time to sow seed is soon after it is ripe, which is early in September. It will then germinate in February and the young plants will show their leaves about the same time as the bulbs planted in autumn. The young bulb produces each year a single leaf until it flowers, when it will produce two, this number being forthcoming every year subsequent to the season of flowering. It takes from four to seven years to flower out a whole batch of seedlings, although the major part of them will bloom during the fourth or fifth year. The essayist also alluded to the practice of the young plants throwing down "droppers," or young bulblets, to great depths, but stated that this was a practice that became less evident as time went on.

The value of new seedlings might be judged as soon as the plants flowered, although in not a few cases a form that is attractive as a breeder, and shows good colour, does not rectify well.

In conclusion, Mr. Horner said that bizarres are the wealthiest section, there being a finer form and more correctness of marking amongst them than are shown by the bybloemens and roses. Amongst the two latter sections much remains to be done. Both form and marking are capable of much improvement. Generally speaking, however, form is ahead of marking.

In the discussion which followed, Mr. Krelage rose to answer a question concerning the etymology of the word "bybloemen" at the special request of Mr. R. Dean. Mr. Krelage said that "bloemen" had the plural termination "en" and therefore, correctly speaking, meant "blooms." The prefix "by" was probably an allusion to an old classification of Tulips, in which the bybloemen were the second section, the roses, or bizarres being the first. In an answer to another question also put by Mr. Dean, he said that in Holland they did not find that either the early or late florists' Tulips were addicted to throwing down "droppers." It had been observed, however, in some of the species, and they sometimes put stones in the ground to prevent them from going down. The Tulip disease was now undergoing investigation in Holland by a committee of experts, but a definite conclusion had not been arrived at yet. They had found, however, that the disease was confined to particular areas, and had attributed it to exhaustion of the soil in those parts, calcium being the lacking element of plant food.

This brought to a close the official programme. Mr. Bennett-Poe moved a vote of thanks to the readers of the papers, expressing his regret at Mr. Horner's absence. Mr. J. W. Barr seconded, and on being put to the meeting it was carried *par acclamation*. A vote of thanks for presiding was also given to the chairman on the motion of Mr. Needham, seconded by Mr. Bentley.

Freedom Park, Plymouth.—As all the trees have been cleared away from Greenbank, at the highest point of Mount Gould, it is proposed by a number of residents to add to the number of existing trees in Freedom Park, and that the same should form part of the Jubilee celebrations.

FLORISTS' FLOWERS AT READING.

Visitors to Reading, especially those interested in horticulture should not fail to visit the Portland Road Nurseries of Messrs. Sutton & Sons. It matters not what season of the year it may be, something interesting is sure to be found; the celebrated strains of florists' flowers are innumerable. The lovely Cyclamen, Primulas, Cinerarias, &c., are just past, and great attention is now being paid to the harvesting of the seed of these useful, winter and spring florists' favourites. Better strains it is impossible to find. The rapid strides made by the hybridists are well known and have been commented upon most favourably in your columns already. Just now a glorious sight succeeds those mentioned, by a grand display of Calceolarias and Gloxinias.

The Calceolarias

Are a marvellous strain; hundreds of plants superbly grown in about 14 in. to 16 in. pots are now in perfection. For profusion of bloom, large well-formed flowers, compact but vigorous habit, and diversity of colours nothing could possibly excel them. There is the lovely Cloth of Gold; there are the self-colours of deep rose, maroon, pale yellow, and the mammoth spotted varieties with immense trusses of flowers of the largest size and finest form possible to procure in these popular favourites. The plants as seen here are grand examples of cultivation, well clothed with fine foliage over the rim of the pots, flowering most profusely, the majority being fully 2 ft. or more across, and as clean as one could wish. These have been grown without heat as far as they possibly could, with plenty of air consistent with safety. A succession can be kept up by sowing at intervals during the months of May, June and July. For early flowering now is a good time, but June sowings generally produce the finest plants.

Gloxinias.

These like their rivals previously alluded to have greatly improved, and here is to be seen a grander display if possible than usual; for the plants now in flower are larger than last year's. A house in full blaze of most lovely colours is a grand sight. The plants are superbly grown in pots, about 12 in. in diameter; the foliage is clean and perfect, extending right over the rim of the pots, and flowering most abundantly. The flowers are of the finest form and substance, combined with distinctiveness of colouring, and enormous blooms are making a grand show. Many of the plants referred to have three to four dozen flowers and buds. There is Her Majesty, the purest white Gloxinia in commerce by a long way. The foliage of this is highly ornamental also, and of the crassifolia type, with erect flowers thrown well above the foliage. Reading Scarlet is a grand companion to the former colour with flowers of an intense glowing scarlet. Then there are the varieties Duke and Duchess of York, the former being a large flower of a deep crimson edged with white, and vary effective; the latter is a rich purple edged with white. There is a grand pair of varieties alike in habit and constitution, namely, Azure Blue, a sky blue on a white ground, and Sutton's Purple, a self rich purple, both of which are most conspicuous. The spotted varieties are valuable additions likewise and vary considerably in variety of colours. Those mentioned are all of the erect strains. The drooping flowered varieties, although not so popular, contain many superb forms which are as distinct as the erect types. They are excellent for hanging baskets and brackets. I often wonder they are not more grown for this purpose, for the habit of plant and flower alike are excellent and admirably suited for this kind of work. The collection at Reading is a very extensive one; the plants varying in age, but the yearlings generally produce the finest flowers. Here they are grown from seed and flowered superbly in nine months. The best time for sowing is January, February, and again in June. These sowings will ensure plants in bloom the greater part of the year. Those who make but one sowing should do so in February.

Begonias.

Hardly any florists' flower has made the rapid strides these have, both double and single alike. I well remember the first time B. boliviensis flowered; then came B. Veitchii and B. rosaeflora, which were the first introductions. Then came B. Sedenii and B. Chelsoni; but hybrids innumerable have sprung up since, and many, yes, very many grand improvements are yearly making their appearance to the astonishment and glory of the many raisers. The culture of the Begonia is a special feature at Reading, where many houses are devoted to their culture; and, shortly, judging from the appearance of the grand lot of sturdy well grown plants now to be seen, a grander treat than ever is in store for a later period of which I hope to allude to, and try to describe when they are fully in flower.

A plant, which is most attractive here, and has been for a long time, and will continue so for some time to come yet, is the lovely Saintpaulia ionantha. This remarkable gesneraceous plant should be grown by all lovers of greenhouse perennials. It is easy to grow, very dwarf and compact in habit, with deep green, fleshy leaves. From the centre of the plants great quantities of spikes of flowers of a violet colour, resembling the Violet in shape, about 1 in. in diameter, and lasting in flower a very long time, continue to spring up. It is easily raised from seed, and plants flower when six months old. They require the same treatment as the Streptocarpus. A grand lot of these will shortly be in flower also. S. Wendlandii is now, and has been, flowering for some time. It is a very remarkable and singularly interesting plant, its habit of growth being most peculiar. It has only one immense leaf over 2 ft. long, nearly the same in width, and reflexed from its very base. Scapes or spikes are thrown up 2 ft. high, branched, and bearing elegant, pale violet-blue flowers. Seed sown now would flower under ordinary treatment all the next winter, and will continue so for six months. The hybrids now so popular vary in colour considerably, lavender, purple, rose, red, and nearly pure white being some of the more salient hues. They are lovely objects for the decoration of the greenhouse and conservatory. Seed sown in January should produce flowering plants in June and July. They are easily grown. Some day I expect to see these plants become favourites with lovers of window plants, for which they are well adapted.—*Rambler.*

ROSE DAY.

Amongst the various projects for the celebration of Jubilee Day, it has evidently occurred to more than one that it would be very appropriate to wear Roses by way of personal decorations, and otherwise. The *Journal of Greengrocery* for May 1st alludes to the fact that "Alter Ego," writing about Roses and the Jubilee in The Gardening World, suggests that Roses be worn in connection with the above, and adds to his article": "N.B.—All pirates of this idea are hereby warned that it is the sole property, &c." The editor goes on to say that "Alter Ego" "should get a copy of our journal of April 17th, and read the article on "Roses." Our correspondent, Mr. Newman, of Ayleshury, is three weeks ahead of him."

Well, there was only a fortnight between the publication of the ideas of the two correspondents in the two instances named, but "Alter Ego" had been writing on the subject at least a week previously, and his communication had been published in another paper on April 25th. This reduces the difference in publication to a week. We are assured that as regards "Alter Ego" the idea was original, and he had not seen it in any paper, for he had just been reading a paper containing a list of all the proposals which had been made to commemorate the Queen's Diamond Jubilee, and they ran up into hundreds, yet he proceeded to make another proposal.

The ideas of the two correspondents, "Mr. Newman" and "Alter Ego," were different—in fact, two separate proposals—though related in some respects. Therefore, the time of publication affects the matter but very little. Mr. Newman, writing under the heading of "Roses," says, "The practice of wearing a buttonhole is growing, and surely patriotism in this, the Diamond Jubilee year, would point to the 'Rose' as being the appropriate buttonhole flower during the month of June." He concludes his article by saying, "In June, then, the Queen of Queens might well be held in daily remembrance by decorating house and buttonhole with the queen of flowers."

As may be seen by reference to The Gardening World, p. 549, "Alter Ego" says, "I further suggest that here, June 22nd, shall be always known as "Rose Day" in honour of England and good Queen Victoria." He concludes by saying, "Rose Day would throw all other celebrations into shade. The Rose is a Royal flower, and should be used on such a truly Royal and national occasion this year, and for all times."

The establishment of a "Rose Day" for all times, we consider the stronger and more original of the two ideas.

GARDENING MISCELLANY.

AGAPETES BUXIFOLIA.

THE claims of this beautiful member of the Vaccinium family do not seem to be recognised outside of botanic gardens even by those who make a speciality of hard-wooded subjects. It is of dwarf and bushy, branching habit, and if of relatively slow growth it should for that reason be acceptable to those who have but small accommodation under glass. The leaves are small, leathery, evergreen, and about the size of those of the tree Box. The drooping flowers are tubular, scarlet, and very freely produced. They also last a long time in perfect condition during spring and furnish a bright bit of colour at a time when variety is very much wanted by way of contrast to Dutch bulbs, Cinerarias, and other spring-flowering subjects. A fine batch of plants under 18 in. in height flowered recently in the greenhouse at Kew, where they had been very attractive for some weeks past. For many years it might have been seen in the temperate house, but is now considered worthy of being grown in quantity with the more popular flowers.

KERRIA JAPONICA FLORE PLENO.

It may not be out of place at this time of the year to call attention to the value of the double Kerria. At the time of writing there are several cottages not far from me the walls of which are a perfect blaze of bright orange yellow—gaudy perhaps, but still effective. The plant seems to grow in almost any situation, and flowers each year with surpassing freedom. All that is necessary is to drive in a few nails each year to keep the long twiggy growths in something like order.—*Viator.*

THE DISEASES OF PLANTS.

THE lantern lectures are evidently a very popnlar feature of the Royal Horticultural Society's meetinngs. One was held on the occasion of the last Drill Hall meeting on May 11th, when Mr. Massee, of Kew, dealt with "The diseases of plants, especially those of Orchids." Mr. Massee's fame as a mycologist is great, and he not only posseses immense stores of knowledge of his special class of plants, but he has also the power of imparting his knowledge in a lucid and agreeable manner.

In his opening remarks the lecturer spoke of the way in which our plants are crowded together in gardens and greenhouses, these conditions being very favourable to the spread of any disease. A disease has, moreover, to become very widespread and attack vast numbers of plants before the gardener recognises it as a disease, and it is then too late to cure.

Fungi differ very greatly from other plants in their general bearing. When the mushroom appears the fungus has done its work, for the mushroom is simply the fruit. The way in which fungi reproduce themselves is also very different to the methods adopted by other plants. In order, therefore, to be able to deal with fungoid diseases, the gardener ought to know the early symptoms, so that the remedy may be applied in time.

Mr. Massee then briefly described the most common types of fungi that attack plants, dealing with their life history, and the way in which they might be recognised.

The white mould (Sphaerotheca) that is so frequently to be found on Roses is a type of hundreds. In this case the mycelium or vegetative portion of the fungus is superficial, although the epidermis of the leaf is penetrated by minute strands of the mycelium. The mildew is reproduced during the summer by spores, which are spread by the wind and by syringing. They alight on a damp leaf and germinate in about four days if the weather is warm. Towards the end of the summer the white mycelium becomes studded with minute yellow points which are the winter form of fruit. These fruits are divided into several cells, each of which contains eight spores. These remain passive during the winter but germinate in the spring. They are thus produced by the fungus to tide itself over the cold weather. This mildew or mould is common to many rosaceous plants and must be looked for and guarded against.

Often enough when a gardener is shown the resting spore stage of the fungus on a leaf and is told that the spores will germinate next spring unless destroyed, he crumples up the leaf in his hand, throws it away and thinks he has done for the fungus, when in reality he has only helped to distribute it. Syringing with clear water is worse than useless. The best method of combating the mildew is to spray with half an ounce of sulphide of potassium dissolved in a gallon of water. This is a most effectual remedy, and is no more harmful to the host plants than clear water would be.

The coral red excrescences (Nectria) that are so commonly found on dead twigs and branches were next discussed. This fungus also had summer and winter spores, the latter remaining passive throughout the cold weather.

The black spot on Orchids (Glaeosporium nigrocinctum) was described by Mr. Massee at some length. It made its appearance on the thick leaves in the form of a dead white patch surrounded by a black ring, or else as a black spot merely. From the centre of the black ring a long tendril-like body extrudes, bearing spores which are spread about. It only takes a mature spore a day to alight upon its host, and penetrate the epidermis, whilst in a week it will have produced a mass of mycelium. The fungus is injurious to the host plants in two ways. First of all it is a true parasite and draws its sustenance from its host after the manner of parasites; secondly it breaks the epidermis of the leaf in a number of places and thus transpiration of water goes on at a much greater rate than is good for the plant. Orchids are so built that they do not readily lose the moisture from their leaves under normal conditions, so this fungus upsets the balance of life. That the transpiration of water does take place through the ruptures in the epidermal tissue may be proved by covering these broken areas with pieces of "cobalted paper." These turn pink if allowed to come in contact with moisture, and the pink spots will be very evident in this case. The best cure for this fungus is also spraying with the sulphide of potassium.

The dreaded white rot that attacks forest trees was the next on the list. This disease alone, the lecturer computed, destroyed millions of pounds worth of trees a year in Europe alone. It was the work of Agaricus melius, which might be easily recognised when in fruit by the fact that it was the only densely tufted mushroom with light gills that we have. The strands of mycelium are as thick as fine cord, and any tree that they attack is hopelessly lost. The mycelium is thrown out along the ground for a radius of 10 or 12 yards from the base of the affected tree, and when it reaches a suitable host climbs up it between the bark and the wood. A good plan is to isolate affected trees by cutting around them pits 9 in. deep and 6 in. in diameter, throwing the soil inwards.

Alluding to the Tomato disease Mr. Massee, after describing the way it goes to work, declared that we are far too conservative in our methods, and that in any other country than our own £1 or £2 would be spent to save £100 worth of Tomatos.

The Peronospora on Vines, and Ustilago arvense, the well known smut on Oats, were also described.

The cluster cups on Pears and Junipers were cited as a good instance of a case where the fungus required two separate host plants at different stages of its growth. In order to keep the Pears free all the Junipers should be cut down that were anywhere near. The fungus was perennial on the Juniper, and one such tree was sufficient to infect a host of Pears.

Finger and Toe (Plasmodiophora) attacks many cruciferous plants. Quicklime would certainly check if not kill this fungus, and the lecturer advocated its use.

Mr. Massee then spoke of a very interesting class of Fungi, viz. those that attack insects. In France said he they sell spores of a certain fungus that preys upon Cockchafers for diffusion where these insects are numerous.

In conclusion he said that the last thing a fungus thinks of is to die out. After becoming weakened by appearing in one state for a long time, it will gain new life and energy by showing up in another place in a different state, in which it will live for a time and then change back again.

SOCIETIES.

ROYAL NATIONAL TULIP.—*May 12th and 13th.*

THE fourth annual exhibition of this society was held in the long corridor in the Royal Botanic Society's Gardens at Regent's Park on the above dates. A fair amount of material was forthcoming. In the afternoon of May 12th a Conference was held in the museum.

In the classes according to schedule Mr. Charles W. Needham, Royton, Oldham, was first for twelve dissimilar rectified Tulips to include two feathered and two flamed of each class. Samuel Barlow, Chancellor, Julia Farnese, Sir Joseph Paxton, Annie McGregor, Masterpiece, Trip to Stockport, Mabel, Henry Lowe, Adonis, Mrs. Lea, and Talisman were his varieties. Trip to Stockport was also awarded the premier prize for the best feathered bloom. The colour is white, feathered maroon. Mr. James W. Bentley, Stakehill, Middleton, Manchester, was second; and Mr. A. Chater, Cambridge, third.

In the smaller class for six rectified Tulips, dissimilar, Mr. J. Bentley was second; and Mr. Alfred Chater, third.

For six dissimilar Tulips, to include two in each, either feathered or flamed, open only to smaller growers, Mr. A. D. Hall, Wye, Kent, was first with good samples of Sir Joseph Paxton, Mabel, Adonis, William Annibal, and Madame St. Arnaud. Mr. H. E. Grey, Cambridge, was second.

Three feathered forms were best shown by Mr. J. W. Bentley; Mrs. Lea, William Annibal, and E. Pegg were the varieties. Mr. Chas. W. Needham was second, and Mr. A. D. Hall, third.

Mr. A. D. Hall, Wye, Kent, sent the premier three flamed Tulips, one of each class. They were William Bentley (bybloemen), Annie McGregor (rose), Dr. Hardy (bizarre). Mr. James W. Bentley was second; and Mr. Chas. W. Needham, third.

The "Samuel Barlow" first prize for the best pair of rectified Tulips, one feathered and one flamed, was carried off by Mr. A. D. Hall with Sir Joseph Paxton and William Wilson. Mr. Jas. W. Bentley was second; and Mr. Chas. W. Needham, third. Mr. J. W. Bentley had the premier flamed Tulip in Sir Joseph Paxton.

The best six breeder forms, distinct, came from Mr. Chas. W. Needham, who had Camp's Seedling, Mabel, Orleans, Annie McGregor, Storer's Seedling, and Richard Yates. Mr. Jas. W. Bentley was second.

Mr. Chas. W. Needham was also successful in winning the first award for three dissimilar breeders' showing Annie McGregor, Adonis, and Sulphur. Mr. H. E. Grey was second, and Mr. J. W. Bentley, third.

The premier breeder form was declared to be Mabel, belonging to the rose section, shown by Mr. H. E. Grey.

Mr. J. W. Bentley had the first award, a Silver Daffodil Cup, presented by Messrs. Barr & Sons, for a collection of 90 blooms of English florists' forms, in 30 named, distinct varieties; all classes, rectified and breeder, to be represented, and not more than five blooms of any one kind to be staged. This was a magnificent exhibit, and 131 blooms were shown instead of 90. Modesty, Goldfinder, Annie McGregor, Adonis, Masterpiece, Lord Stanley, Queen of England, Nulli Secundus, and Bessie were a few of the most noteworthy forms.

Mr. Needham contributed the best collection of florists' Tulips grouped for effect, the prize being a Silver Medal presented by Messrs. Barr & Sons.

In the class for a collection of Tulips, species and varieties (other than the feathered, flamed, or breeder florists' Tulips) and open to all nurserymen, Messrs. Jas. Veitch & Sons, Ltd., Chelsea, were first. The prize was a Silver Medal presented by W. Robinson, Esq. T. gesneriana, T. florentina, T. Didieri, Golden Eagle, American Lac, and T. vitellina were some of the best forms included. Of the pretty Parrot varieties, Lutea major, Constantinople, and Cramoisie Brilliant were very meritorious.

The miscellaneous exhibits, although few, constituted the brightest part of the show from a scenic point of view.

Messrs John Laing & Sons, Forest Hill, S.E., set up a most attractive group of mixed flowering and foliage plants, the exhibit occupying over a hundred square feet. In the background amongst other

things were pot specimens of Rose Crimson Rambler, and a grand plant of Dracaena lentiginosa. Crotons, Ericas, Gloxinias, and Boronias were also very gay.

Some small, but carefully trained and well flowered Azaleas were the chief feature in a group staged by Mr. Chas. Turner, Slough. Several Pelargoniums, also in good condition, and some Malmaison Carnations were likewise on view, Ferns and Palms furnishing the necessary greenery.

Messrs. Kelway & Son, Langport, Somerset, were to the fore with cut blooms of Paeonies, the colours of which were excellent considering the early season.

Messrs. Barr & Sons were responsible for a most extensive exhibit that proved *the* feature of the show. It occupied nearly 500 square feet of area and stretched for nearly the whole of one side of the long corridor. Tulips, of course, constituted the bulk of the display, and they were arranged in groups according to their several sections. First came a blaze of Darwin Tulips, made up in large irregular bunches. The Sultan, Erguste, Flambeau, Glow, King Harold, White Queen, and Salmon King were a few of the most noteworthy varieties. Next came the Parrots in all their glory of quaint forms and straggling outline. Amiral de Constantinople, Coffee Colour, Crimson Beauty, and Large Yellow were all grand. An array of bybloemens, roses, and breeders of both sections were set up in single blooms on stands covered with white paper. Dr. Hardy, Annie McGregor, Lord Derby, Aglaia, James Wild, and Sulphur were noteworthy forms. These were awarded a Silver Medal by the Tulip Society. Behind the stands of Tulips was a mixed collection of hardy cut flowers, including Irises, Narcissi, and Paeony tenuifolia. At the other extremity were staged a representative collection of cottage or May flowering bedding Tulips all in the pink of condition. A Gold Medal was voted for this huge and comprehensive exhibit.

ROYAL BOTANIC.—*May 19th.*

Amidst highly favourable weather the summer show of this society was held at Regent's Park, on the above date. The large tent which accommodated the exhibits presented a very gay appearance with the various groups of hardy flowers, Roses, pot Rhododendrons, and Azaleas. The quantity of material forthcoming was fair.

In the classes according to schedule, Mr. G. Cragg, gardener to W. C. Walker, Esq., Winchmore Hill, was first for twelve exotic Orchids. Mr. J. C. Clarke, gardener to L. Mond, Esq., Avenue Road, N.W., was second. Mr. W. Rumsey was the only exhibitor of nine pot Roses, and he well deserved the first award which fell to him, his plants being excellent.

Messrs. Kemp & Wilson, 85, Mortimer Street, W., won the first award for a group of Azaleas. Mr. R. Scott, gardener to Campbell Newington, Esq., Regent's Park, was awarded an equal first with Messrs. Kemp & Wilson. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., was the only exhibitor of twelve tuberous Begonias, but his plants were well up to first prize standard. All the varieties shown were double, and the flowers were of large size, and fine form. Messrs. Kemp & Wilson were first for six Azaleas, with well flowered specimens.

In the miscellaneous exhibits Mr. Charles Turner, Slough, set up a charming little group of small trained Azaleas. The plants were full of flower and in capital condition, whilst Ferns and Palms were sprinkled here and there. (Silver Medal.)

A grand display of Roses came from Messrs. W. Paul & Son, Waltham Cross. The group took the form of a huge semi-circle, the pot plants being arranged in the background. Some large and well flowered samples of Crimson Rambler and its yellow counterpart Claire Jacquier, served to give height. The dwarfer pot plants were worthy of all praise, a new hybrid Tea Aurora being very noteworthy. Cut blooms of Marechal Niel, Enchantress, and other leading varieties formed a fine foreground. (Silver Gilt Medal.

As usual Messrs. Barr & Sons' hardy cut flowers occupied a prominent position. Irises, and Tulips were literally glowing with colour, and some of the finest florists' varieties of the latter were much admired. (Silver Medal.)

Messrs. Thomas Rivers & Son, Sawbridgeworth, contributed some finely grown and fruited pot Nectarines. A basket of plucked fruits of the same variety (Cardinal) served to still further illustrate the value of this early variety. (Large Silver Medal.)

Mr. W. Rumsey, Joynings Nurseries, Waltham Cross, also had a grand show of Roses, both of pot plants and cut blooms. Souvenir d'un Ami, The Queen, and Mrs. Rumsey were some of the best varieties. (Silver Medal).

Messrs. Scrivener & Co, Watford, contributed a table of bouquets, wreaths, spray and floral baskets. The arrangement throughout was admirable and reflected great credit upon the designers. (Silver Medal). Messrs. John Waterer & Sons, Limited, set up a group of superbly flowered Rhododendrons, representing a number of leading varieties. (Silver Medal). Mr. William Bull, 536, King's Road, Chelsea, exhibited a number of new plants, including Davallia epiphylla, Anemia rotundifolia, and Ficus radicans variegatus. A collection of fruit and vegetables came from Mr. G. Kelf, gardener to Mrs. Abbot, Regent's Park. It comprised Strawberries, Peas, and French Beans in pots.

A very showy and well-arranged group of miscellaneous flowering and foliage plants was set up by Mr. R. Scott. Two well-trained plants of Clerodendron Balfourii occupied a central and conspicuous position. Dracaenas, small Caladiums, and zonal Pelargoniums were also very bright and effective. (Large Silver Medal.)

Mr. John R. Box, Croydon, had a group of splendid herbaceous Calceolarias. The plants were dwarf, vigorous, and full of flower, whilst the flowers were individually large, and of vivid colour and marking. (Silver Medal). A few Canterbury Bells were shown by Mr. Odell, Violet Farm, Hillingdon, for which a Large Bronze Medal was awarded. A group of Pelargoniums set up by Mr. R. Scott received a Large Bronze Medal.

BANANA CULTURE.

A FINE bunch of this delicious fruit has recently been ripened in the stove in Dove Park Gardens, Woolton, Liverpool. The total weight was 95 lbs., or an average of 9 lbs. per score pods, the heaviest pod turning the scale at 10 ounces, which must be considered highly creditable, being far in advance of the imported specimens as regards size of pod, especially in thickness. The flavour and aroma are also distinctly in advance of those imported. The culture adopted by Mr Thomas Carling is simple and could easily be adopted in any stove where sufficient space is available. The minimum amount of space should be ten feet square and not less in height. The compost found most suitable is good rich sod, broken up roughly with an addition of cow manure; and after the fruit is set a liberal mulching is given of the same manure, and repeated waterings of the liquid from the manure heap. Immediately the last fruits are gathered the old plant is cut down, and the most promising sucker encouraged, which will show fruit the following September, and be ready for the table in April the following year. This means a crop of fruit every year, as the sucker should be three or four feet in height, when the old plant is removed. The temperature of the house is that adapted for a general collection of stove plants, the winter minimum being 55°.—*R. G. W.*

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Propagating Cytisus scoparius andreanus.—*H.W.*: There are several ways of propagating this highly ornamental Broom, but that most commonly adopted is by grafting on the common Laburnum. Why so much of this is used is difficult to conceive beyond the fact that strong stocks can quick' obtained, upon which the Broom quickly rea a flowering state. The common yellow Broom , the commons and waysides ought to prove a more durable stock seeing that the two plants are so closely akin. It can also be raised from seeds, and though the variety is not constant by this method, a percentage of 75 or thereby will come true. It ought to be worth while carrying out this method of propagation, even if those that revert to the yellow have to be discarded. They could certainly be utilised as stocks. The plant on its own roots ought to remain in a healthy condition for a much longer period than grafted ones. You might also try to root cuttings under cool treatment or in pits or frames heated by the sun during the summer when half-ripened shoots can be obtained.

Calceolarias dying.—*A. T.*: The complaint is not at all an uncommon one, but we think it might partly be overcome by using fairly sandy soil in the autumn and pressing it down firmly before inserting the cuttings whether in frames or in boxes stood in frames. The cuttings should also be kept close to the glass, for the sake of light, and well ventilated on every favourable opportunity during the winter, so as to make them sturdy. Much leaf soil in the compost tends to retain much moisture about the base of the unrooted, or badly rooted, cuttings during the winter months. You had better get a fresh stock of plants either now, or of cuttings in the autumn. Select cuttings from healthy plants only. Fresh soil in which to insert the cuttings might prove beneficial in the future.

Names of Plants.—*W. J., G.*: 1, Prunus Padus (Bird Cherry); 2, Spiraea Thunbergii.—*A. L. M.*: 1, Deutzia scabra; 2, Deutzia gracilis; 3, Clematis montana; 4, Syringa persica; 5, Berberis vulgaris. —*R. A.*: 1, Anemone sylvestris; 2, Scilla nutans alba; 3, Scilla campanulata; 4, Paeonia officinalis flore pleno; 5, Aubrietia deltoides variegata; 6, Arabis albida variegata.—*S. J.*: 1, Narcissus poeticus recurvus; 2, Saxifraga granulata flore pleno; 3, Ranunculus aconitifolius flore pleno; 4, Anemone coronaria var.; 5, Iberis sempervirens; 6, Iberis garrexiana superba.—*S. Ward*: 1, Odontoglossum sanderianum; 2, Odontoglossum crispum andersonianum; 3, Laelia purpurata var.; 4, Denbrobium chrysotoxum.—*G.B.*: 1, Pteris scaberula; 2, Hymenophyllum tunbridgense; 3, Adiantum decorum.—*Chas. E. Searles*: 1, Dendrobium chrysotoxum suavissimum (pale var.); 2, Dendrobium chrysotoxum suavissimum (the best dark blotched variety), 3, Dendrobium tortile; 4, Aerides falcatum Leoniae.

Flamed and Feathered Tulips. — *L. C.*: A breeder Tulip is all of one colour except the base, which may be white or yellow according to the section to which it belongs. After a greater or less number of years, these breeders become rectified, or at least some of them do, that is, the overlying colour runs into stripes and markings, exposing the white or yellow ground colour to a greater or less extent in different varieties. In flamed Tulips the overlying colour forms a band along the centre, giving off numerous branches or lines, and also forms lines close to the margin. Thus flamed Tulips are feathered as well; but when they are simply feathered the dark lines of colour are arranged close to the margin of the segments only.

Galvanised wire netting.—I have charge of several gardens, most of them well-stocked with fruit trees, and all doing well except *one* of them; and this one garden is enclosed round the top of the wall with wire netting 6 ft. high. The walls are covered with fruit trees, which have now been planted for five years, and every year the growths keep dying back. They have the exact treatment as in all the other gardens I have come to the conclusion it must be the effect of rain dropping year after year off the galvanised wire on to the buds of the trees, especially the Peaches and Nectarines. I should be glad to hear if any of your correspondents have trees so situated, and if so, what is their experience.—*J. B., Ealing.*

[It is a very common complaint that Peach and Nectarine trees, when tied to galvanised wires, have their shoots killed back every year. Where the shoots touch the wires, and often for some distance above and below the points of contact, they become browned or blackened. These portions being killed it follows that all above them must sooner or later die for want of support from the roots. The explanation offered is that iron and zinc when wet generate electricity, and the shoots are thereby killed. You do not say whether the shoots are in any or all cases actually tied to the wires, where they have been killed. The remedy against galvanised wires is to give them a good double coat of paint, which neutralises their action.—ED.]

Begonia Fulgurant.—*Mixed Bed*: You have done well in resolving to isolate your Begonias on a groundwork of something else. We do not consider it a good plan to crowd tuberous Begonias, as is often done. On the contrary we have seen splendid effects produced by leaving plenty of space between them. We think, however, that a groundwork of variegated Gazania would be lost or spoiled after the end of July, owing to the growth of the Begonias shutting out the light. Gazanias, like other African plants love the sunshine. We think also that Perilla would grow too tall to be suitable as an edging, for it would hide many of the Begonia flowers and neutralise their effect at a short distance off. We would give preference to a groundwork of Herniaria, Mentha Pulegium gibraltaricum, or some other dwarf green subject. Then if they get covered over or killed by the growth of the Begonias towards the end of the season, it would not much matter. The Ivy-leaved Pelargonium l'Elegans, with its white foliage, if regularly pegged down, would make an effective and attractive edging, contrasting both with the foliage and flowers of the Begonias.

Communications received.—F. Sander.—A. K. L.—E. J.—C. B. G.—J. L.—Omega.—H. Cannell.—Chas. Stewart.—H. G. Hobby.—Geo. J. Ingram.—Chas. Williams.—T. M.—S. K.—W. R.—Todman.—A. T. B.—W. R.—Ch. Day.—Amateur.—A. H.—J. C.—W.—J. Whitton.

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TOOGOOD & SONS, Southampton.—Toogood's Yellow Hybrid Turnip.

F. SANDER & Co., St. Alban's.—Sander's New Plants for 1897; also Sander & Co's New Orchids for 1897.

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Plums per ½ sieve		
Strawberries, per lb.	2 6	4 0
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	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
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Beet ..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers ..... doz.	2 0	3 0
Celery ..... per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs ..... per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ... per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions ..... per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes ... per dozen	1 0	1 3
Seakale ... per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
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Turnips ..... per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

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Asparagus Fern, bun.	2 6	3 0
Azalea, doz. sprays...	0 6	0 9
Bluebells, 12 bun.	1 0	1 6
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	3 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	2 6
Geranium, scarlet, doz. bunches	4 0	6 0
Iris, various doz. bun.	6 0	18 0
Lilac, White (French) per bnch.	3 6	4 6
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Narciss, various, doz. bunches	1 6	4 0
" double "	3 0	6 0
Orchids, doz. blooms	1 6	12 0
Paeonies, French doz. bun.	5 0	9 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	6 0	9 0
Polyanthus, 12 bun.	1 0	2 0
Pyretbrum doz. bun.	2 0	4 9
Roses (indoor), doz.	9	1 6
" Tea, white, doz.	1 0	2 6
" Niels	1 6	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	3 6	6 0
Tuberoses, doz. blooms ...	1 0	1 6
Violets (English) per doz. bnches.	0 9	1 0
Violets (Parma) per bnch.	3 0	4 0
Wallflowers, 12 bun.	1 6	3 6

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" specimen	3 0	5 0
Arum Lilies, per doz.	8 0	12 0
Cinerarias, per doz. ...	6 0	9 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, In var. doz	6 0	24 0
Erica, various, per doz.	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	9 0
Heliotrope ... per doz.	6 0	9 0
Hydrangeas per doz.	8 0	10 0
Ivy-leaved Geranium, per doz.	4 0	8 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia ..... per doz.	4 0	6 0
Marguerite Daisy doz.	6 0	12 0
Marguerite Yellow, per doz.	5 0	9 0
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Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
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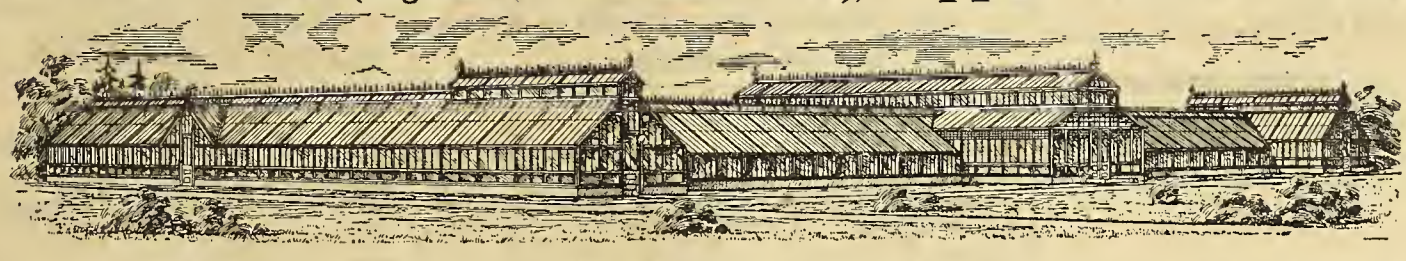

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Ageratum, blue, height 1 or ½ ft. each	6 0	1 0
Alonsoa Warscewiczii, crimson-scarlet, 1½ ft., h.h.a.	7 6	1 3
Antirrhinum (Snapdragon), very favourite bedding plants and fine for herbaceous borders and cutting, h.p.		
,, Barr's "Queen of the North," pure white, *extra fine*, 1½ ft. ..	10 6	1 6
,, Barr's large-flowered Dwarf Bedding, mixed, ½ ft... ..	7 6	1 3
,, Barr's large-flowered Tall Varieties, mixed, 1½ ft. ..	7 6	1 3
Asters (China), all of finest strains—		
Victoria, large-flowered, mixed 1¼ ft.	7 6	1 3
Paeony-flowered, mixed, 1¼ ft...	7 6	1 3
Cockade or Crown, mixed, 2 ft.	7 6	1 3
Dwarf Chrysanthemum-flowered, mixed, ¾ ft.	7 6	1 3
Comet or Plume, mixed, new and beautiful, 1¼ ft.	10 6	1 6
Quilled, mixed, 2 ft.	7 6	1 3
Balsam, Barr's Criterion, mixed, h.h.a.		2 0
Calliopsis, tall or dwarf, mixed, very showy, h.a.	4 6	0 8
Carnation Margaritae, various beautiful colours, 1 ft., h.p ..		1 6
Celosia plumosa, finest mixed shades, graceful plants for flower beds and mixed borders.. ..		3 6
Convolvulus major (Morning Glory), choice mixed		1 6
Centaurea candidissima compacta, silvery white foliage, ¾ ft., h.h.p.		2 0
Cineraria maritima, silvery white foliage, 1½ ft., h.h.p.		1 6
Dianthus Heddewigii (Japanese Pink), Barr's choicest hybrids	7 6	1 3
Helichrysum (Everlasting) mixed best large-flowered kinds, 2 ft., h.a.	5 6	0 10
Heliotropium (Cherry-pie Flower) h.h.p.		2 6
Humulus japonicus variegatus (Variegated Japanese Hop), foliage white and green, very rapid growing effective climber, h.a...		3 6
Lobelia Erinus, best blues ..	4 6	0 9
Marigold, African, lemon, orange, or mixed, 2 ft., h.h.a. each	3 6	0 9
,, aurea floribunda, golden, a fine hedder, ¾ ft., h.h.a.	3 6	0 9
,, French, Barr's dwarf gold-striped, 1 ft., h.h.a.	4 6	0 9
Mignonette, Barr's Covent Garden Favourite, the largest and best of all		2 6
Mimulus, Barr's Giant Strain, mixed colours, 1 ft., h.p. ..	7 6	1 3
Nasturtium (Tom Thumb) valuable bedders—		
Empress of India, crimson-scarlet flowers, dark foliage ..	7 6	1 3
Golden King	5 6	1 0
Scarlet King	5 6	1 0
Nicotiana affinis (Tobacco Plant), pure white, deliciously fragrant, 3 ft., h.h.a...	10 6	1 6
Pansies, Trimardeau Giant strain, beautiful mixed colours ..	7 6	1 3
,, Barr's Peacock Strain, a lovely new strain		2 0
Petunia, Barr's Large-flowered Bedding strain of beautiful colours, h.h.p. ..		2 0
,, Barr's Superb Giant Fringed, flowers very large and beautifully fringed, h.h.p.		3 6
Phlox Drummondii, Barr's Improved Large-flowered Strain, in finest mixed colours, 1 ft., h.h.a.	5 6	0 10
Pyrethrum, Golden Feather ..	4 6	0 9
Scabiosa, Barr's Large-flowered Double, mixed, most valuable for cutting, 2 ft., h.a...	7 6	1 3
Stocks, Large-flowered Ten-week, mixed, *finest* kinds, 1 ft. ..	7 6	1 3
,, Giant Globe Pyramidal, mixed, 2 ft.		1 6
,, Giant Perfection, continuous flowering, 1½ ft. ..		1 6
,, Giant Perfection, Princess May, long spikes of large *primrose-yellow* double flowers		2 0
Sweet William, Barr's Perfection Auricula flowered		4 6
Tagetes pumila, Golden Ring, bright yellow, a valuable bedder, 1 ft., h.h.a.	3 6	0 9
Tropæolum canariense (Canary Creeper)	12 6	2 0
,, Lobbianum, mixed, handsome climbing Nasturtiums		2 0
Verbena, Barr's Choicest mixed	12 6	2 0
Violas, Barr's mixed bedding Tufted Pansies	7 6	1 3

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New Strawberry, Veitch's Perfection

FIRST-CLASS CERTIFICATE, ROYAL HORTICULTURAL SOCIETY, JULY 14, 1896.

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Are booking orders to supply, early in August next, plants of this new Strawberry, the finest and most richly flavoured that has yet been raised.

It is the result of a cross between British Queen, well known as one of the best flavoured of all Strawberries, and Waterloo, a superb late variety of large size and deep colour.

The following extract is from the official report of the meeting of the Fruit Committee at Chiswick, on June 29th, 1896, as published in the *Journal of the Royal Horticultural Society*, vol. xx., p. lxvi :—

"Messrs. James Veitch & Sons, of Chelsea, sent a box of fruit and some growing plants of a magnificent Strawberry, named Veitch's Perfection, a hybrid raised by Mr. Seden from British Queen and Waterloo. It was found to be of marvellous sweetness and flavour, the foliage and flavour being markedly of British Queen type, and the colour of the fruit almost as dark as Waterloo. It was unanimously resolved to recommend a First-class Certificate."

Plants in small pots, **42/-** *per* **100, 6/-** *per doz ; in 32-size pots,* **100/-** *per* **100.**
Strong Runners, **21/-** *per* **100 ; 4/-** *per doz.*

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Many Silver Cups and Medals at Antwerp, York, London, &c.

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Our Selections of Choice named Distinct Varieties, 15/-, 18/-, 24/-, 30/-, and 42/- per dozen.

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FOREST HILL, S.E. AND CATFORD, KENT.

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—Bacon.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, MAY 29th, 1897.

A Glance at the Temple Show.—The tenth great annual show of the Royal Horticultural Society in the Inner Temple Gardens, is in every way worthy of any previous one and a marked advance in several respects upon all that have gone before. Those who saw the first one in 1888 will admit this. Changes there have been, and that we fully expected in the course of nine years. The first show of the series, having been inaugurated in a tentative way, found the exhibitors unprepared for such an event; but the fact that it was a grand success proved plainly the great resources at the command of the exhibitors who supported it then and have consistently done so ever since. As we go to press the three days' show has been opened to the public, and will remain so during Thursday and Friday. The morning of Wednesday was cloudy but dry, though later on there were light showers of rain.

Strong evidence of the growth of the Temple Show is furnished by the growing annual demand for space over and above what is actually available. Many of the leading exhibitors have been refused hundreds of square ft. of space, and the deficiency, therefore, runs up into three or four figures. Duplicates are forbidden, so that the groups of certain classes of flowers have been restricted, thus allowing of greater variety. The real growth of the show, however, consists in the select but varied character of the exhibits, the greater improvement in fruits, flowers, and vegetables, particularly florists' flowers and Caladiums, and in the greater evidence of cultural skill. Orchids continue to monopolise a great amount of table space, and show no falling away. Both amateurs and nurserymen are well represented, the former even being more

numerous than last year, including Sir Trevor Lawrence, Bart., Baron Schroder, W. Thompson Esq., Sir F. Wigan, Major Joicey, The Right Hon. Earl Percy, Fred Hardy, Esqr., Ludwig Mond, Esqr., W. A. Gillett, Esqr., Welbore S. Ellis, Esqr., Malcoln S. Cooke, Esqr., and others. This is a healthy sign. Nurserymen who well sustain their part are Messrs. F. Sander & Co., Hugh Low & Co., W. L. Lewis & Co., B. S. Williams & Son, L'Horticulture Internationale, Charlesworth & Co., James Cypher, A. A. Peters, and others.

Three finer groups of Caladiums have probably never been shown at any exhibition than those shown by Messrs. J. Veitch & Sons, Ltd., J. Laing & Sons, and J. Peed & Sons. The Temple Show has brought this showy and useful decorative class of plants to the front rank of importance and interest to gardeners. Pantia Ralli, Esq., is an amateur exhibitor of Caladiums. Tuberous Begonias are well represented by Messrs. J. Laing & Sons, H. J. Jones, J. R. Box and T. S. Ware; while Messrs. Sutton & Sons, have a superb exhibit of the fibrous rooted section. The Gloxinias and Streptocarpus, staged by Messrs J. Veitch & Sons, Ltd., have never been in finer form; and the same may be said of Messrs. Sutton & Sons' Gloxinias. Calceolarias are splendidly shown by Messrs. J. Carter & Co., H. Cannell & Sons, and by Mr. J. James & Son. Messrs. J. Peed & Sons have a fine lot of Gloxinias. Carnations are brought well to the front by Messrs. Wm. Cutbush & Son, The Duke of Marlborough, and several others. All of the above subjects are grown in every garden, and their popularity is also an indication that they are equally useful and important to the exhibitors who show them, whether amateurs or professional. Messrs. F. Sander & Co., exhibit a magnificent group of new plants artistically arranged.

Roses are present in considerable quantity, but the huge plants to be seen at former summer shows have almost wholly disappeared. The answer to the question why this is so is that they do not pay. They occupy a great amount of valuable houseroom and require a great deal of attention to do them well. On the other hand the modern requirements are Roses in quantity and variety. Messrs. Paul & Son, W. Paul & Son, C. Turner, and G. Mount are amongst the principal exponents. Messrs. Richard Smith & Co., are still to the fore with their large pot specimens of Clematis, which are fine. The exhibitors of hardy herbaceous plants, either in the form of cut flowers, plants and rockeries, are very numerous, and a grand display is made by Messrs. Barr & Son, T. S. Ware, R. Wallace & Co., J. Laing & Sons, the Guildford Hardy Plant Nursery, J. Cheal & Sons, J. Backhouse & Son, Dobbie & Co., J. Kelway & Son, B. Ladhams, Geo. Jackman & Son. Hardy trees and shrubs are well shown by Messrs. J. Veitch & Sons, Ltd., Fisher, Son, & Sibary, Cripps & Son, and W. Fromow & Sons. Japanese Maples are a great feature of these exhibits.

Fruit and vegetables are mostly displayed in tent No. 1, near the main entrance of the gardens. The sixty dishes of Kentish Apples and Pears, and the pot plants of Peaches and Nectarines shown by Messrs. Geo. Bunyard & Co., are well worthy of inspection; the same may be said of the Peaches and Nectarines in pots shown by Messrs. T. Rivers & Son, as well as the fruits shown by Leopold de Rothschild, Esq., Earl Percy, Sir J. W. Pease, Bart., and the Strawberries by Messrs. Laxton Bros. Messrs. J. Veitch & Sons, J. Carter & Co., Mrs. Wingfield, Mr. G. Featherby and others come out well with vegetables. If the Temple Show has acted as an incentive to the improvement of all these flowers, fruits, and vegetables, it may be considered as having fulfilled and still fulfilling its mission.

The Azaleas, which have been very gay in the gardens at Kew for some weeks past, have recently been very much destroyed by the frost. Only the open flowers get cut up so that late varieties may yet reach perfection. On the lee side of the Azalea garden the scented varieties could be detected some distance down the wind before the destruction of the flowers.

Grimsby Horticultural Society.—At a recent meeting of this association, Mr. Jas. Johnson delivered an essay upon Odontoglossums and their cultivation. The subject was handled in a practical manner by the essayist, the cultural routine being detailed minutely. The remarks of the essayist were illustrated by a collection of cut blooms in first-rate condition.

Lincolnshire Gardeners Association.—At the last monthly meeting of this society, Mr. Fanthorpe gave an interesting paper on Gloxinias and Caladiums. The allotments question was subsequently considered, and it was resolved that two prizes should be offered for the best essays on the cultivation and cropping of an allotment a rood in area. One prize is to be open only to members of the association, the other is to be open.

H. R. H. The Princess of Wales visited the Temple Show during the course of the afternoon. H.R.H. was accompanied by the Duke of York, Princess Victoria of Wales, and Prince and Princess Charles of Denmark. The royal party passed slowly through the tents, escorted by Sir Trevor Lawrence, Bart., evidently delighted with everything. Upon reaching Messrs. Sutton's stand, the Princess expressed her admiration of the magnificent forms of Gloxinias, and graciously expressed a wish that the Messrs. Sutton should send her some of them to Marlborough House, as she had never seen anything so fine, and had no idea that such grand flowers were to be had. Mr. Sutton then presented H. R. H. with a silver and crystal casket containing views of the greenhouses in which the plants were grown, which the Princess graciously accepted.

Fruit prospects in Yorkshire.—Notwithstanding the long-continued prevalence of a low temperature and keen east winds, Peaches and Nectarines have set well in many gardens. Apricots have not done quite so well, but Cherries and Pears promise well. The Plums have set well, but many of the fruits may yet drop, if the weather continues cold and dry. It is rather early to speak with certainty about Apples, as they only commenced to expand about the beginning of the month. The bloom is very abundant, however, and if only a small proportion of the flowers set there will be a very heavy crop. The state of the weather during June and July will largely determine the weight of the crop the trees will carry to perfection, as the trees will drop their fruits by hundreds during long continued drought. Currants and Gooseberries are said to be damaged by frost in some districts.

Lecture on Horticulture.—The third and last of a series of lectures on Horticulture was given in the Wesleyan Schoolroom, Habrough, on the evening of Monday, May 10th, by Mr. R. W. Rice, lecturer at the University College, Nottingham. "Garden flowers and plants" were the subject for discourse, illustrations being given by means of a magic lantern. Mr. Rice remarked upon the antiquity of the flower garden, mentioning some of the gardens of Egypt and other ancient countries. The Christmas Rose, Daffodil, Lily of the Valley, Lilium, Fuchsia, Myrtle, Polyanthus, Dahlia, Pelargonium, and Cactus were all dealt with, cultural directions being given for each. Speaking of Pansies and Violas the lecturer spoke of the need there was for a continual thinning of the growths in order to produce fine individual flowers as well as a long succession of bloom. The Dahlia, too, should have the shoots thinned down to about two, if really good flowers were needed. The Rose brought to a close Mr. Rice's list of popular and easily grown plants. He gave his audience minute directions for budding, and his detailed explanations were much assisted by capital illustrations thrown upon the screen.

Early Potatos and Gooseberries.—New Potatos of an early variety were dug from the open at the residence of Col. Butson, Coxlease, in the neighbourhood of Henley-on-Thames, on the 12th inst. They were planted soon after Christmas and received no protection whatever while making their growth. Gooseberries ripened by the same date, though the garden is about 600 ft. above the level of the sea.

Whittlesea Horticultural Society held a general meeting at the Town Hall, Whittlesea, on May 11th, Mr. John Peed in the chair. It was decided to hold a show on Thursday, July 29th, Mr. Peed having placed his gardens and grounds at the disposal of the committee as a site for the show. Captain White succeeds Mr. J. F. Brown as hon. secretary. A vote of thanks was passed to the latter gentleman upon the occasion of his retiring from office.

Mr. J. Harry Laing elected a vestryman.—At the Lewisham vestry elections on the 13th inst., the result of the poll showed that Mr. J. Harry Laing, of the firm of Messrs. J. Laing & Sons, Forest Hill, headed the list of those elected on the local board of the Forest Hill Ward of Lewisham. The whole of the seven vestrymen elected were moderates, and Mr. J. H. Laing had 299 votes, while the next candidate had 285, and the seventh 249 votes. None of the progressives were elected. We congratulate the horticulturist.

New Carnation and Flower Clip.—A simple but ingenious contrivance has been sent us by Mr. H. A. Davidson, Holkham, Norfolk. It is intended to save the labour involved in the tying of Carnations and other flowers when being staked. The clip is made of the best tinned steel (to prevent rust), and will with ordinary care last for years. In structure the clip consists of one piece of wire twisted so as to form two open loops intended to be slipped over the stake, while the ends are so arranged as to form a loop that may be opened for receiving the stem of the Carnation, by pressing the upper one surrounding the stake. The clip slips up or down the stake with freedom, but is kept at the desired height by resting on a pair of leaves. As the stem grows in length it carries the clip up with it, as in the case of Raffia ties. It is made in all sizes to suit other and thicker stemmed plants, and the inventor considers that the time and labour saved in tying will make it a success.

Victoria Diamond Jubilee Prizes at Edinburgh.—The Royal Caledonian Horticultural Society has issued a circular concerning the special prizes offered in certain classes at their autumn shows on the 8th and 9th September next, to commemorate the sixtieth year of Her Majesty's reign. These prizes are offered for fruit, plants, cut flowers and vegetables. The class for fruit is open to gardeners and amateurs, and the valuable prizes are "for the best and most tastefully decorated table of dessert fruit, 10 ft., long by 4 ft. 6 in. wide." The conditions are that the exhibitors select sixteen dishes from 12 given kinds, the number of grapes, and the number of fruits to a dish of each kind being stated; each dish must consist of one variety only. Thirty-nine guineas and three medals are offered in three prizes, namely, twenty guineas, and the Veitch Memorial Trustees' Large Silver Medal for the best exhibit; twelve guineas and the Society's Victoria Diamond Jubilee Silver Medal for the second; and seven guineas and the Society's Victoria Diamond Jubilee Bronze Medal for the third. A similar amount in money, with the Society's Victoria Diamond Jubilee Silver Gilt Medal, and their Silver Medal in the first and second classes, and their Bronze Medal in the third, are offered for the best group of plants tastefully arranged in a space not exceeding 300 square ft. This class is open, as is the class for cut flowers Ten, seven and four guineas, accompanied by the last named set of Medals, respectively are offered in this class. Ten, seven and four guineas, accompanied by the Veitch Memorial Trustees' Large Silver Medal, the Society's Diamond Jubilee Silver Medal, and their Victoria Diamond Jubilee Bronze Medal, respectively are offered for a table of vegetables 12 ft. long by 5 ft. wide. Twenty-five dishes of not less than sixteen kinds must be staged. This class is open to gardeners and amateurs only. Circulars and schedules may be obtained from the assistant secretary, 18, Waverley Market, Edinburgh.

Canna America has dark bronzy-red or apricot-red flowers, faintly spotted with salmon, and having a pale yellow centre. The variety belongs to the same race as Austria and Italia, but though the new comer is very distinct in colour, the substance of the flower has not much improved.

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting of the above society was held at the Parish Room, Shirley, Southampton, on Monday the 17th inst., the president, W. F. G. Spranger, Esq., presiding over a good attendance of the members. The subject for the evening was a "Microscopical Demonstration," by Mr. A. C. Rogers, of Red Lodge Nursery, assisted by Mr. T. Brierley, Borough Analyst, Dr. A. Angell, County Analyst, Mr. H. Ashby and Mr. Edgar Eady; and about twenty microscopes were under their care. Mr. Rogers gave a brief address, and amongst other things he said, "their object was to introduce their audience to the fairyland of science, and no paper read could be so good as ocular demonstration as afforded by the microscope. He and his friends intended to give them examples of every department of vegetable life and some insects, showing as regards the first-named, the cellular structure, cuticles, stomata, spiral vessels, raphidian crystals, and epidermal appendages, such as hairs and scales; also the various parts connected with the reproduction of the species, such as pistils, anthers, ovaries, pollen, and seed. This would show the infinite diversity and adaptation of nature. Evolution of plant life is an absorbing topic to the botanist. Imagine the gigantic forest of Ferns and Club Mosses of the carboniferous period, and compare them with the beautiful forms of plant life of to-day, and you will get an idea of the vast changes that have taken place. The patient investigator will find an inexhaustable source of the highest intellectual pleasure in trying to unravel some of the secrets of Nature, which are yielded only to those who diligently seek to learn the lessons which are written in every leaf and flower; and he trusted some of his audience would now be induced to take up this field of research." The members now went the rounds of the microscopes for the next hour. A hearty vote of thanks was accorded to the operators, to the exhibitors and to the president, and some light refreshments being provided a pleasant and social evening was spent. The exhibits included Rhododendrons and Azaleas from Mr. W. H. Rogers, Red Lodge Nursery; six varieties of hardy shrubs (Certificate), from Col. W. S. Sinkins; Cucumbers (Certificate), Tomatos in pots (Certificate), six hardy shrubs, cut blooms, and two pieces of Laburnum showing three different coloured bunches of blooms from the president; Mushrooms (Certificate) and Orchids, from C. G. Smart Menteth, Esq.; group, vases and decorative plants from Mr. B. Ladham's nurseries, and a number of other exhibits, making altogether an effective display.

PLANTS RECENTLY CERTIFICATED.

The following plants received Certificates of Merit at the summer show of the Royal Botanic Society at Regent's Park on May 19.

Anemia rotundifolia.—For description of this see the list of plants certificated by the R.H.S. on May 11th. Botanical Certificate. Mr. Wm. Bull, F.L.S., 536, King's Road, Chelsea.

Ficus radicans variegata.—This is a very pretty trailing Ficus. The leaves are about 1½ in. in length, lanceolate and acuminate. They exhibit a light green hue with a broad margin of white. Botanical Certificate. Mr. W. Bull.

Tulip Flambeau.—A fine form of the Darwin Tulips with the characteristic slaty-blue base. The flower is large, of good form and bright scarlet in colour. Grown in masses it is most effective. Floricultural Certificate. Messrs. Barr & Sons, King Street, Covent Garden.

Tulip Orange Queen is another Darwin Tulip of great merit. In colour it is rich apricot, shaded towards the centre of the segments with ruddy-chestnut. The flower is deep and of excellent form. Floricultural Certificate. Messrs. Barr & Sons.

Papaver Prince of Orange.—This is a superb form of P. orientale The flowers are very large and bright orange-scarlet. The deep black-maroon blotch at the base of each petal internally is about ½ in. in diameter. The plant runs to about 2 ft. in height in an ordinary season, and is a most suitable subject for the herbaceous border. Floricultural Certificate. Messrs. Barr & Sons.

Rose Mrs. Rumsey.—This is a fixed sport from the H. P. Mrs. George Dickson, which it closely resembles in habit of growth, freedom of flowering, and mildew-resisting qualities. The flowers are of fine shape, and rich rosy-pink in colour. Floricultural Certificate. Mr. Wm. Rumsey, Joyning's Nurseries, Waltham Cross, N.

Gleanings from the World of Science.

The undermentioned subjects were brought up at the meeting of the Scientific Committee of the Royal Horticultural Society on the 11th May.

Weevils on Fruit Trees.—Mr. Robt. Smith, of Shrewsbury, forwarded some living specimens received by him from Mr. J. Jones, Chelmick Pools, Church Stretton. They were described as attacking Plum and Apple grafts, Roses and Raspberry buds. They proved to be Otiorrhynchus picipes. The trees and bushes might be sprayed, though a better plan is to shake the boughs over a large sheet of paper, in which they can be caught and then destroyed.

Birch Branch with Phytoptus.—Dr. Masters showed specimens illustrating the early stage of the attack on boughs by this insect. It is not often the commencement of the so-called "Witch Brooms" can be detected as in this instance.

Abies bracteata.—He also exhibited sprays of this handsome tree, remarkable for the silvery under-surface of the leaves, which are about 3 in. in length. It bears large male catkins, and elongated pointed buds. It is a native of S. California. It is remarkable that it fails to flower on the Atlantic side of N. America.

Picea Menziesii.—He also showed a bough of this splendid timber tree from Vancouver.

Petalless Apples.—Flowering shoots of the Ecklinville (Seedling) Apple were received, remarkable for having no petals. They were sent from the Glewstone Gardens, Ross. There were 600 bushes of twelve years' growth, all being similarly affected. No particular cause could be suggested.

Double Narcissus.—Dr. Masters showed a single and double flower of a N. incomparabilis, of a somewhat novel character. The perianth consisted of twelve pieces regularly arranged in "threes." The short cup-shaped corona as well as the stamens were totally absent; but the styles above the tube were free and petaloid, suggesting the normal condition in an Iris.

Sclerotia (?).—Mr. M. Taylor, of The Gardens, Pembedw Hall, Nannerch, sent some remarkable specimens of a fungus consisting of large branching lumps, which appeared in a Mushroom bed. They were forwarded to Kew for investigation.

Improved Method of Grafting.—Mr. Robt. Smith, of Bradwell Villas, Bishop Street, Shrewsbury, sent a number of specimens of grafts, illustrating a new method. This being, that in preparing the scion, while one "tongue" is inserted as usual, the opposite half of the scion is carried over the flat top or "crown," and inserted on the opposite side, or two grafts may be thus inserted on opposite sides of the stem, the result being, as shown in the specimens sent, that the summit is completely covered in with new growth. This was seen in small specimens of whip-grafting, but none were sent to show how far large crowns would become covered over. Another advantage arose from the new method of preventing loss of grafts by wind breakage, for it thus gave a better and stronger union. It was thought by Mr. Douglas that it was a decided improvement upon the old method, as long as the scion and stock were of the same size; but further information was desirable as to the success when the surface of the stock much exceeded that of the scion.

Double White Auricula.—Mr. R. Dean sent a plant, which was the result of fifteen years' selection from a single white variety; the petals were not of a pure white, but slightly yellowish-green tint.

HINTS FOR AMATEURS.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Planting Tomatos.—*W Knight*: The wall facing south will suit the Tomatos capitally. You should lose no time in getting the plants out as they will be safe enough from frost now. At least we are all hoping that the frosts are over for the season.

Crimson Rambler.—*D. Twiss* writes to ask if there is a yellow Rose of the same habit as Crimson Rambler, and if so, where it can be obtained.

Claire Jacquier is the counterpart of Crimson Rambler as far as habit goes, although it is scarcely so vigorous a grower. The flowers are light yellow. It can be had from any of the nurserymen who make a speciality of Roses.

Asparagus.—Will you tell me why my Asparagus has come so poorly this year? I only get a very few sticks from them. The beds were planted five years ago with good strong roots. Surely they are not worn out yet, as they have not been cut very hard. *Geo. Taylor.*

We think that it is carelessness in cutting the heads more than anything else that is to blame; certainly the beds ought to be all right yet. A properly made and well husbanded Asparagus bed will last for twenty years. If you use a knife when cutting, and push this down for some depth below the soil you are almost sure to injure the young buds which are in the neighbourhood. Give your beds a dressing of salt, as much as will whiten the ground well, and be careful with the knife.

Climbers for Greenhouse.—Will you give me a list of some of the most suitable climbers for a greenhouse? I can keep the temperature of the house up to 45° during the winter months except in very sharp weather. *Exmouth.*

Hoya carnosa, Plumbago capensis, Lapagerias, Hibbertia dentata, Kennedya prostrata Maryattae, Tacsonia Van Volxemii, Cobaea scandens variegata, Passiflora racemosa, P. caerulea, P. c. Constance Elliott and Roses will all do, and will give you a good deal of variety from which to pick and choose.

Melons.—*G. R. R.*: If you have material sufficient to build a good hotbed upon which you can place the frame you should be able to succeed with Melons. The hotbed must not be less than four feet in height, otherwise it will not hold the heat long enough. Plant as soon as you can, for you will thereby secure the best part of the summer. As the lights of your frame are large, two plants to each of them will be needed. In planting, "lay" the plants down so that their stems rest on the soil, the one pointing to the front, the other to the back of the frame. Pinch the tops out after they have made three rough leaves. This will cause side shoots to be thrown out, one of which may be trained to each corner of the frame. Stop these again before they get to the sides, and fruiting lateral growths will then be thrown out. Each plant should carry half a dozen medium-sized fruits.

Lifting Tulips.—How can I tell when Tulips are ready for lifting?—*J., Exmouth.*

When the stems will bend without breaking, the bulbs may be lifted.

Stopping Vines.—*M. L. S.*: Stop the growths of the Vines two or three joints beyond the bunch according to the roof room there is. The growths from two Vines growing side by side may overlap each other if too much crowding is not thereby produced.

Vines.—It will be quite safe to have a little air on the vinery all night, *Enquirer.* The top ventilators may be opened for about 2 in. This gives substance and vigour to the foliage.

EXHIBITORS AT THE TEMPLE SHOW.

On the occasion of the tenth great annual show of the Royal Horticultural Society in the Inner Temple Gardens we avail ourselves of the opportunity of placing before our readers portraits of a number of the leading exhibitors. Many of the faces represented on the accompanying supplement are well-known over a wide area of the world, and others are equally known by repute; indeed, many of the names are household words amongst horticulturists. Their exhibits on this occasion are recorded under "The Temple Show."

Mr. Edward John Beale, F.L.S., F.R.H.S., is the principal of the firm of Messrs. James Carter & Co., High Holborn, London. He is well known to an ever widening circle of friends and horticulturists, and abroad has earned the decoration of *Chevalier de l'Ordre du Mérite Agricole*. At exhibitions the firm have at various times come before the public with collections of Chinese Primulas, Cinerarias, Petunias, Calceolarias, hardy herbaceous plants and vegetables, particularly Runner Beans, Dwarf Beans, Cucumbers, Potatos, and other useful subjects. Both during the past and the previous winter their Cinerarias have been notable for the variety and brilliancy of their colours. They have made a fine display for many weeks past in the Forest Hill Nursery of the firm. Gloxinias and Begonias are also more or less extensively grown there, together with Chrysanthemums and other popular flowers. The Peas and Potatos, particularly some varieties, are well known in almost every garden. Their Calceolarias on this occasion are particularly fine. Seed farms in various parts of the country supply agricultural and horticultural seeds in great quantities.

Mr. James Cypher, F.R.H.S, Cheltenham, is a well-known exhibitor at various leading shows in different parts of the country. He grows a general collection of nursery stock, but if we were to instance anything more than another, we should say that Orchids and stove and greenhouse flowering plants are specialities. We have frequently noticed his fine groups of Orchids at leading London shows and elsewhere. While good cultivation is always in evidence, we have noted rare and valuable specimens in his collections. As far as the southern countries are concerned, we should think that the finest of the big specimens of stove and greenhouse plants have retreated to Mr. Cypher's nursery. Where they used to be in evidence at the big summer shows in London, the shows have ceased to exist or give little encouragement to those grand specimens which for many years were the glory of the May and June shows. That they exist somewhere in the country is satisfactory.

Mr. George Bunyard, F.R.H.S., is the principal of the firm of Messrs. Geo. Bunyard & Co., The Royal Nurseries, Maidstone, from whence come the collections of famous, Kentish grown Apples, which make their appearance at the leading shows all over the country. These Apples are grown at the Allington Nurseries of the firm, and though they take the most prominent position amongst the fruits which emanate from Maidstone, yet Pears, Plums, Cherries, Peaches, Raspberries, &c., are more or less extensively cultivated and exhibited. Roses also take a prominent position in the Allington Nurseries, on account of the area devoted to them. The firm is certainly best known by the famous collections of Apples which are placed before the public from time to time; but the older nurseries, which have been established over a hundred years in Maidstone itself, are occupied with a great variety of useful flowers and decorative stuff for the needs of a large local trade. Vines are also cultivated here; and there are something like fourteen different nurseries within a few minutes' walk of one another.

Mr. Frederick Sander, F.L.S., F.R.H.S., of the firm of Messrs. F. Sander & Co., St. Albans, has for many years been so closely identified with Orchids, that his name will immediately suggest that popular class of plants. Amongst Orchid importers and growers generally, he is known as the "Orchid King," a proud title due to the large number of new kinds he has introduced to cultivation as well as the quantities he imports. It is beyond the scope of this note to recount the many fine things for which cultivators in various parts of the world are indebted to him or the firm he represents. New plants, both flowering and foliage, also constitute a speciality of of his firm, as the awards secured both at the leading exhibitions in this country and abroad testify. More recently the firm has greatly extended its sphere of operations by the building of quite a little village of glass at Bruges in Belgium. Palms, Azaleas, &c., are amongst the leading features of that branch of the establishment. The magnificent group of Orchids exhibited annually by the firm at the Temple Show is well known.

Mr. Wm. Lander Lewis, F.R.H.S, is the principal of the firm of Messrs. W. L. Lewis & Co., Southgate, N. They are Orchid growers and importers, as well as exhibitors, and we frequently meet with one or other of the members of the firm, including Mr. Wm. Lander Lewis and Mr. F. Ashton. A general collection of the more useful Orchids are grown at Southgate, including Cattleyas, Laelias, Ondontoglossums, Oncidiums, Cypripediums, &c. The collection is extending and new houses are being built from time to time for their reception. The fascinating work of raising hybrid Orchids also receives some attention. Numerous importations are almost sure to yield something fine, and already some grand varieties have turned up amongst the Cattleyas and Laelias, as we have noted in previous valuable and effective exhibits at the Temple Show, where they regularly make their appearance.

Mr. James Herbert Veitch, F.L.S., F.R.H.S., is a well-known member of the firm of Messrs. James Veitch & Sons, Ltd., Royal Exotic Nurseries, King's Road, Chelsea. Here the area covered with glass is very extensive, and we need only mention such things as Orchids, Amaryllis, Javan, and other hybrid greenhouse Rhododendrons, Streptocarpus, Gloxinias, Caladiums, Nepenthes, Cacti, Carnations, and Chrysanthemums, to recall the many-sided features of this famous nursery. The Langley Nurseries, Langley, Slough, give a good account of themselves in the Orchids and fruit that make their appearance in public. The seedlings of Orchids, that is, hybrids, would alone give credit to this place. Those that have reached the flowering stage are sufficiently numerous to enable the firm at times to put up a large group consisting entirely of hybrids. They are of perennial interest. A grand collection of fruit trees is also grown at the Fulham Nursery. Flowering trees and shrubs, Conifers, &c., are the leading features of the Coombe Wood Nursery, Kingston Hill, Surrey. Exceedingly interesting exhibits are brought to the Temple Show, and the fortnightly meetings of the Royal Horticultural Society.

Mr. James Kelway represents the firm of Messrs. Kelway & Son, Langport, Somerset. For many years they have exhibited large collections of cut flowers of hardy herbaceous plants and other subjects in season, commencing in spring and early summer with tree Paeonies, followed later by herbaceous Paeonies, Pyrethrums, Irises, including the large flowering varieties of Iris laevigata (Kaempferi), and Lupins, all of which, especially the Paeonies and Irises are extensively grown. At various shows and meetings of the Royal Horticultural Society, and elsewhere, the fine collections of single and semi-double Delphiniums of the finest varieties continue to offer fresh surprises for the public. Then towards autumn, Messrs. Kelway & Son have fresh surprises in the extensive and superb collections of Gladioli which are staged to the best advantage and in prime condition. The above are leading features of the Langport nurseries, but various other interesting subjects are brought before the public from time to time.

Mr. Henry Williams, F.L.S., F.R.H.S., is the well-known head of the firm of Messrs. B. S. Williams & Son, Victoria and Paradise Nurseries, Upper Holloway. Orchids have for many a year and day been a leading feature of these nurseries, and they make their appearance in greater or less quantity at most of the meetings of the Royal Horticultural Society, as well as at the Temple and other London shows. Palms, Ferns, Dracaenas, Aralias, Nepenthes, Marantas, Dieffenbachias, and other fine-foliaged subjects are grown in considerable quantity to supply the needs of the establishment for decorative and other work. Flowering plants are not neglected, but include such specialities as Clivias, Amaryllis, Tree Carnations, Camellias, and various other useful and more or less popular subjects. The group of Orchids exhibited by the firm at the Temple Show is usually very extensive.

Mr. John Peed is the senior partner in the firm of Messrs. John Peed & Sons, of the Streatham and Roupell Park Nurseries. He being of a retiring disposition we do not often meet with him in public, though he makes us welcome, in common with others who call upon him at The Nurseries, Streatham. Amongst the specialities of the firm at Streatham are fine collections of fruit trees, Roses, Conifers, and hardy flowering trees and shrubs which we have had the pleasure of inspecting, under his guidance. Having been established here for many years, his experience extends back a long way, while he is communicative and ready to impart information on various horticultural topics. Florists' flowers, fine foliaged plants and vines are grown at the Roupell Park Nurseries, Norwood Road, under the charge of his son, Mr. Thomas Peed, F.R.H.S., who has shown us the various subjects that happened to be in season. Caladiums and Gloxinias are leading features of this branch of the establishment, and fine displays of them are placed before the public.

Mr. Henry Cannell, F.R.H.S., is the senior partner of the widely-known firm of Messrs. H. Cannell & Sons, Swanley, Kent. Zonal Pelargoniums are always in order here, equally at mid-winter as at mid-summer, and somehow, to us, seem always associated with Swanley, and have done since early in the seventies. Other sections of Pelargonium are not, however, neglected. Cut flowers frequently make their appearance at various shows all over the country. Tuberous Begonias constitute a regular exhibit at the Temple Shows, and very fine they are. About Christmas, earlier or later, other fine features at Swanley are the Cyclamens and Chinese Primulas. Other features are the grand collection of Chrysanthemums, in autumn, the bedding plants in spring, and the quaint and grotesque Cacti in season from January to December. The Eynsford branch of the establishment, more recently acquired is very extensive, and contains collections of Violas, Paeonies, herbaceous plants generally, Onions, Potatos, Strawberries, and fruit trees. It is, moreover, a seed farm where all sorts of flower and vegetable seeds are grown in quantity.

Mr. John Laing, F.R.H.S., is the senior partner of the widely-known firm of Messrs. John Laing & Sons, Forest Hill, S.E. His name has been a household word in connection with tuberous Begonias since the old South Kensington days of the Royal Horticultural Society, and his firm still maintains its reputation in that respect, being a regular exhibitor of a splendid group of this class of plants at the Temple and other shows during the year. Caladiums have also been a feature of the Stanstead Park Nursery, Forest Hill, for a great number of years, including the first Temple Show, nine years ago. The years that have intervened have seen a vast extension of the cultivation of Caladiums. Gloxinias, Streptocarpus, shrubby Begonias, Orchids, Clivias, hardy herbaceous plants, &c., are also features of this nursery, and they are frequently exhibited, together with stove and greenhouse decorative subjects. Roses and fruit trees are also large items of the cultures carried on by this firm, but they are grown in other nurseries not far from Stanstead Park.

Mr. H. J. Jones, F.R.H.S., Ryecroft Nursery, Hither Green, Lewisham, is best known in connection with Chrysanthemums, of which he is a raiser, cultivator and exhibitor. Few, indeed, are better or more widely known in connection with this most popular autumn flower. The magnificent groups of Chrysanthemums which he has put up at many of the leading shows in different parts of the country, have been the admiration of every one who has seen them and the envy of his rival competitors. He is also skilful and tasteful in the arrangement and effective display of groups of tuberous Begonias, of which he is also a raiser, grower and exhibitor. Their massive stiffness he is able to relieve in a wonderful way with light and graceful plants; and he manages to tone down the gorgeous hues with the same material. Zonal, show, fancy and regal Pelargoniums are also specialities of the Ryecroft Nursery; and they together with the Begonias are prominent features of spring and summer shows.

Mr. Peter Rudolph Barr, F.R.H.S., is the senior member of the firm of Messrs. Barr & Sons, King Street, Covent Garden. Everyone knows that Daffodils are associated with the name of Barr, for the firm have been identified with the cultivation of the richest collection of Daffodils for many years, through good and ill report, until they are amongst the most popular of spring flowers throughout the country. They, together with early and late Tulips

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Mr. Geo. Bunyard, F.R.H.S.

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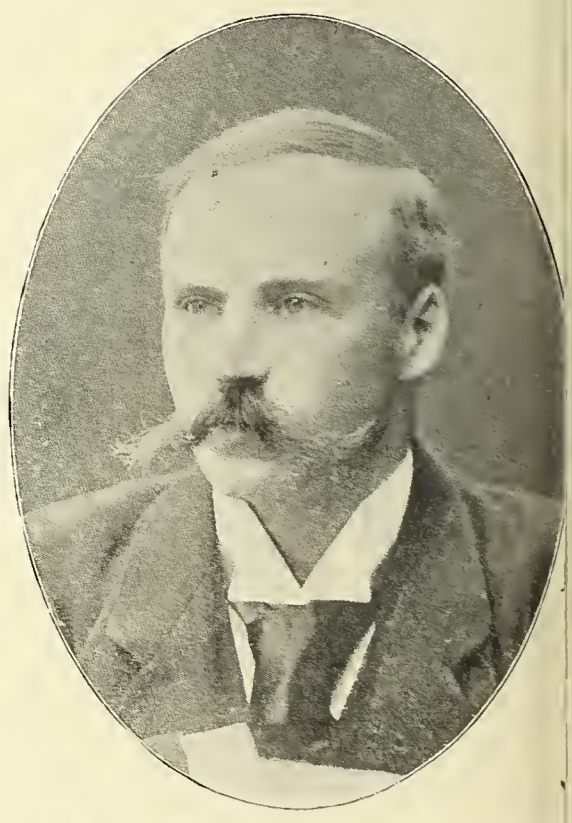
Mr. Wm. Lander Lewis, F.R.H.S.



Mr. James Herbert Veitch, F.L.S., F.R.H.

Mr. Herbert J. Cutbush, F.R.H.S.

Exhibitors at th

Mr. John Peed.

Mr. Henry Williams, F.L.S., F.R.H.S.

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Mr. John Laing, F.R.H.S.

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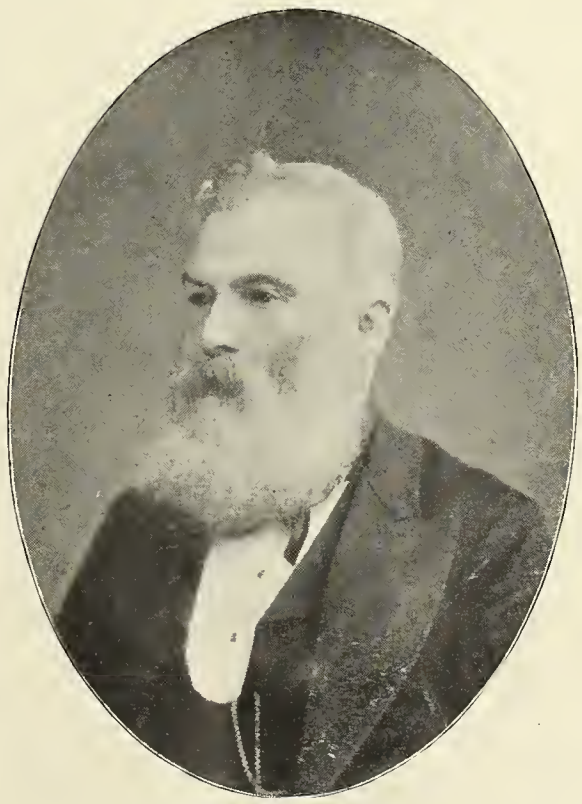

Mr. James Kelway.

Mr. Peter Rudolph Barr, F.R.H.S.

and a host of other spring flowering bulbs, are prominent features of Messrs. Barrs' nursery at Long Ditton, Surrey. Later on the extensive area planted with Paeonies makes a grand display. Irises belonging to all sections have been a speciality of the firm for more years than we care to remember. The extent of ground and the presence of water at Long Ditton offer greater facilities for the cultivation of this class of plants than the old Tooting nursery. Herbaceous and alpine plants generally are well cared for by the Messrs. Barr.

Mr. Herbert J. Cutbush, F.R.H.S., of the firm of Messrs. Wm. Cutbush & Son, Highgate, N., is well known, being a frequent exhibitor and generally present at gatherings of horticulturists. Stove and greenhouse plants, including Palms, Heaths, Epacris and Baronias are often well shown by the firm. Their collection of Malmaison Carnations and other tree varieties are frequently the most prominent feature of their large groups in London and other leading exhibitions, particularly the Temple Show. Collections of herbaceous plants are the notable exhibits at various summer shows and the meetings of the Royal Horticultural Society. We have also examined collections of various other subjects, such as forced bulbs, Ivies, Hollies, Conifers, &c., in their nurseries at Highgate, Middlesex, and Barnet, Herts.

THE TEMPLE SHOW.

May 26, 27, and 28.

On all hands the tenth annual show of the Royal Horticultural Society in the Inner Temple Gardens, was admitted to be a grand success as far as the exhibits were concerned. The Orchids occupied about the same amount of space as last year; but the amateur exhibitors were if anything more numerous than usual. Caladiums, Gloxinias, Begonias, Carnations, Calceolarias, and hardy herbaceous plants were grand. Hardy trees and shrubs were also fine. Notwithstanding the showers of rain there were great crowds of people in the tents by 1 o'clock. The chief complaint we heard was that the exhibits were too crowded for want of space.

ORCHIDS.

Baron Schroder (gardener Mr. H. Ballantine). The Dell, Egham, Staines, exhibited a magnificent group of Orchids which were very extensive and most floriferous. Odontoglossums were most conspicuous all over the group, particularly the grand varieties of O. crispum for which this establishment is famous. Very handsome were O. c. sanderianum, O. c. ballantineanum, O. c. mirabile, O. Hallii leucoglossum, O. polyxanthum, O. luteo-purpureum vuylstekeanum, with yellow flowers, and O. ramosissimum, clumps of Vanda teres, Laelia purpurata, Cattleya Mendelii, C. Mossiae, C. Skinneri and Dendrobiums were very prominent all over the group with a telling effect. The bigeneric hybrid Laeliocattleya Digbyano-Mossiae was in finer condition than ever on this occasion, the delicately coloured lip being of enormous proportions. The ever sensational Bulbophyllum barbigerum was in this group on the present occasion. A cultural commendation was deservedly awarded for the magnificent specimen of Coelogyne dayana.

Sir Trevor Lawrence, Bart., (grower Mr. W. H. White) Burford Lodge, Dorking, exhibited a very extensive collection of Orchids in the large tent as on former occasions. Very conspicuous were Thunia marshalliana, T. Bensoniae, Epidendrum radicans, E. mooreanum, and others. Cypripedium lawrenceanum, C. lebaudyanum, C. swannianum superbum, C. selligerum majus, varieties of C. barbatum and others were superbly done. Cattleya Mossiae, C. M. Wageneri, C. Mendelii, C. walkeriana, Laelia purpurata in grand forms were also well done. Odontoglossums were represented by five forms of O. crispum, O. c fastuosum, O. ruckerianum, O. citrosmum, O. c. album, and others. The hybrid Zygopetalum Perrenoudi was both rare and fine, while Aeranthes zygopetaloides was rare and curious. A unique exhibit was a pan of the native Neottia Nidus-avis, powerfully but not disagreeably scented.

Welbore S. Ellis, Esqr., (gardener, Mr. W. S. Barrell) Hazelbourne, Dorking, staged a profusely flowered group of Odontoglossum crispum in great variety and some handsome pieces of Miltonia vexillaria. Other species were O. nitens, O. Hallii, O. cordatum, Cochlioda Noezliana, and Odontoglossum crispum Ellisiae all very fine. The Princess of Wales' Orchid was applied to O. crispum generally.

The Rt. Hon. Earl Percy (gardener, Mr. G. Wythes), Syon House, Brentford, also exhibited a grand group of Orchids, including large and well-flowered pieces of Cymbidium lowianum, Dendrobium chrysotoxum, Cattleya Mossiae, C. Mendelii, Laelia purpurata, L. tenebrosa, Miltonia vexillaria, and Cypripedium barbatum var. The group was mixed with Palms, Maidenhair Ferns, and other decorative plants, and was in every way creditable.

W. A. Gillett, Esq. (gardener, Mr. Carr), Fair Oak Lodge, Bishopstoke, had a fine group of Orchids, consisting largely of Odontoglossum crispum and Miltonia vexillaria in a well flowered condition. He had some fine varieties of Laelia purpurata, Cattleya Mossiae, C. Mendelii, Miltonia Phalaenopsis, Cypripedium niveum, Odontoglossum crispum, Cochlioda noetzliana, and other useful subjects.

Messrs. F. Sander & Co., St. Albans, exhibited a group of Orchids, including two grand pieces of Dendrobium dalhousieanum, and handsome pieces of D. Dearei, D. infundibulum, Cattleya Mossiae reineckeana and Masdevallia harryana Bull's Blood, all splendidly flowered. Interesting and beautiful were Cattleya Rossii, Miltonia vexillaria, in variety, Laelia tenebrosa, Laeliocattleya D. S. Brown, Cattleya Mendelii, C. Schroderae alba, and C. Mossiae. They also had a fine plant of Sobralia Veitchi.

Messrs. B. S. Williams & Son, Upper Holloway, London, exhibited an extensive group of Orchids, consisting largely of Cattleyas, Laelias, and Odontoglossums. Laelia purpurata, Cattleya Mossiae, and C. Mendelii were prominent and showy. Oncidium superbiens, O. concolor, and O. marshallianum, together with Vanda suavis, V tricolor insignis, V. t. planilabris, and Cattleya Lawrenceana were noteworthy and conspicuous specimens. Several pieces of Anguloa Clowesii were very fragrant, and resembled Tulips at some distance away.

Malcolm Cooke, Esq. (gardener, Mr. Buckell), Kingston Hill, Surrey, exhibited a well-flowered little group of Orchids, including Laelia purpurata, Cymbidium lowianum, Cattleya Mossiae, and various Odontoglossums. Foliage plants were worked tastefully amongst the Orchids.

Sir F. Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen, staged a very nice group of Orchids, indeed, though not large. He had a grand piece of Cymbidium lowianum, the long spikes of which hung down over Cattleyas, Masdevallias, Dendrobiums, and other profusely flowered subjects. Cattleya Skinneri virginalis, Aerides Fieldingii, Cypripedium Gertrude Hollington, and others were fine. Eria extinctoria again occupied a proud position.

M. A. Piret, Argenteuil, France, staged an interesting group of Cattleyas, including several very fine varieties of C. Mossiae. Laeliocattleya Electra was shown by C. L. N. Ingram (gardener, Mr. Bond), Elstead House, Godalming. His Grace the Duke of Sutherland (gardener, Mr. Blair), Trentham, exhibited a grand piece of the Princess of Wales Orchid (Odontoglossum crispum). M. Hye Lysen, Ghent, exhibited Miltoniopsis bleuana gigantea and several other interesting new things. M. Peeters, Brussels, showed Odontoglossum crispum Peetersi and O. c. Mrs. Peters, two splendid and closely similar varieties.

Mr. James Cypher, Queen's Road Nursery, Cheltenham, staged a very extensive group of Laelia purpurata in great variety. He had fine masses of Miltonia vexillaria, Cattleya Mossiae, C. Mendelii, Odontoglossum crispum, O. Hallii, and Oncidium macranthum. Interesting and useful also were O. concolor, Masdevallia Shuttleworthii, Thunia alba, and Laeliocattleya schilleriana. The whole made a very fine display. The Messrs. Charlesworth & Co., Heaton, Bradford, had an interesting and pretty group; prominent amongst these were numerous fine forms of Odontoglossums; O. crispum The Prince was one of the most distinct varieties we have seen, the sepals and petals white, heavily spotted with dark brown, the lip white with a deep brown blotch in the centre. Amongst the many fine forms of Cattleya Mossiae was the variety C. M. reineckeana Charlesworth's variety, white sepals and petals and had a particularly brilliant lip. Laelia purpurata was in various shades from deep crimson-purple to the pale L. p. Schroderiana. The most prominent feature was Laeliocattleya Lady Wigan, a cross between L. purpurata Russelliana and C. Mossiae aurea; the sepals and petals delicate rose, fine in form and substance; the fine lip rose, lined with purple being most attractive. Laelia Digbyana, L. Latona, finely flowered Dendrobiums, many fine Cypripediums, amongst them being a fine C. bellatulum album, were fine.

Mr. R. Ashworth sent a form of Odontoglossum excellens; most distinct, the flowers being almost white and beautifully spotted with brown.

Mr. Berkinshaw sent a plant of Odontoglossum Pescatorei Berkinshaw's var.; the sepals white, suffused with rose, the petals whiter, the whole being thickly covered with dark brown.

Messrs. W. L. Lewis & Co,'s, Southgate, group was a blaze of Cattleya flowers, contrasting finely with the yellow Oncidiums of the O. Marshallianum and O. Macranthum section. The lovely yellow Cattleya citrina was finely flowered. The most prominent amongst the many fine Cattleya Mossiae was the variety C. Mossiae perfection; the sepals and petals and lip were of fine form and substance, of a delicate shade of rose throughout, the lip yellow at at the base, lined with brown. L. purpurata was in strong order, varying considerably in form and colour. Amongst the Cypripediums the most prominent were, Cy. Aylingii and a pale form of the lovely Cy. Gertrude Hollington.

Mr. F. Hardy, Tynesfield, Cheshire, had an interesting group, the most prominent being a plant of the lovely Cypripedium callosum Sanderii, Cy. Gowerii magnificum, fine forms of Cattleya Mossiae, a good plant of C. Skinneri alba, good forms of Miltonia vexillaria, Odontoglossum citrosmum, good forms of O. crispum, and finely spotted O. Cervantesii.

Messrs. Linden & Co. Brussels group contained many fine forms of O. crispum, the most prominent being O. c. President Faure. The sepals and petals white with a distinct rose purple blotch in the centre, the lip white spotted with deep brown. O. Pescatorei var. is a lovely form, white sepals and petals, slightly tinted with rose and spotted purple lip, white and yellow at the base, slightly spotted purple. Amongst the many fine forms of Cattleya Mossiae was a plant of the white C. Mossiae Wageneri, with four flowers, and finely flowered Cochlioda Noetzliana, and other interesting Orchids.

Messrs. Hugh Low & Co. had the largest group in the Show, consisting principally of their fine strain of Cattleya Mossiae; prominent amongst these was a good form of C. Mossiae Wagnerii. Louise is a delicate rose with a slight tracing of purple in the lip. Cattleya Mendelli was represented by numerous finely coloured forms. Laelia fragrans was also well to the fore, a beautiful delicate form of L. p. Schroderianum being most prominent. L. Letoria was represented by a nice plant with three flowers on the spike. Several finely flowered plants of Coelogyne pandurata, fine made up pans of Cypripedium Curtisii and C. bellatulum, and numerous good forms of Odontoglossum crispum, the most prominent being O. crispum Queen Victoria, the sepals and petals white, tinted with rose, beautifully spotted with dark brown, the lip white, broad and spotted with numerous small spots, finely flowered Oncidium macranthum, and made up pans of Dendrobium Bensoniae made up an interesting group.

Messrs. Backhouse, York, as was the case last year, arranged their plants on a neat arrangement of cork and which consisted of finely flowered Odontoglossums, good forms of Cattleyas in their various species Laelia tenebrosa, and a large specimen Sobralia macrantha, Miltonia vexillaria and Cypripediums in variety.

Mr. T. Statter, sent an interesting hybrid Cypripedium, a cross between C. concolor and C. bellatulum, and very much in way of Cy. Godefroyae with the yellow concolor ground.

Mr. W. Thomson, Stone, Stafford, had a fine group of Odontoglossums finely flowered, and remarkable in variety. Several forms were noted by the committee, and will be referred to again. Cochlioda Noetzliana was beautifully flowered and the colour finely developed.

Mr. Ludwig Mond (gardener, J. Clarke) sent a small group consisting principally of finely flowered Cattleya Mossiae, Coelogyne, Dendrobiums and Odontoglossums in variety.

Messrs. Cripps & Sons, Tunbridge Wells, sent two plants finely flowered of Cypripedium candidulum.

Major Joicey, Sunningdale Park, sent an interest-

ing group consisting of finely flowered Anguloa Clowesii, Miltonia vexillaria, and finely flowered Dendrobium formosum.

Mr. R. I. Measures sent an interesting exhibit in four excellent Cypripediums, C. Rhembha (barbatum superbum crd. with Godefroyae), in which both parents could be plainly distinguished. C. Chapmanii (bellatulum crd. with Curtisii) and C. C. magnificum, which gained an award of merit at the previous meeting at the Drill Hall was now given the coveted First-class Certificate.

TUBEROUS BEGONIAS.

Messrs. J. Laing & Sons, Forest Hill, S.E., continued their march of improvement of the popular race of Tuberous Begonias. They exhibited a large group of single and double varieties, the latter being massed in the centre, and the singles towards either end. The plants were grown in 32 and 24-sized pots, but at this early period the plants were dwarf and fresh with a long season before them. Novelties amongst single varieties were fairly numerous, and were improvements in the colour of the flowers, or habit of the plant bearing them. Very choice and beautiful was the pure white Lady Hamilton. The lively pink flowers of Marchioness of Northampton were carried erect, and their form was all that could be desired. A free flowering variety was Earl Brownlow, which carried its flowers well above the foliage. The salmon-scarlet flowers of Dr. Nansen were of fine form rendering this plant well suited for exhibition purposes. The same may be said of Admiral Rawson, which had fiery-scarlet, erect flowers, well adapted for exhibition. The rich golden-bronze flowers of British Flag were orbicular in outline and handsome. Equally well-shaped were the dark crimson flowers of Earl Cowper. The habit of Viscountess Falmouth leaves little to be desired, the flowers being of a rich, dark rose. A grand yellow variety was Mrs. Faudel Phillips. All of the above are new and of a high order of merit.

There was an equal if not a greater advance amongst the double kinds well sustaining the reputation of the Forest Hill firm. The beautiful Camellia-shaped flowers of Lady Pirbright were salmon-pink and the petals wavy. While somewhat similar in shape, the flowers of the Hon. Cecil Rhodes are crimson, and carried well above the foliage. The rosy-crimson flowers of Li Hung Chang were very massive, and should commend themselves to those who like big flowers. The best golden-yellow variety in the collection was that named Diamond Jubilee, the flowers being carried clear above the foliage. A good thing also was Dr. Jim, with rich orange-scarlet flowers. The buff-apricot flowers of Lady Pearson were attractive, and likely to catch the eye of the ladies. Mrs. Montague Wootton carried pale yellow flowers having wavy or crisped petals. Pleasing and attractive were the rich rosy flowers of Lady Harris. The Camellia-shaped flowers of Lord Rosemead were of a rich cerise shade. All of the above are new and likely to find their way into collections.

Some of the older varieties were well worthy of attention, including H. M. The Dowager Empress Frederick, the rosy-pink flowers of which in the earlier stages remind one of a rosebud. The clear yellow flowers of Lady Clifford of Chudleigh were very fine and superior in this shade of colour. Another variety of special charm was Lady Frederick Fitzroy, with yellow-apricot flowers of beautiful and regular outline, the plant also being of good habit. Duke of Fife is now getting well-known on account of its massive and most attractive rosy-salmon or soft orange-scarlet flowers; it is admirably suited for bedding. Dwarf and compact is Countess of Warwick, having rich salmon-scarlet flowers. The scarlet blooms of C. F. Langdon were of great size. Charming also were Blush Queen, blush; Invincible, brilliant crimson; Clio, yellow, and beautifully crimped; and Duchess of York, having soft orange flowers, shaded or tinted with peach, and most attractive. All the colours were so arranged as to show one another off to the best advantage.

Of those whose names have come very much to the front in connection with the cult of the tuberous Begonia, Mr. John R. Box, of Croydon and West Wickham holds a very prominent position. From the nurseries at West Wickham came a magnificent array of the now popular flower, and it would be difficult to decide which was the strongest point, the habit of the plants, the size, substance, and form of the flowers, or the superb and vivid colouring that these selfsame flowers manifested. The exhibit was a large one and occupied upwards of 200 square feet in area. Adiantums were used to some extent for setting up, but the sturdy foliage threw the flowers into sufficient relief without extraneous aid. The size of the flowers throughout, both of single and double varieties, was immense, and their weight proportional to their size, but the stalks supporting the flowers were strong and vigorous, and thus fully equal to the task of lifting the flowers up to view without support. For beauty of form the single varieties reached a very high standard, many of them being as nearly circular in outline as a Begonia can well be. The following are some of the best new single varieties shown:—Lady Lennard, pure white; Sensation, deep rose; Wickham Yellow, a fine deep butter yellow; Modesty, blush white; Magnitude, large, rose pink; Captivation, a charming blush, with prettily fimbriated edges; Bronze Queen, deep bronze, shading to chestnut in the centre; Utopia, vermillion; and Majesty, bright rose.

Beautiful as were the single varieties, even more interest seemed to centre round the doubles. The colours here also exhibited a marvellously wide range. Up to the present time the fine shades of apricot and bronze-yellow that have been forthcoming in the single forms have been lacking in the doubles. After a deal of trouble and not less of pains expended Mr. Box has succeeded in making good this deficiency, and some of the plants shown exhibited various delicate shades of the hues alluded to. Queen of Queens is one of the finest. It may be described as bronze-orange, shaded with apricot towards the base of the petals. Golden Sunset, of a fine amber hue is very effective; also Evening Sunset, which is bright orange. Celestial has flowers of a rich terra-cotta hue. Diamond Jubilee, deep yellow, very dwarf habit; Lady Edridge, salmon-pink; Sir Frederick Edridge, deep crimson with fimbriated petals; Lady Headfort, bright cerise; Mr. H. B. Roberts, fiery scarlet; Lady Douglass, rose-pink; and Countess of St. Germains, soft apricot, were all of them in fine condition. They are all new having been sent out during the present season. We must not pass that well-known variety Miss Griffith without due mention. The delicate shade of blush, the regular arrangement of the petals with their prettily gophered edges, and the handsome size of the flowers all contribute to stamp the variety as one of the very best in cultivation. Taking it altogether Mr. Box's collection of Begonias exhibited real and sterling merit.

A bright patch of colour marked the spot where Mr. H. J. Jones, of Ryecroft Nursery, Lewisham, S.E., had deposited his tuberous Begonias. The Ryecroft collection of these showy plants is known far and wide as a most comprehensive one, and is the result of a number of years devoted to careful cultivation and improvement. On this occasion Mr. Jones gave an apt illustration of the kind of plants he grows at Ryecroft. From beginning to end the same sturdy and dwarf habit was apparent, whilst the foliage was of great size and substance and wore that dark green hue which is so closely identified with perfect health. The flowers themselves all bore the hall mark of merit, both form and size being up to a very high standard. The range of colour too was immense, particularly amongst the single varieties. Pure whites, deep crimsons, bright yellows, and dazzling shades of rose were all on view with innumerable intermediate tints and gradations of colour. Of the latter some charming shades of orange and apricot were very noteworthy and exceedingly effective. The double forms bore flowers of medium size but exquisite form, and it would be difficult to imagine greater refinement than that displayed by many of the partly expanded flowers. The Camellia shape is certainly the finest type of the double tuberous Begonia and this was much in evidence. In all cases the flowers were borne on stout stalks and held well above the foliage. When we take into consideration the fact that these selfsame plants have been grown close to London we must admit that natural disadvantages may to a very large extent be obviated by proper care and attention. In area the group occupied some 200 square feet, with a run of about 50 ft. in length, close upon 200 plants being included. The arrangement itself merits a word of commendation, for in this point Mr. Jones knows well how to win points. The outline of the group was charmingly undulated, and had the appearance of three low mounds. Maidenhair Ferns were utilised in sufficient quantities so as to form a setting for the Begonias, the different shades of green thus obtained contributing in no small degree to the general effect. An edging of Isolepis gracilis and a background of Cocos weddeliana added a finishing touch to a very praiseworthy effort.

A very neat group of tuberous Begonias was contributed by Messrs. H. Cannell & Sons, Swanley, Kent. Double varieties composed the whole of the exhibit, and some charming forms were included. Of these Lord Sherborne, Mrs. Lewis Castle, Lady Gertrude, Duchess of Fife, Mrs. W. B. Miller, Nina, and Lady Roberts were very noticeable. The plants too, were of dwarf and sturdy habit, and bespoke cultivation of no mean order.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, had a superb lot of tuberous Begonias. The form and size of the double varieties was remarkably good, and admirably illustrated the pitch of perfection to which this showy and useful flower has been brought. Double forms predominated, and it would be exceedingly difficult to praise these too highly. The new white Jubilee Queen is the best of its kind we have yet seen, and the yellow Golden Queen possesses exactly the same characteristics as to shape and build. The lovely picotee forms Samuel Pope, Miss Annie Fell, and Mrs. J. Portbury were magnificent. Other grand sorts were Maid of Kent, Leviathan, Princess of Wales, Mr. Robert Lawford, Alba Magna, Mr. John Fowler, Miss Bertha Joseph, and Mrs. Arthur Pitts.

CALADIUMS.

Messrs. J. Veitch & Sons, Ltd., Chelsea, had a magnificent group of Caladiums, the finest we have ever seen them put up. They had huge plants of Mrs. Harry Veitch, Baron Adolphe de Rothschild, soft red with pink blotches; George Berger, soft red and green-edged; Madame John Box, soft pink, with broad green edges; and Gaspard Crayer, red, with a green edge. Mrs. Harry Veitch had dark red leaves, more or less netted, and having carmine nerves, being unusually highly coloured. Sir Henry Irving, sub-transparent white, and green at the edges; B. S. Williams, marbled with red and rose and green at the edges; and Candidum, white, with green veins, were very choice and scarcely smaller than the previous ones. Very dwarf and beautiful were Orphee, La Lorraine, deep red, with narrow green edges; and Princess Royal, a basket of which bore small yellow leaves, with a crimson centre, being both very distinct and pretty. The white leaves of Alice Van Geert were marbled with green and moderate in size. Charming for decorative work was the dwarf and soft red F. W. Moore. Mrs. Joicey (new 1896) had brilliant red leaves and green edges. Lady Mosley, also new, and just being sent out, was noted for its sub-transparent, rosy leaves.

The rosy-pink leaves of Ibis Rouge, and its dwarf habit were recommendable features in this well-known variety. Very soft in colour were the creamy leaves of Lillie Burke, finely netted with green. Lady Stafford Northcote, almost of a uniform crimson, is new and will be sent out next year. Bold and handsome was Marquis of Camden, having large bright red leaves and crimson ribs. Sir Julian Goldsmid (new 1896) was red, shaded with crimson, and bold in appearance. On the contrary Silver Cloud was creamy, lightly marbled with pink and green. It was sent out last year, and therefore new like the charming variety named Her Majesty, with sub-transparent white leaves, overlaid with yellow. The leaves were small and very telling in appearance on account of their distinctness. A pair that may be linked together on account of their similarity were Gabrielle Lemoinier and Duchesse de Mortemart, having white leaves, sometimes marbled with green, the latter being the whiter. Lord Derby was new last year, and noted for its rosy-pink leaves and deep green veins. The same holds good for Duchess of Fife, having white leaves, netted with green. Mr. C. J. Pierpont Morgan (soft rosy-red) also came out last year. Prince Charles was light red with crimson ribs. Comte de Germiny had deep salmon leaves, blotched white. The well-known Reine de Danemark, Isis, Charlemagne, and Rose Laing are well known, and we have never seen them finer.

Leonard Bause, silvery-white with a red splash, was sent out last year. Some of this year's novelties were Duchess of Connaught, creamy, with pinkish

centre; St. Frusquin, fiery crimson; Silver Queen, white; Exquisite, with small red and pretty leaves; Prince Edward, creamy, shaded with pink; Lord Penrhyn, bronzy-crimson; Mrs. Bause, lovely red and gold; and Baroness Schroder all new varieties for this year. Ladas, soft red; Miss Ellen Terry, soft cream, shaded pink; and Chelsea Gem, dwarf, bright red, were all very handsome in their way, especially the last-named. The new variety Mrs. McLeod had deep salmon-scarlet leaves, of most attractive appearance. The huge crimson leaves of Madame Pynaert were very noticeable; and Martha Laforge had creamy leaves, shaded with green and having rose nerves. Amidst such a galaxy of beauty in endless variety of colour, shadings, and markings it was exceedingly difficult to pick out the best where all were so good. The huge specimens first-named above formed a background to the dwarf and valuable decorative varieties in front.

Messrs. John Laing & Sons, Forest Hill, had a much finer group of Caladiums than they had last year, well sustaining their records for any previous Temple Show. They exhibited some very large specimens of old varieties which have stood the test of time, and are still first-class exhibition sorts. Amongst these was Louis A. Van Houtte, with huge leaves of an intense bronzy-red hue, and tinted with green. The long arching leaves of L'Automne were creamy-white, spotted with bluish markings. Another chaste, light variety was Madame d'Halloy, with silvery-white leaves, shaded with rose and having carmine ribs. The old-gold of the huge leaves of Triomphe de Comte also formed an excellent setting for the lively carmine, and stronger nerves. Mrs. Harry Veitch was here again prominent, with the white ground of the leaves more or less heavily netted and overlaid with red and crimson. The rich red centre of the leaves of Flambeau with their broad green border was also highly noticeable. Candidum can hardly be omitted from any exhibition collection. The strong, and dark green veins traversing the leaves in every direction serve to show off the silvery white to the best advantage. Here again the dark rose and bright carmine veined leaves of B. S. Williams were distinct and handsome.

Of new or recent introductions, Messrs. Laing & Sons also had large and regular exhibition specimens, including Baron Adolphe de Rothschild, with its reddish-crimson and spotted leaves, and Barao de Marmore. The leaves of the latter were handsomely netted with green on a pretty white ground, traversed with velvety crimson ribs, and narrowly outlined with green. We had to spell Joaquimnabuco, but the leaves were handsome all the same. The centre as well as the ribs were of a rich crimson-red, surrounded with creamy white and bordered with green. Very pretty was Flammant Rose, the huge leaves of which were of a rich rose, veined with a darker hue and surrounded with a lively green. The green ground of Itapocii served to set off the carmine ribs and the purplish-red veins. A beautiful emerald-green variety was Humbert de Mareste, blotched with pure white, and traversed with blood red ribs.

Small plants either new or of recent introduction, occupied positions in front of the large specimens, and were both varied, beautiful and numerous. Souvenir d'Antonie Chantini had brilliant reddish-carmine leaves, lake veins and green markings. It is new for 1897. Silver Cloud and Sir Julian Goldsmid were here again fine. The vivid carmine veins of Sir Wm. Broadbent were well set off by the green and blotched ground. Alexander III. (new 1897) had large bright red leaves, bordered with green and is a vigorous grower. The broad red nerves of Cacapava were well displayed by the creamy-yellow ground. The sub-transparent and soft pink leaves of Dona Carmen Macedo were beautifully netted with greeen veins. No collection ought to be without the dwarf and handsomely coloured F. W. Moore, which can be turned to good account in a great variety of ways. The foliage of Earl of Derby is white, prettily blotched with rose, and veined with green. The contrast with Roma was very great, the leaves in this case being of a glowing, fiery-red. Mons. Ed. Mieg must also be placed amongst new kinds for this year. It is dwarf in habit, with rosy-lake leaves veined with a lighter rose and margined with blood red spots. Handsome was Orphee with rosy leaves and bright carmine veins. The golden leaves of Mons. Chaber were of great size and blotched with white. It was certainly one of the most charming and distinct in the collection, which was well worthy of inspection.

As a decorative plant the Caladium, when well grown, has few equals. In former years Messrs. John Peed & Sons, of Roupell Park Nurseries, S. E. have made grand exhibits, notably at the Temple Show of last year, but this season marks a still further advance. It is not too much to say that as far as foliage plants go, their exhibit of Caladiums was a feature of this year's show. The plants occupied about 300 square feet of area, and presented a truly gorgeous spectacle. The whole of them, in fact, were marvels of good culture. Some of the giants in the background exceeded four feet in height and the same distance in diameter, whilst the huge heart-shaped leaves were magnificently coloured, size and brilliancy of hue having been successfully united One grand sample of Mrs. H. Veitch had leaves about 2 ft. in length, by 1½ ft. in width, which looked like large rosy-red shields with bright crimson striation where the veins lay. Nearly forty varieties in all where shown, representing the cream of a collection that has but few to equal it. The following are a few of the most conspicuous varieties, although in an exhibit such as this where every individual plant was good, and more than good, it is impossible to make a selection without apparently doing an injustice to some fine varieties which individual taste passes over for something more to its liking. Charlemagne rosy red, with deep crimson nerves; Assunguy, rosy pink, with deep green veins; Oriflamme, bright red, margined with green; Baron Adolphe de Rothschild with its characteristic rich carmine centre; Candidum, white with very prominent ribs; and Roncador, dark red, with green veins, were all represented by superb specimens. Of the newest varieties there was also a good sprinkling. Marie Dubil has leaves of medium size with a crimson centre, surrounded by a broad margin of pea green. The whole leaf is dotted with white, and the veins are carmine. Mrs. John Peed is very dwarf and distinct. The leaves are carmine red, with nerves of a deeper hue, and a narrow green margin. Duchess of Teck is translucent white with a red-brown spot at the point of junction between the petiole and the lamina. Henry Dixon is pale green, dotted with white, a very pretty and distinct form In the foreground were pans about 15 in. in diameter filled with Argyrites, and its pretty counterpart with regard to size Minus Erubescens, Le Nain Rouge, and Lord Rosebery. The way in which the plants had been staked is deserving of the highest praise, for every leaf was in its place, none crowding upon its neighbour. The same might be said with regard to the superb specimens of Excellent, Madame Mitjana, President de la Devansaye, Silver Cloud, Henriette Bassett, and L'Insolite, although the pressure upon our space forbids detailed description at this time. We cannot pass, however, without mentioning Prince of Wales, which has leaves of a golden green hue with deep carmine veins—a form that showed up very conspicuously among the rest. All honour then, be to the Messrs. Peed for an exhibit that was fully in accordance with their high reputation as cultivators of the Caladium.

In a corner close to the entrance to tent No. IV a very handsome exhibit of Caladiums was made by Pantia Ralli Esq., (gardener, Mr. G. Hunt) Ashstead Park, Epsom, Surrey. There were some very finely grown plants to be seen here, and grand specimens of such varieties as L'Automne, B. S. Williams, Baron Adolphe de Rothschild, Martha Laforge, Prince of Wales, and Marquis of Camden. For an exhibit hailing from a private establishment this was a remarkably meritorious display, and would have done credit to the largest grower in the kingdom. The colour throughout was good.

FERNS.

As usual Messrs. W. & J. Birkenhead, Sale, near Manchester, contributed a superb collection of Ferns, both hardy and exotic. A special feature here was a glass case containing a selection of filmy Ferns. Hymenophyllum nitens, H. fosterianum, Trichomanes trichoideum, T. radicans americanum, and Todea superba were some of the most distinguished occupants of this miniature greenhouse. The general collection included fine pieces of Adiantum pedatum, Struthiopteris germanica; also Dicksonia culcita, Davallia hirta cristata, Gymnogramma schizophylla, Athyrium Filix-foemina plumosum elegans, and various crested and tasselled Athyria. Pteris tricolor, represented by a panful of small plants, was very attractive by reason of its fine colouring. Pteris aspericaulis is another form which has the fronds very brightly coloured when in the earlier stages. Cheilanthes radiata is a quaint and beautiful form that is all too rarely met with. This exhibit was an admirable exposition of the variety in cutting and colour of the fronds to be obtained by a judicious selection, as well as of the wealth of the Messrs. Birkenhead's collection.

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, had a superb display of Ferns. Not only were the whole of the plants in excellent condition but the arrangement throughout exhibited a deal of taste, and displayed their charms to very great advantage. Adiantum farleyense, Asplenium Mayii, Davallia Mariesii maxima, Platycerium grande, Gymnogramma Alstonei, G. grandiceps purpurea, and Pteris longifolia were a few of the most noteworthy plants of this group, which, indeed, was remarkable for the number of good things it contained.

Mr. H. Howell, 271, King Street, Hammersmith, had a small but pretty group of Ferns and Caladiums, all of which were in the pink of health.

ROSES.

Mr. Chas. Turner, The Royal Nurseries, Slough, had a huge exhibit of pot Roses in Tent No. V. The group was of a very imposing and showy character, and the whole of the plants composing it were large; some of them being veritable giants. In the background were some highly floriferous plants of Crimson Rambler, the wealth of crimson thus obtained being rich in the extreme. Huge specimens, all well flowered, of La France, Comtesse de Serenvi, Mrs. John Laing, Juno, and Celine Forestier, were placed in front of these, and some dwarf bushy specimens of Crimson Rambler showed what a Rose of many parts this is.

Messrs. W. Paul & Son, Waltham Cross, Herts, set up a splendid lot of Roses close to the farther end of the large tent. The bulk of the exhibit consisted of pot plants, several standards of great height being dotted about among the bush plants to relieve the stiffness and uniformity that would otherwise have resulted. Claire Jacquier, the ubiquitous Crimson Rambler, and Crimson Queen were some of the best of the standards. The bush plants included excellent samples of varieties like Spencer, Ulrich Brunner fils, and Mrs. John Laing. The foreground was occupied by a row of stands containing cut blooms. White Lady, Margaret Dickson, Medea, and the new apricot hued Tea Empress Alexandra were some of the best of these.

Messrs. Paul & Sons, The Old Nurseries, Cheshunt, filled the opposite corner of the large tent with pot Roses. As most of the plants were reared on pots the group looked very imposing and massive. Madame Charles, Violette Bruyer, Madame de Watteville, La France, Margaret Dickson, and Captain Hayward were the most noteworthy plants, whilst some of the blooms of Tea Madame de Watteville were superb in their colour and refinement.

Mr. W. Rumsey, Joynings' Nurseries, Waltham Cross, staged Roses in a most effective fashion in Tent No. IV. There also Crimson Rambler figured conspicuously both as standards and long sprays, and was assisted by Climbing Star of Waltham and Souvenir d'un Ami amongst the latter plants. The bush plants, likewise, were capital examples of good cultivation. Cut blooms of many leading varieties occupied the front rank, in which sorts like Souvenir d'un Ami, Marechal Niel, and Ulrich Brunner were well worthy of special mention. The whole group was a great success, and the tasteful arrangement reflected great credit upon those responsible for its construction.

Mr. George Mount, Canterbury, displayed a taste of his quality in the art of Rose growing in Tent No. III., and there were no better blooms in the whole of the show than those that appeared here. A dozen grandly flowered plants of Crimson Rambler formed the background of the exhibit, and were the only pot plants shown. The cut blooms of Niphetos, Mrs. John Laing, Catherine Mermet, The Bride, General Jacqueminot, Ulrich Brunner, and Earl of Dufferin were simply magnificent, and worthy of all praise.

STOVE AND GREENHOUSE PLANTS.

Messrs. James Veitch & Sons, Ltd., exhibited a splendid group of their grand strain of Gloxinias in

finer condition than we have ever before seen them. Many of the finest varieties both old and new were named, a plan pursued because the method of propagating them by means of leaves enables the finest varieties to be perpetuated true to colour. Many of the older plants were of considerable size, and while the fleshy foliage of all was good, the large plants were most profusely flowered, some of them having three crowns from the tuber. Gomer, a purple-flowered sort, with white edges, carried about 120 flowers and buds. The flowers of the chaste white Virginalis hang on till they wither. Most charming was Cygnet with white flowers, with a double band of violet and light blue respectively round the margin. The rosy-scarlet flowers of Eclatante have a white tube, the white extending into the scarlet in the form of five rays. Those of Josephine are of an intense violet-purple. The scarlet flowers of Duchess of Connaught have a distinctive and broad white margin. Monarch is well known to be one of the brightest crimsons. A striking contrast was afforded to the latter by the white flowers of Modesty, traversed by a rosy band across the centre. The white flowers of Adela have a soft, rosy edge, in contrast to the usual arrangement of colours. The darker shade, however, may now be at the base, middle or edges of Gloxinia flowers, as these varieties demonstrate. The huge violet flowers of Orphee have a crimson shading which makes them distinct and attractive. Claudia, on the other hand, is crimson, with a blue edge; and the way in which the segments overlap makes the variety distinct and handsome. The intense, fiery crimson of Hebe makes the variety the best we have seen of this colour. Self colours are very popular with Messrs. Veitch and the public, but the spotted varieties are not neglected. One of the finest we noted was Jeanette, having large, regular flowers, finely spotted with violet on a white ground. Sunbeam rejoices in scarlet with a rosy throat. Another grand variety is Cicely having purple flowers with a black band next to the well defined white margin. Rosalia is a huge soft rosy flower, spotted with red in the tube. Muriel is quite new, and has huge scarlet flowers fading to rose at the edges after the style of an alpine Auricula. Like many others we noted in the collection, the flowers of this variety consist of seven broad and closely overlapping segments.

Messrs. Veitch & Sons, also proved that their original successes with Streptocarpus are being followed up, inasmuch as they staged no less than five distinct races or strains of Streptocarpus. The oldest, of course, is known as Veitch's choice hybrids, and now displays infinite variety in colour and markings. The flowers were larger than formerly. A quantity of a white variety was very fine indeed. All of the plants were very floriferous. Amongst the most notable of the new races was that named Mrs. Heal, a strain obtained by crossing S. Wendlandii with Veitch's hybrids. The flowers were large and of a deep blue. Whatever the public may think of the Gratus strain, it is certainly one of the most distinct, and this quality is due to the influence of the remarkable species S. Dunnii. The progeny is intermediate in character both in leaf and flower. Numerous scapes arise, as it were, from the base of the large leaf and each scape carries from twenty to fifty tubular flowers of various red, purple and other hues. A fourth strain is Pulchellus produced between Veitch's hybrids, and S. Fanninii, the latter being the pollen bearer. The leaves are narrow and pointed, while the slender graceful scapes bear from twenty to thirty flowers that vary from blue and violet to white, blotched in the long, curved tube. The fifth strain was that recently certificated under the name of S. achimeniflorus, and raised from a white variety of Veitch's hybrids, and S. polyanthus, the latter being the seed parent. The strain has the leaves of the former, and the flowers of the latter several times enlarged. The species S. polyanthus has soft blue flowers with a white eye. The most fastidious should now find something to their taste amongst the five hybrid races above named.

Cacti in general find but a limited number of admirers, but there is no doubt that the effect of the huge flowers, of the varieties of Phyllocactus shown by Messrs. J. Veitch & Sons, Ltd., had an irresistable fascination in the eyes of the flower-loving public. This is due no less to the gigantic size of the flowers, than to the gorgeous colours, their subtle tints and combinations, and their irridescence according to the incidence of the light. Nevertheless, they are not seen to best advantage in a tent, owing to the dim or greatly subdued state of the light. This grand collection of the finest varieties consisted of something between 200 and 300 plants, including many new and superb hybrids flowering for the first time. The brilliant orange-scarlet of Excellent had a crimson shading towards the margin. The rich scarlet flowers of Niobe on the contrary were purple towards the base. A new variety named Niobe had flowers of moderate size of a lovely rose hue; and the satiny pink of Delicatus, with slightly darker shades in La Reine and Jessica, supplied delicacy of colouring difficult to rival in other flowers, owing to their glossy smoothness and refinement. Very rich scarlet were the huge flowers of Eurasian and Elatior, contrasting strongly with the white Vesta. Grand Monarch, Homer, Olivette, Speciosissima and Agatha represent varieties for which it was difficult to find adjectives to properly describe them.

Messrs. Sutton & Sons, Reading, occupied about 80 ft. run of table space in the centre of tent No. 3, and it must be admitted that their Gloxinias produced a splendid effect. The plants were large and the flowers massive and far in advance of anything we have seen the firm produce at any previous Temple Show. They, together with the fibrous-rooted Begonias and a large group of Sutton's Giant Mignonette had an enlivening effect upon the whole of the tent. The Mignonette was splendidly grown, in fact, never has been better in so small pots. Around the pillars of the tent, and along the centre of the table were Cocos and other Palms with clumps of splendidly grown Lilium Harrisii.

The Reading strain of Gloxinias is now getting well-known all over the country. Messrs. Sutton & Sons consistently perpetuate the finest of their acquisitions to which they give special names by which they may be recognised and noted down for future reference. A mixed packet of seed will furnish an infinite variety of colours, of which the description of the leading and most distinct colours would be a formidable task owing to the remarkable variation and combination of rich and lively colours with which they abound. The large and pure white variety, Her Majesty, still remains to be beaten. The plants were finer than usual, the huge, fleshy leaves hanging over the sides of the pots, especially in this and other sorts exhibiting the crassifolia type of foliage. The popular Duke of York has rich crimson flowers, with a broad white margin, and its counterpart and companion, Duchess of York, differs chiefly in the dark purple ground colour. Equally conspicuous in its way was Sutton's Purple, a dark self of great size and substance. A lovely variety is that named Azure Blue, in which the colour indicated is the most prominent and the first to catch the eye of the beholder. Reading Scarlet is a variety of great brilliancy, and an acquisition for any collection. We understand it comes quite true from seed, which would mean that it has been perpetuated in that way for a number of generations, causing it to become fixed and constant.

One of the most novel and interesting, as well as the prettiest feature of Messrs. Sutton & Sons' extensive exhibit was their collection of named varieties of fibrous-rooted Begonias, which they have been improving for several years past with admirable results. These Begonias belong to B. semperflorens of which they are valuable improvements, and equally useful for outdoor bedding as for pot culture. The flowers are produced in the greatest profusion all the summer, and the glossy, dark green leaves always look clean. Sutton's Reading Snowflake is of snowy purity, contrasting in a remarkable manner with Crimson Gem, which has flowers of the richest dark red and foliage of a glossy metallic red, especially when grown in the open. The flowers of Sutton's Coral Gem are of a soft rosy tint, very pleasing to the eye and popular with many. Those of Duchess of Edinburgh are white, with a rosy margin, and certainly lovely. The plants exhibited were all raised from seed sown in January last. Indeed, so easily, quickly and successfully may they be brought to perfection, that they will be largely grown by the amateur in the near future.

Messrs. J. Laing & Sons exhibited a group of Streptocarpus of a large flowered strain, in which different shades of blue were very conspicuous. For instance we noted such hues as bright blue, lavender, deep sky blue, and violet. In another direction the flowers varied through lilac, pink, rose, purple, and violet-purple. There were also white varieties in the group, but the almost inevitable purple and violet bands traversed the lower side of the tube longitudinally, showing themselves on the base of the lower lip. The plants were grown in 32 and 48-sized pots. Messrs. Laing consider that relatively young plants are preferable to old ones because they flower more freely, and are therefore of much greater decorative value.

A group of Gloxinias was also shown by Messrs. J. Laing & Sons, of the erect flowering strain. For some years past they have been improving their collection of Gloxinias, both in the size of the plants, the flowers and their colours, all the leading of which are represented by some shade or other. Commencing with white we noted such colours as rose, purple, crimson, maroon-violet, and violet-purple. Fancy coloured varieties were also represented by violet and purple flowers, having a broad outer margin of white to the segments. Spotted varieties were also shown so as to meet the taste of those who fancy this arrangement of colour. No attempt is made of naming them, it being considered sufficient to select the finest of the seedlings as they come into bloom, and to improve the whole strain by saving seed of the best. There are few establishments where these showy hothouse plants are not grown in greater or less quantity.

Messrs. J. Carter & Co, High Holborn, London, exhibited a large and beautiful group of Calceolarias, which were notable for the relatively dwarf habit of the plants, and the handsome size of the flowers. The latter might be compared to the fruits of President or some similar Strawberry which has compressed fruits, though rounded and blunt at the edges. The flowers were also notable for the great variety of colouring which they presented. Some were glowing crimson, others crimson above and creamy beneath, or richly spotted with crimson on a yellow ground, while the margins and the under side were coppery orange. Cloth of Gold is a rich yellow variety, from which others differed in being lemon-yellow, yellow with a crimson throat, or crimson above with all the rest yellow, like a red-cheeked Cherry. Variations of another type were diffused crimson, and yellow beneath marbled with crimson, glowing crimson and marbled with yellow in various patterns. Some of the darkest we noted were maroon-crimson. Then again some were equally marbled with crimson and yellow, crimson in front and marbled elsewhere. The spotted flowers were indeed endlessly varied in the arrangements of colour. A creamy sort had starry crimson markings like hieroglyphical characters. We noted a variety with crimson markings on yellow in various patterns upon the same plant. Then again there was crimson marbling on a pale buff-purple ground, or purple spotting on a rose ground. Some of the marbled varieties were notable for the huge size of the blooms, which must be many times the size of the originals. Another variation was crimson with a broad, rose band round the front. Very fine also was a velvety purple variety. The Victoria Prize Calceolarias, as well as other plants, were arranged in tiers so as to relieve or obviate the monotony of a flat surface. They culminated in the centre in a dome artistically furnished with leafy growth and floral decorations surmounted by a crown of flowers, and also a floral "V.R." in keeping with the Diamond Jubillee year.

The same firm also exhibited some of their strain of Petunias on which they have been working for many years. The double flowered sorts were varied in colour, some of them being very attractive. A finely frilled white variety was very pretty in its way, and should prove useful for decorative work in the greenhouse and conservatory. Other double varieties were purple, blue-purple, and lavender, lined with violet along the course of the veins in a very characteristic manner.

Messrs. F. Sander & Co.'s exhibit of new plants was an exceedingly gay and varied group and contained very many novelties and subjects of interest. Petunia Mrs. Fred Sander was staged in a large clump, and the huge very double rosy pink flowers were much admired. Davallia hirta, a new and very pretty Davallia was represented by a superb specimen. Dracaena godseffiana, D. sanderiana, Anthurium bogotense, Caladium speciosum, and C. albanense were other notable plants that must become great favourites when they are better known. Rhipsalis salicor-

noides is a curious looking and interesting subject. Eriocnema fascinator is very distinct with its light golden green leaves. The group was edged with small plants of Hypericum moserianum tricolor and various Cattleyas, Laelias, and Odontoglossums were dotted here and there to enliven the foliage plants. Mention should also be made of a magnificent piece of Anthurium scherzerianum sanderianum a grand form that is far ahead of the type in size and colour of flower.

Messrs. Richard Smith & Co. Worcester, exhibited a collection of well-grown specimen Clematis in pots. The most prominent and effective are Princess of Wales, bearing a mass of large pale, mauve blossoms. Blue Gem, of a slightly deeper shade, and Gloire St. Julien are fine single kinds, having full and fine formed petals. A handsome specimen of Mr. George Jackman, distinct and semi-double with pure white flowers. Imperatrice Eugenie bears immense blooms of rosy-white, with pink anthers giving a distinct character to the flowers. Lucie Lemoine, double white, and Countess of Lovelace, bluish-lilac, are fine among the double kinds. Sensation, Lord Derby, Edward Desfosse, and Lawsoniana are represented in good specimens.

Messrs. Henry Cannell & Sons also exhibited a large and very fine collection of Calceolarias. In habit, profusion of bloom, and fine quality these would be difficult to surpass. They are the principal exhibitors of the Gladiolus flowered section of Cannas. The varieties are rapidly extending, and every shade of colour is represented. Austria is a fine yellow, Aurora, fine brick-red; Paul Bruant, deep red; Amiral Avellan, yellow, densely spotted with small red spots: Paul Lorenz, red; Duchess of York, yellow, heavily spotted; Madame Crozy is still one of the best in habit, throwing up a fine truss of bloom; Conquerant, orange colour; Sunset Glow, and Henry Irving are also fine forms.

Messrs. Geo. Jackman & Son, Woking, exhibited a few specimens of their new hybrids from Coccinea. These are remarkably free blooming, and perpetual in character. Duchess of York is a soft rosy colour, well adapted for cut flower decoration. Duchess of Albany, centre of petals deep rose, with a paler edging of the same colour. Countess of Onslow is a free kind, bearing bold flowers of rosy purple. Countess of Onslow of a lighter shade of purple is equally free and effective.

HARDY HERBACEOUS PLANTS.

An exceedingly showy group of hardy flowers was contributed by Messrs. Barr & Sons, King Street, Covent Garden. The exhibit occupied fully 250 sq. ft., and within this area was accumulated a varied and extensive collection of this class of material for the cultivation of which the firm is justly famed. Bearing in mind the very trying character of the season, cold biting winds having been followed by hot scorching sun, it was cheering to see how well the flowers had withstood the trying climatic influences, for they were in capital condition all round. The central and conspicuous feature was a miniature rockery. This was about 8 ft. in length by 4 ft. in depth, and was furnished with various Alpine and low growing plants, with a view to illustrate the appearance presented by this class of plants when placed amidst suitable surroundings out-of-doors. Amidst the heavier stones at the back some plants of Ramondia pyrenaica were peeping out as happily as if they had grown there all their lives, whilst the small, white, star-like flowers of Arenaria balearica completely covered some of the stones. Behind the larger pieces of rockwork, and serving as a background were some fine specimens of Cytisus andreanus and Rosa spinossisima. In front were numbers of pretty and rare plants all appearing as if in permanent quarters. Chief among them was a batch of about a dozen plants of the rare Viola pedata. This is a most distinct form, with large light blue flowers and pedate leaves with very long narrowly linear segments. Another rare Viola was represented in V. rothomagensis, which has handsome blue and white flowers. Tufts of the curious looking Crucifer Morisia hypogaea must not be forgotten, the yellow flowers and deeply cut foliage being both handsome. Of Rock Roses, Helianthemum Mrs. Earle is a novelty with very bright crimson flowers. Phlox subulata Gem, with soft pink flowers, and P. lilacina, also dwarf, and with lilac blooms, afforded bright patches of colour in their several positions, whilst the so-called American Cowslips (Dodocatheons), were well in evidence: D. splendens and D. Medea alba are

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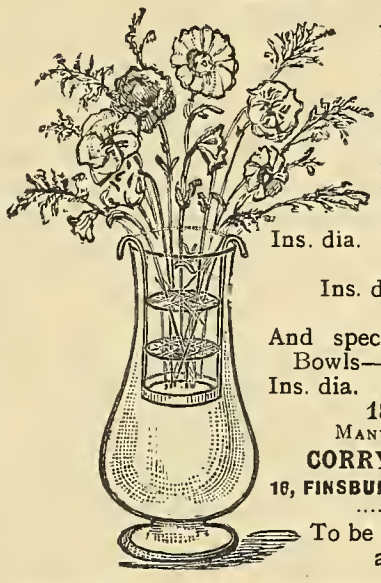

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well worthy of extensive patronage. Delphinium nudicaule, Dianthus glacialis, Aster alpinus, and Papaver alpinum were all very gay, and the quaint hardy Cypripedium Calceolus C. parviflorum, and C. montanum attracted much attention. The Ixiolirions, very handsome bulbous subjects from the Cape, were another feature. I. sintenesi has light blue stellate flowers of about 1½ in. in diameter, with several deep blue stripes down the centre of each segment. I. macranthum is pale blue, and the segments are more reflexed. At the side of the rockery there appeared a large handsome tuft of Iberis sempervirens flore pleno, whilst in the background a noble specimen of the silvery Thistle Onopordon tauricum reared its stately head. Nothing in the Thistle line can be more effective than this.

The collection of hardy cut flowers that surrounded the rockery was a marvel of comprehensiveness, and formed a notable object lesson of the wealth and variety of material that the Messrs. Barr's nurseries contain. The flowers were arranged in bold striking bunches that could not fail to be effective. The collection of Irises was a superb one, and the profusion of rich colour and differences of marking offered by members of this important family. I. germanica and its varieties formed a host in themselves, Mrs. Darwin, a pure white, being a real beauty. I. Madame Chereau, I. g. Kharput, I. gracchus variegata, I. pallida, and the sweet scented I. Cingealti were all good. Dietis Huttoni is a curious looking Irid with thick, stiff, leathery leaves and yellow flowers. Papaver orientale in such grand forms as Beauty of Livermere, blood red; Prince of Orange, orange; Salmon Queen, and Blush Queen were simply gorgeous. Centaurea montana in varieties of white, rose, purple, and yellow, was much admired, and the same might be said of Linum narbonense with its delicate lilac-hued flowers. Lupinus polyphyllus, Ranunculus viridiflorus, Aquilegias in a great variety of colours, Cheiranthus alpinus, Trollius Orange Globe, T. japonicus flore pleno, and Geums in variety, all added their quota of beauty to the general effect. A number of the single Pyrethrums in many shades were also well deserving of honourable mention. Fanny, blush; and Princess Charlotte, crimson, were two of the best. A collection of leading varieties of Violas was also included, and a huge leaf of Gunnera scabra, some 8 ft. in length, that was here displayed to illustrate the value of this foliage plant created quite a sensation.

The Guildford Hardy Plant Co. scored a great success in a miniature rockery erected by them. It was some 25 ft. in length, and rose at an angle of about 45° from the line of the stage edge. All the plants with which it was furnished, and they were many, rare, and varied, looked singularly happy, and it was easy to imagine that they had grown in that position all their lives. Dwarf Conifers of a kind made a suitable background. Ramondia pyrenaica, Papaver alpinum, Onosma taurica, Cypripedium Calceolus, C. montanum, Daphne fioniana, and D. Cneorum were some of the most notable subjects.

Mr. John Forbes, Hawick, Scotland, has a small group of Polyanthuses, including a number of varieties in first-class order, and well illustrating the value of the flower for spring bedding purposes.

Messrs. Dobbie & Co., Rothesay, had a collection of Violas, Sweet Peas, and single and Cactus Dahlias. The first named were in strong force, and comprised about seventy leading varieties. Of these we may mention Marchioness, Geo. Lord, Princess Beatrice, Lemon Queen, A. J. Rowberry, Niphetos, Peter Barr, Lavender King, James Cocker, and Sweet Lavender. Sweet Peas and Dahlias were in grand form and colour for the time of year, although the latter flowers are so closely associated with autumn.

Messrs. R Wallace & Co. made a big exhibit of Irises, Liliums, Ixias, and Calochortus. Their collection of each of these was excellent, great variety being forthcoming in both colour and habit. The Spanish Irises (I. Xiphion) were represented in many colours and they were very much admired, for the flowers appear to great advantage amongst the graceful, grass-like foliage.

A magnificent display of hardy cut flowers came from Messrs. Kelway, Langport, Somerset. It included a collection of double and single Pyrethrums, in white, yellow, crimson, yellow, and pink, Cannas, Aquilegias, Paeonies, and Irises in great variety. Lupinus Langport King, L. polyphyllus, and L. Foxi, all fine, showy plants, and favourite subjects for herbaceous gardens.

Messrs A. W. Young & Co., Stevenage, Herts, had a varied exhibit of hardy plants, including a collection of Violas with mixed cut flowers, and a batch of Zonal Pelargoniums in pots.

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 5th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, June 7th.—Second day of the Cheltenham Show. Cambridge Rose Show.

WEDNESDAY, June 9th.—Chelmsford Rose Show.

FRIDAY, June 11th.—Sale of imported and established Orchids by Messrs Protheroe and Morris.

WHAT THEY SAY OF THE TEMPLE SHOW.—A second survey of the tenth annual show held last week in the Inner Temple Gardens enables us to corroborate what we said of it after a hasty survey on the morning of the day of opening. All admit that it was a grand show and not a few experts are decidedly of opinion that it was the best of the series which has yet been held. Space is altogether deficient in those gardens and in the tents provided to admit of the natural growth of the show. Many of the large exhibitors would have doubled the extent of their exhibits provided there had been space available, while certain horticultural exhibits were altogether excluded. It will serve to give some idea of the popularity of this show when we state that 22,600 sq. ft. of space was asked for, while only 11,800 sq. ft. were available. In face of this great demand for space, many will naturally ask whether the quality was all that could be desired, or in proportion to the limitations placed upon quantity. There can be no doubt that for the most part this must be answered in the affirmative. Some few exhibits may not have toed the line of former years, but a far larger number were certainly superior. The rule promulgated about two years ago, if we rightly remember, that duplicates in any one exhibit were inadmissible, is beginning to make itself felt to the advantage of exhibitors and visitors alike. The artistic arrangement of the exhibits continues to make progress; and if we decline to say that perfection has been reached in any particular case it is because we regard that stage or goal as a nebulous and visionary thing, existing in imagination only as an unrealisable ideal. 'Twas ever such in all human affairs, for "man never is, but always to be blest." Probably it is well for all shows that such is the case, for without an incentive to better the past and laudable emulation on the part of exhibitors, all flower shows would soon come to a dead stagnation—"dead perfection, no more; nothing more, it it had not been," as Tennyson says.

What about the financial question, the practical man asks? Well, the gate money taken during the first two days was equal to that of last year, so that the takings during the third day were additional. The weather was bad during the first and third days, some one insists. The sunshine introduced by the presence of royalty during the first day was sufficient to confound the calculations of any weather prophet; and we know for certain, that most if not all of the exhibitors and gardeners were perfectly satisfied about the rain, notwithstanding the paradox that they wished it to be fine and wished for a good rain all in the same breath. Most certainly it was advantageous to the show, as well as horticulture elsewhere that the atmospheric conditions changed on the 25th ult. The moist atmosphere was most favourable to all plants, flowers and vegetables, both in maintaining them in a healthy, fresh, and clean condition. Last year after the first day of the show the exhibits in tents No. 1, 2, and 3 were unfit for inspection on account of the thick coating of dust which settled upon them. Last week all this was changed for the better. Taking it then as a whole, it was a record show, and well worthy of the year of Her Majesty the Queen's Diamond Jubilee.

Baron Schroder and Sir Trevor Lawrence, Bart., still remain the champion exhibitors amongst amateurs, if not, indeed, amongst all comers in the Orchid line, if quantity, quality, variety and aggregate value are considered. Our calculations may not be based, however, on the same lines as those adopted by some of our lay contemporaries who speak of Cattleya Mossiae reineckeana as "a new floral wonder," "an extraordinary Orchid," and "the largest and most beautiful Cattleya ever known to the civilised world, and it would take 1,000 gs. to buy it." Some years ago the £800 to £1,000 Orchid was Cypripedium Stonei platytaenium; then it shifted to Odontoglossum crispum apiatum; now the Cattleya has it, which is only fair. Verily we make progress by leaps and bounds. In these cases the glamour lay in the big price. But what shall we say of the Orchid, which a lay brother says "is the marvellous Bulbophyllum barbigerum, a flower venerated and feared in Dahomey and the West Coast for obvious reasons? It belongs to the fly-catching class." If we failed to see the obvious reasons, &c., we quite admit that it was owing to a lack of imagination, and possibly the bearded wonder

"had much of glamour might
To make a lady seem a knight."

In an extensive and varied exhibition like that which was held last week there will always be sensations for someone; but such impressions are short lived, for "knowledge and feeling, perception and sensation, though always co-existent, are always in the inverse ratio of each other." On the other hand there were many beautiful Orchids that will always remain beautiful though they cease to excite wonder and sensation. They are too numerous to recount here; but more epithets might with propriety be applied to the large specimen of Coelogyne dayana, than pretty, graceful, elegant, attractive, handsome, and charming; though glowing colours in this species are conspicuous by their absence. But surely the telegraph wire must be held responsible for the following variant from a provincial contemporary: — "Baron Schxœder sent a perfect plant of the coeboyne dazana, with its floating flowers so closely resembling a swarm of bees that the visitor could almost hear them buzz."

Gardeners' Royal Benevolent Institution.—Messrs. Rothschild & Sons have contributed the sum of £210 to the funds of the Gardeners' Royal Benevolent Institution.

Frost at Ashford.—While frost has been of common occurrence almost every morning during the past month, it was so severe at Ashford on the 15th ult. as to cut Potatos and other market garden produce to the ground. The abundant blossom on the fruit trees was also destroyed by the frost and cold cutting winds, to a great extent.

Mr. William Barber, at present fruit foreman at Woolton Wood, Liverpool, has been appointed head gardener to Walter Holland, Esq., Carnatie Hall, Mossley Hill, Liverpool. He enters upon his duties on June 7th.

We notice in our daily contemporaries that Mr. Martin J. Sutton has promised the magnificent donation of £1,000 to the Prince of Wales' Hospital Fund, on condition that nine other similar sums are collected by Jubilee day.

Mrs. Roger Cutler.—Through the exertions and liberal assistance of several horticulturists, the relict of the late secretary to the Gardeners' Royal Benevolent Institution was last week placed at the top of the poll with 5,500 votes, for a pension from the Royal Masonic Benevolent Institution.

Anatole Louis Cordonnier, author of *Le Chrysantheme a la Grand Fleur*, was made laureate of the prize of honour on the occasion of the general agricultural meeting and divers agricultural solemnities at Paris. He was honoured with the decorations of Chevalier du Mérite Agricole on November 30th, 1890.

The Laburnum was rich in its golden blossoms by the beginning of the second week of May on the south coast of England. The Hawthorn was also in bloom by the same date. Both of these trees have been gay for a week past in the districts around London. It is, therefore, useless to speak of the season being late, for we have seen May out before the Hawthorn blossom whitened the trees and bushes.

York Florists' Show.—The York Florists' Society held its second show for the season at the Guildhall, York, on Wednesday, May 26th. Tulips were the chief feature of the exhibition. The Rev. G. Horner was very successful as a prize-winner and was credited with the first award in each of the following classes for Tulips; one bloom flamed rose, one feathered bizarre, one flamed hybloemen, one rose breeder, one bizarre breeder, and one hybloemen breeder. The reverend gentleman also had the premier bloom in the show.

Brighton & Sussex Horticultural Society.—Mr. Geo. Miles presided at the last monthly meeting, at which Mr. R Dean, of Ealing, gave an address on Gooseberries. The lecturer dealt in a practical manner with cultivation for the market, and for exhibition, mentioning the best varieties for each purpose. Mr. Elliott, of Lancing, made an excellent exhibit of cut Carnations, some of the best varieties of which were Uriah Pike, Countess of Paris, and Queen of the Market. Messrs. Balchin & Son, Hassocks, showed Ericas and seedling Pelargoniums; and Mr. Spottiswood seedling Carnations.

Variations of Temperature.—This year we have been visited by some surprising ranges of temperature. On May 12th, 13th, and 14th, the centre of cold in Europe fell upon France to the east of Paris, and frost was registered in all the departments, at Paris, Lyon, Macon, Besancon, Clermont, Chatellerant, and even Bordeaux, and on the morning of the 15th the temperatures at Moscow, St. Petersburgh, Constantinople, Naples, and Algiers were exactly the same. These curious changes are due to atmospheric currents, but have nothing to do with the moon, as is popularly but erroneously supposed.

Orchids at the Sale Rooms.—There is a great boom in Cattleya Mossiae reineckeana at present. A fine variety of it was sold at the Central Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 21st ult., and fetched 60 gs. The sepals and petals were pure white, but the lamina of the lip was rich purple all over with the exception of the white margin. Another plant of a very fine variety turned up on the 28th ult,, and was purchased for 35 gs. We have seen other fine varieties recently, so that some collector must have hit upon a fine strain in their native wilds. On the last mentioned date there was some lively bidding for the handsome Odontoglossum crispum Heliotropium, described by us on p. 566, and for which a First-class Certificate had been awarded by the Royal Horticultural Society on April 27th last. It was finally secured at the handsome sum of 135 gs.

The Dutch Bulb Growers have reason to believe that there will be a great demand for bulbs this autumn.

Wembley Park is now open for the free admission of the public on Sundays. The park is beautifully wooded.

The Graeco-Turkish war and gardening.—It is believed that the effect of this war will be detrimental to the collecting and marketing of such bulbs as Chionodoxas and Galanthus Elwesii. The canary seed used in Europe is mostly grown in the district where the recent hostilities broke out, and the price is expected to rise.

The Brussels Flower Festival, known as "The Longchamps Fleuri" was held in the Bois de la Cambre, there on the 17th ult. Hundreds of vehicles of a varied description took part in the procession. A bicycle carrying a child was converted into a sort of floral butterfly with outspread wings and attracted the attention of the vast crowds of people there.

Bristol Naturalists took their second botanical excursion on Saturday, May 22nd. The route followed was by Abbot's Leigh, the Abbot's Pond, Markham Bottom, and Pill. Thence they were ferried across the Avon and returned from Shirehampton station. A fine clump of the Barberry and a good deal of Crepis biennis were seen, both of which are rare plants in the Bristol district.

Teaching Gardening from a text book.—Amongst the evidence given before the Commission of Manual Instruction that of Mr. Gordon, the principal of the Cheshire Agricultural and Horticultural College, is worth noting. He condemned, without reservation, the practice of teaching gardening from a text book Practical instruction was necessary. Mr. Jeremiah Golden, of the Enniskerry National Schools, likewise gave an account of the lessons in practical gardening he had given on a piece of ground, 1 rood 20 perches in area, that was attached to his school.

Cape Heath in ice.—According to *The African Critic*, the *Norman* brought home an immense wreath, composed of Cape heath, for the Emperor of Germany. It was frozen in a solid block of ice, and the case which contained this treasure was so gigantic that the *Athenian* was unable to take it into her ice-chamber. However, the latter vessel has carried it to Hamburg for its consignee, Mr. Edward Lippert. Report says that this floral offering comes from no less a personage than Oom Paul, who presumably got it for nothing, and so can afford to make a show of liberality where it will be gratefully appreciated. Moreover, there will now be an opportunity for another cablegram! What the wreath is meant for, history sayeth not. Perhaps for the Flower Show in Hamburg, which opened May 1, and is to last till October 31.

Presentation.—Mr. Peter Mathieson, who has been head gardener to D. E. Outram, Esq., Dalling Mhor, Kirn, for the last twenty-one years, received a presentation on Wednesday evening, the 26th ult., in the George Hotel, Dunoon, on the occasion of his leaving the district. Ex Bailie Tannock presided, and called upon Mr. Simon Martin to make the presentation of a gold pendant with suitable inscription, a purse of sovereigns, and a beautiful gold brooch for Mrs Mathieson. Mr. Mathieson, in the course of a brief reply, said he could not too deeply thank his friends for the handsome and unexpected way they had seen fit to mark the close of a twenty-one years' residence in the district, which he left with sincere regret. On behalf of Mrs. Mathieson, he also acknowledged their thoughtful remembrance of her. Both of them would ever remember their many friends in the Dunoon district. A number of toasts followed, including "The Commissioners," "The Gardening Interest," &c. Songs (in English and Gaelic) agreeably diversified the proceedings, and the singing of "Auld Lang Syne" brought a pleasant meeting to a close. Mr. Mathieson has been appointed gardener to Cyril H. Dunderdale, Esq., Monkland House, Airdrie. Mr. Mathieson was a successful exhibitor at the early Chrysanthemum shows held in the Waverley Market, Edinburgh.

Wild Strawberries were picked at several places in the neighbourhood of Plymouth on the 17th ult.

A real live Cuckoo, at an early hour on Sunday morning, the 16th ult., awakened the inhabitants of the Temple by its repeated cuc-kooings.

Failure of the Cherry Crop.—A Sittingbourne telegram states that the Cherry crop in Kent is well-nigh a failure this year. If this prove true it cannot fail to have serious consequences, as it entails a loss of thousands of pounds sterling.

Cricket: Hurst *v.* Allen & Hanbury's.—This match was played at Walthamstow on the 22nd ult. and drawn. Hurst had 139 runs for 3 wickets; and Allen & Hanbury's 63 for 6 wickets. Squire, 64, Cochrane, 36, and Portch, 24, played well for Hurst.

"Sixty Years With Brightest Stars."—V. R., 1897. This is the title of a poem by the well-known seedsman and Daffodil grower, William Baylor Hartland, Cork, Ireland. It will be illustrated with likenesses of Bell, Edison, Watt, Stephenson, Rontgen, and the Queen at the age of of 18 and present day, all included in his "Jubilee Issue" of conference Daffodils, the latter containing the very best sorts, from original drawings by Gertrude Hartland, and engraved by Welch of London.

Garden Lecture at Blackwell.—Mr. Luckhurst, F.R.H.S., recently gave an open-air demonstration in the allotment gardens, at Primrose Hill, Blackwell, upon "Spring Work in Garden and Fruit Plantations." In the course of his remarks the lecturer recommended one pound of lime dissolved in three gallons of water as an application for killing slugs and maggots on Onion beds. When dealing with Apples he advised them to plant Lord Suffield, Potts' Seedling, Prince Albert, and Prince Bismarck.

Mr. Martin H. Foquett Sutton.—At a dinner given by Messrs. Sutton & Sons on the night of the 1st inst., to several hundreds of their employees at Reading on the occasion of Mr. Martin H. Foquett Sutton becoming a partner, his health was proposed by his grandfather, Mr. Martin Hope Sutton, now in his 83rd year, who founded the firm more than sixty years ago. Mr. Martin J. Sutton, the present head partner, announced on behalf of the firm that in addition to the day's pay on June 22nd, a sum representing an extra week's wages would be presented to every one in their employ in honour of the Diamond Jubilee of their patron, the Queen.

Saturday Afternoon Holidays.—Half of the staff of Messrs. W. L. Lewis & Co., Orchid growers, Southgate, N., leave off work on Saturday afternoon at 1 p.m. On the succeeding Saturday, the rest of the men leave off at that time, so that all of them get a holiday once a fortnight. This has been going on for five weeks, and while the men appreciate it, the firm loses nothing by it. Mr. F. J. Thorne, gardener to Major Joicey, Sunningdale Park, Sunningdale, Berks, gives his men, both labourers and gardeners, a half holiday on precisely the same lines as the above, and finds the scheme perfectly workable and satisfactory. Other employers, and head gardeners, if they looked at the matter in this light, would, we feel sure, accord their men the same highly appreciated boon.

Scottish Horticultural Association.—The monthly meeting of this association was held on June 1st, a fair attendance of members being present. The president was in the chair. Mr. Little, The Gardens, Murton Bank, Perth, read a very practical paper on Ferns. He dealt in a thorough manner with their culture, and gave many useful hints. Messrs. Jas. Grieve & Sons exhibited a new bedding Viola named Joseph. It is dwarf in habit and a very robust grower. The colour is a deep bronze with a well marked eye. Several other exhibits were made and received attention from the members. On May 22nd, about fifty members of the Association drove to Oxenford, the Midlothian seat of the Earl of Stair. They were received (after a pleasant drive of ten miles) by Mr. McHarrie, the resident factor, and Mr. Smith, the gardener. Two pleasant hours were spent in the well-kept grounds and gardens. Everything was found to be in perfect order. After the company had been photographed, the return journey was begun and ended in safety.—*R. L.*

GARDENING MISCELLANY.

ROSE MRS. RUMSEY.

HAVING regard to the persistency the mildew (Sphaerotheca) attacks some of our best Roses year after year and seriously checks or even cripples them as far as constitution is concerned, a race of Roses that could resist the mildew to a great extent would be of inestimable value. The variety in question is stated to be absolutely mildew proof. The raiser, Mr. Wm. Rumsey, of Joyning's Nurseries, Waltham Cross, has tried it side by side with other varieties during seasons when mildew has been very prevalent, and although other varieties in close proximity have been attacked Mrs. Rumsey has escaped without a spot. The flowers exemplify a capital form and a delicate and beautiful shade of rose-pink. They are produced in abundance from June to October. One important feature is that the flowers are borne on long stalks, and as these are well clothed with clean and healthy foliage the blooms appear to great advantage. The variety is a sport from Mrs. George Dickson, and there is little difference in vigour, health, and profusion of flower between the two varieties. For pot work or outdoor cultivation Mrs. Rumsey is alike good.

THE CUCKOO.

I HAVE been a little amused by your notes on the treble note of the cuckoo. There are some things in connection with everyday life that are not a little curious, and this treble note of one of the most familiar birds we have is one of them. It is curious, because so seldom noticed by the many who are ever on the alert to hear the first notes of this bird, which gives promise of brighter and warmer weather; and curious because of the reasons assigned for it. My schoolboy impressions respecting this treble note are very lively, the explanation given to me some of the old boys being that as eggs were getting scarce, the cuckoo could not get enough to moisten his throat properly, and in consequence of having to make an extra effort to ejaculate cuckoo he overshot the mark, and instead of cuc-koo" he sang "cuc-cuc-koo."—*W. B. G.*

HELIANTHEMUM MRS. EARLE.

THE Sun Roses, or Rock Roses, as they are popularly called, are exceedingly pretty and useful little plants. Planted on dry sunny banks, where other plants would not grow they soon cover the ground with a carpet of their long trailing growths, and as their brightly-hued flowers are produced freely they form quite a picture. There is a considerable range of variation in the colours of the flowers and a still further addition has been made in H. Mrs. Earle, which has large, very double, bright crimson flowers. We were quite struck with its appearance during a recent visit to the Messrs. Barrs' Long Ditton Nurseries, where batches of each variety were growing side-by-side.

EUCALYPTUS CITRIODORA.

THE value of the Eucalypti as sub-tropical bedding plants is only imperfectly grasped as yet. E. globulus is coming into great favour for this purpose, and its peculiar glaucous hued foliage is at once distinct and ornamental. Apart from this the fragrance emitted by the leaves has many admirers. E. citriodora, however, is far more noteworthy on this account for its fragrance, is similar to and fully as powerful as the popular Aloysia. It is thus in request for pot work in conservatories, but might also be utilised in the sub-tropical garden since it will succeed under the same treatment as the more vigorous looking E. globulus. We lately observed a remarkably fine lot of plants with Messrs. Hugh Low & Co. at their nurseries at Bush Hill Park, Enfield.

THE FLOWER GARDENS OF VICTORIA (AUSTRALIA).

(*Continued from p. 597.*)

The end of August and beginning of September see the plant-life awakening everywhere. Plants can almost be seen to grow in the humid air and soil; all the fruit trees leaf and blossom; the grass and Cape weed, introduced by the late Baron Von Mueller, with its lovely composite bright yellow flowers, are a treat to behold; and now, where once hard-baked clay was to be seen, with not a trace of verdure, there spring up, as if by magic, all sorts of flowering grasses and weeds, which seem to fairly revel in their new existence. Gardens are in their gayest attire, and need lots of weeding and cleaning. This continues until the end of October, when the first faint hot breaths begin to be felt, just sufficient to remind the flowers that their time of trial is coming. So we come round to the warm summer days again in November.

I shall now speak of the gardens and their occupants in these respective seasons, trying to put a mental picture before your eyes, a picture as seen and described by one who is pleased, as an amateur, with the scene, and tries, however imperfectly, to describe it to you, who may in comparison be looked upon as a true artist.

Beginning at the commencement of summer—viz., in November—one finds the gardens looking very gay and full of freshness. Geraniums of all sorts grow and bloom in great profusion. Columbines, Foxgloves, and some late Freesias, Cowslips, Primroses, Polyanthuses, and other late spring bloomers are growing almost, if not quite as well, as in any English garden. Auriculas are less common, but cultivated in the higher altitudes to great perfection. Pelargoniums make a splendid array, and grow in almost any locality to the verge of wildness and in the greatest variety, the fine pink one known to us as the "Azalea" Pelargonium being especially fine and a free grower, blooming well in the hottest weather. Carnations are in almost every garden, and are remarkably fine, the large delicate pink one being a general favourite. The White Prince and the Clove-scented dark crimson share this honour also. I have seen nearly an acre of these lovely scented plants in one nursery, the perfume from the flowers being exquisite. Petunias thrive amazingly, and with a minimum of attention. Whites, purples, pinks, single and double Phloxes are easily grown, and afford an immense variety of colour.

Pansies and Larkspurs can be kept blooming nearly all the hot weather with very little care, while Ericas, Epacris, and Heaths are plentiful and of all varieties, the Australian climate seeming particularly suited to them. Many varieties are indigenous, and may be found in the wild state in many scrub-covered places in New South Wales. Irises do well, and make a splendid show in the earlier summer months, the Japanese Flag Irises being particularly fine, with their handsome foliage and large Clematis-like flowers, both single and double, and from 5 ins. to 7 ins. in diameter, varying in colour from the darkest blue to rose, salmon, red, purple, crimson, pure white, orange-yellow, striped and blotched. Our climate is also specially suited for the Amaryllis family, and they require little care, and the flowers of white, rose, vermilion, maroon, and purple are a treat to see, so well do they blossom. Tecomas, Sweet and Everlasting Peas require plenty of water and looking after. Balsams, Gladioli, Dahlias, Cockscombs, Asters, Marigolds fairly blaze in the bright sunlight. In fact for the latter flower the heat seems to be essential for the proper development of the blooms, and a border of these on the lawn at our big racecourse at Flemington on the day of the running of the Melbourne Cup race has gained a world-wide fame for its lovely sight. Fuchsias, Pentstemons, Foxgloves, Hollyhocks, Zinnias, Coreopsis, Cinerarias, Stocks of all hues, single and double, bloom well, but require plenty of hose and attention.

When summer is at a white heat, so to speak, and many gardens are looking a little seedy, those who have planted Mesembryanthemum and Portulacas are well repaid. It is a fact that the hotter the day the better do these bloom. The former grow wild on all the seacoast cliffs, and when in the garden and cared for are simply dazzling in brilliancy. Golden yellows, pale crimsons, and snow-whites, all look at their best, and their icy-like thick leaves have a cool appearance. Nasturtiums also seem to revel in the heat, the leaves growing as large as good-sized dinner plates, and on any fence or wall this beautiful plant grows ranker than a weed, and the strange admixture of colours, due to the bees, I believe, presents an ever varying sight, while the green leaves are a delightful rest to the eyesight in days almost too bright.

CARNATION DUCHESS CONSUELO.

UNDER the name of Duchess Consuelo, given in compliment to the Duchess of Marlborough, a group of this grand new yellow self Carnation was exhibited at the Temple Show on the 26th, 27th, and 28th ult., by Mr. T. Whillans, gardener to his Grace the Duke of Marlborough, Blenheim, Woodstock. Last year it was exhibited at the Drill Hall, Westminster, and received an Award of Merit from the Royal Horticultural Society, and the present is a suitable time to explain that it was so distinguished under the name of Admiration. The alteration has been sanctioned by the R.H S., after due application to the floral committee of that body. The variety had not been put into commerce so that the alteration was easily effected. The name now applied to this variety will be understood as being in the nature of a worthy compliment to the gracious mistress of Blenheim, who, it is said, is a great admirer of this class of plants and of this variety in particular.

For many years past Carnations have been a leading feature in the ranges at Blenheim and the success that attends their cultivation there could not be better exemplified than by the superb quality of the specimens of the pink Souvenir de la Malmaison var. Princess of Wales, that were included in the attractive and much admired group of Carnations staged by Mr. Whillans at the Temple Show last week.—*J. E. J.*

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were made by the Royal Horticultural Society at the Temple Show on the 26th ult.

Orchid Committee.

ODONTOGLOSSUM CRISPUM STARLIGHT. *Nov. var.*—The flowers of this beautiful variety are large, heavily washed with rosy-purple on a white ground, and thickly spotted with purple all over. The sepals are elliptic, the petals triangular and deeply jagged. The small plant exhibited by R. Brooman White, Esq., Arddarroch, Gaerlochhead, carried half a dozen handsome flowers. First-class Certificate.

CYPRIPEDIUM CHAPMANI MAGNIFICUM. — This grand hybrid variety, raised between C. bellatulum and C. Curtisii, and which received an Award of Merit from the R. H. S. on the 11th ult., was again brought before the Orchid Committee at the Temple Show and received the coveted First-class Certificate. It is really a handsome hybrid. R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell.

LAELIOCATTLEYA LADY WIGAN. *Nov. hyb. bigen.*—This handsome bigeneric hybrid was raised from Laelia purpurata, crossed with Cattleya Mossiae aurea. The sepals are blush, and the petals blush-pink, but altogether delicate and pleasing. The huge lip is nearly white with bold, purple lines, radiating from the base of the lamina, the throat is golden and the tube lower down is marked with purple lines. It is a charmingly distinct form First-class Certificate. Messrs. J. Charlesworth & Co., Heaton, Bradford.

LAELIA PURPURATA ASHWORTHIANA. *Nov. var.*—The sepals of this variety are blush or nearly white. The petals are the feature of the flower, being ovate, 3½ in. long, and 2 in. wide, white at the base and apex and dark crimson-purple in the middle. The lip is crimson-purple except at the apex which is rose; and the throat is lined in the usual way. The width of the petals is remarkable. First-class Certificate. E. Ashworth, Esq., Harefield Hall, Wilmslow, Cheshire.

ODONTOGLOSSUM SCEPTRUM AUREUM. *Nov. var.*—The usual brown colour is washed out of the sepals and petals of this variety, leaving the blotches of an old-gold hue. The petals are thickly spotted with old-gold, the lip having a large blotch of that hue, while the ground colour throughout is yellow. It is choice and pretty. First-class Certificate. W. Thompson, Esq. (gardener, Mr. J. W. Stevens), Walton Grange, Stone, Staffs.

LAELIOCATTLEYA TYNTESFIELDENSIS. *Nov. hyb.*—The parentage of this hybrid has not been recorded, but it has much of Cattleya dowiana aurea in it. The sepals and petals are soft creamy-yellow, veined with rose. The lip is of a warm red hue, shaded with maroon and marbled with yellow towards the base

It is certainly very handsome. First-class Certificate. G. W. Law Schofield, Esq. (gardener, Mr. G. Shill), New Hall Hey, Rawtenstall, Manchester.

LAELIOCATTLEYA SCHILLERIANA HARDY'S VAR.—The flowers in this case are very large, with brown sepals and petals, spotted crimson. The lip is deep o sy purple netted with white; and the tube is lilac externally, and white internally, lined with purple. First-class Certificate. F. Hardy, Esq. (gardener, Mr. T. Stafford), Tyntesfield.

ODONTOGLOSSUM CRISPUM QUEEN VICTORIA. *Nov. var.*—The flowers of this grand variety are large with overlapping segments, which are white, tinted with pink and having a large, often horse-shoe-shaped, reddish-purple blotch in the centre of each. The lip is white with several spots round the disc. First-class Certificate. A well-grown plant with handsome flowers was shown by Messrs. Hugh Low & Co., Clapton.

SPATHOGLOTTIS AUREA CD. WITH VIEILLARDI. *Nov. hyb.*—The sepals of this new hybrid are oblong and yellow, while the petals are oval-elliptic, yellow and spotted with crimson on the face, and finely marbled on the back. The outer face of the sepals is of a rich rose. The three-lobed lip is yellow and heavily overlaid with a rich glowing carmine, particularly the lateral lobes. The lanceolate leaves are 12 in. to 16 in. long. It is a beautifully distinct form. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

LAELIA PURPURATA FASTUOSA, *Nov. var.*—The lip is the leading feature of this beautiful variety, being of an intense crimson-purple, lined with purple on a creamy-white ground in the tube. Award of Merit. A. Warburton, Esq., Vine House, Haslingden.

COELOGYNE DAYANA DELL VAR. *Nov. var.*—The small plant of this variety exhibited by Baron Schroder (gardener, Mr. H. Ballantine), The Dell, Egham, had larger flowers than the huge and well-flowered specimen of the type also shown by him. The sepals and petals are pale yellow and the lip rich brown, closely lined with white, and having eight white plates on the disc. Award of Merit.

CATTLEYA MENDELII MADONNA. *Nov. Var.*—The colours of this new variety are soft and beautiful. Both sepals and petals are white, the latter being finely crisped at the edges. The white lip has a large purple blotch on the centre; the throat is soft yellow, and the tube pale purple and yellow. Award of Merit. Messrs. W. L. Lewis & Co., Southgate, N.

ODONTOGLOSSOM EXCELLENS RICHARD ASHWORTH. *Nov. var.*—The flowers of this pretty and distinct variety are as pale as we have ever seen in this type. The sepals are creamy-yellow, darker at the margin and have a purple blotch in the centre. The petals have one to three blotches, or are sometimes without a blotch at all. The lip is white, with an intense purple blotch in front of the crest. The plant bore a panicled stem 2½ ft. high. Award of Merit. Richard Ashworth, Esq., Ashlands, Newchurch, Cheshire

ANOECTOCHILUS SANDERIANUS.—The broadly elliptic leaves of this fine foliage Orchid have emerald green veins in the centre, and cross lines of the same hue, while the spaces between them are olive green. The cross network of veins is often reddish or yellow. The combination of colours is strangely and exquisitely beautiful. Award of Merit. Messrs. F. Sander & Co., St. Albans.

CATTLEYA MOSSIAE EMPRESS QUEEN. *Nov. var.*—The flowers of this grand variety are of great size with blush pink sepals and petals. The lamina of the lip is white with a purple disc; and there is a large, clear orange blotch in the throat, while the tube is purple, lined with white. Award of Merit. Messrs. Linden, L'Horticulture Internationale. Brussels.

ODONTOGLOSSUM PESCATOREI IMPERIALE. *Nov. var.*—The large intense purple blotch on the centre of the sepals, and the two or three smaller ones on the petals are the feature of this variety. There are also three purple blotches in front of the disc of the the lip. Award of Merit. Messrs. Linden, L'Horticulture Internationale.

ODONTOGLOSSOM EXCELLENS THOMPSONI. *Nov. var.*—The large chestnut-red blotches on the sepals and petals are the feature of this variety. The petals have also a white central area. The lip is soft yellow with a large blotch in front of the crest. Altogether it is a handsome variety. Award of Merit. W. Thompson, Esq.

ODONTOGLOSSOM CRISPUM ANNIE. *Nov. var.*—The rosy tinted white sepals have a few brownish-purple blotches in the centre; and the petals have one large and several small purple blotches. There is also a semi-circular brown blotch in front of the yellow crest. Award of Merit. W. Thompson, Esq.

ODONTOGLOSSOM CRISPUM PEETERSII. *Nov. var.*—The sepals and shallowly-toothed petals have a large brownish-purple blotch in the centre, or it is broken up into two or three. The petals also have a band or line of small spots just within the margin, and these alone distinguish the variety from Mrs. Peeters, which has a solid band of colour just within the margin. Both sepals and petals are also heavily coloured with purple externally. The lip is white, with a few reddish-purple blotches. It is certainly a handsome variety. M. A. A. Peeters, St. Gilles, Brussels.

CYMBIDIUM CANALICULATUM.—The flowers of this species are small, greenish-yellow, with a maroon blotch on the lip, and borne on a long raceme. It is a very rare species in cultivation. Botanical Certificate. Messrs. W. L. Lewis & Co.

COELOGYNE ASPERATA LOWII.—The ovate sepals and lanceolate petals are pale yellow, and the lip is bright rusty-red on a creamy ground, with two corrugated ridges along the centre. Botanical Certificate. Messrs. Hugh Low & Co.

CYPRIPEDIUM CONCO-BELLATULUM. *Nov. hyb.*—This is a showy hybrid intermediate between the parents, C. concolor and C. bellatulum. Award of Merit. Thomas Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, near Manchester.

Floral Committee.

PHYLLOCACTUS SYRENS.—The flowers of this variety are of medium size for the genus, yet, nevertheless large. The outer petals are of a deep rose, tinted with scarlet; the inner ones are oblong, rounded at the end, and of a warm rosy-pink, contrasting with the great brush of white stamens. It is a charming flower of soft colours. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

PHYLLOCACTUS ADONIS.—The flowers in this case are large, with the outer petals of a deep rose, and the inner ones of a soft lilac shade, tinted with rose. The stamens are white. It is a delicate and charming flower of a soft and uncommon colour. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

BEGONIA DIAMOND JUBILEE.—The golden yellow flowers of this double tuberous variety are of great size with broad, rounded petals arranged round several centres. The leaves are narrow, and of a deep olive green, while the plant is dwarf and of excellent habit Award of Merit. Mr. John R. Box, Croydon, and West Wickham.

DAVALLIA HIRTA.—A large and well-grown plant of this useful exhibition Fern was exhibited by Messrs. F. Sander & Co., St. Albans. The plant was 6 ft. in diameter, and the long, arching fronds of a rich dark green colour. First-class Certificate.

PETUNIA MRS. FRED. SANDER.—A large quantity of this variety was shown by Messrs. F. Sander & Co., in their group of new plants. The flowers are of huge size, and compactly double, with wavy and beautifully crisped soft rose petals. Award of Merit.

ARISAEMA BAKERIANA.—The spathe of this species is brownish olive green, and the upper part is arched over the opening. The spadix is brown, with a long, drooping, singularly fringed tail. Botanical Certificate. Messrs. F. Sander & Co.

CLEMATIS DUCHESS OF ALBANY.—The flowers of this hybrid are deeply cup-shaped with four erect sepals that are pink externally and rose internally. A large plant shown by Messrs. Geo. Jackman & Son, Woking, was profusely flowered and attractive. Award of Merit.

BEGONIA QUEEN OF QUEENS.—The golden-apricot hue of the flowers is quite a new shade amongst double tuberous Begonias. The petals are broad and rounded, making the flowers appear refined and handsome. The foliage is deep olive-green, and the plant of dwarf, branching habit. Award of Merit. Mr. John R. Box.

AZALEA RUSTICA FL. PL. FREYA.—This is one of the deciduous Azaleas, and bears large trusses of salmon-apricot, double flowers. For large beds on the grass this should prove useful and handsome. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

AZALEA RUSTICA FL. PL. Ribera.—While the plant is similar in all respects to the last named, the flowers are white tinted with blush in the centre, and with pink externally. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

CALADIUM LADY STAFFORD NORTHCOTE.—The The leaves of this handsome and striking Caladium are almost of a uniform rich dark crimson, triangular in outline, and measure about a foot across each way. It is a novelty for 1898. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

CALADIUM MRS. MCLEOD.—The shield-shaped leaves of this variety are of a uniform, deep salmon-red with carmine veins, and very handsome. They measure, at present, about 9 in. by 6 in. The variety will be sent out amongst next year's novelties Award of Merit. Messrs. J. Veitch & Sons, Ltd.

CROTON HER MAJESTY.—The linear leaves of this graceful and useful variety are golden yellow on the lower ¼, ½, or ¾ of their length, the rest being dark olive green. Award of Merit. Messrs. Fisher, Son & Sibray, Handsworth Nurseries, near Sheffield.

CLEMATIS MARCEL MOSER.—The huge flowers of this variety consist of eight or nine elliptic sepals of a soft-violet mauve, banded with red along the centre. They measure 6 in. to 9 in. across. The variety is very vigorous, and flowers from June to October from the old wood. It belongs to the C. lanuginosa group, and is very handsome. Award of Merit. M. Moser, Versailles, France.

RHODODENDRON FL. PL. MADAME MOSER.—This has every appearance of belonging to the R. ponticum type, having oblong, dark green leaves. There are few double varieties amongst this type. The flowers are of a deep crimson-red, and semi-double with crisped petals. Award of Merit. M. Moser.

PYRETHRUM WILSON BARRET.—The flowers of this variety are large, perfectly double, with a high centre, entirely quilled, with exception of the outer rays, and of a deep rose-purple. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

IRIS LUPINA.—The falls of this dwarf Iris are broadly oblong and greenish with a large maroon blotch in the centre, and numerous small and paler spots almost hiding the green. The standards are very broad, roundly-obovate and incurved over the centre of the flower. They are violet with dark violet nerves and spotted internally. Award of Merit. Messrs. R. Wallace & Co., Colchester.

CARNATION ARTEMUS.—The large double flowers of this variety are of a rich scarlet heavily banded with dark heliotrope and very beautiful. The plant is a vigorous grower attaining a height of 2½ ft. or more. Award of Merit. Martin R. Smith, Esq. (gardener, Mr. C. Blick), The Warren, Hayes, Kent.

CANNA COMTE DE BOUCHARD.—The flowers of this beautiful Canna are of large size, and golden yellow, thickly spotted all over with scarlet. Award of Merit. Messrs. Paul & Son, Cheshunt.

FICUS RADICANS VARIEGATA.—The leaves of this climbing Ficus are lanceolate, acuminate, with a creamy-white margin, varying greatly in width. Award of Merit. Mr. Wm. Bull, 536, King's Road, Chelsea.

Fruit and Vegetable Committee.

TOMATO GOLDEN JUBILEE.—The fruits of this new Tomato are of medium size, flattened, and of a rich golden yellow, more or less flushed with orange-red. It was raised from Golden Princess, crossed with Frogmore Selected, and is even more handsome than Royal Windsor which received an Award of Merit on the 27th April last. First-class Certificate. Mr. Owen Thomas, The Royal Gardens, Frogmore, Windsor.

MELON DIAMOND JUBILEE.—The fruits of this variety are oval, about 4 lb. to 5 lb. in weight, yellow, and finely netted. The flesh is white, of great thickness, juicy, melting, and highly flavoured. Award of Merit. Mr. C. Herrin, The Gardens, Dropmore, Maidenhead.

A RAMBLE UP THE CHESS.

IF summer is the season of love, then spring, "gentle spring," is surely the time when those who have grown old in this love, feel, with Thomson, that Nature—"Fills every sense, and pants in every vein." But, unfortunately, the "gentle spring," like the "season of love" is, very often, so mixed up with adverse circumstances that it is difficult to distinguish a line of demarcation. However, in the flowery prime, nature lovers are not easily deterred from re-visiting old haunts, or seeking "fresh fields" or "new" woods, or breezy heights. But,

somehow or other, Easter seems to be associated with Eurus, the east wind; and, certainly, the Easter—with its several consecutive days—of 1897 was no exception to the rule, for Eurus was out and about, and rudely blew his ruffian blasts with measured force and full. There is an old and a cold couplet that begins "when the wind is in the east" —but, I refrain. Eurus does good work, he has his offices to perform, and some of these are to abstract the lingering moisture; dry up the dank and stagnant places, check the too precocious bud, or mellow the saturated soil. But, Eurus or no Eurus, "hope springs eternal in the human breast," and impels one forward, so to speak, toward the sights and sounds of the country—toward the opening buds, or fully expanded flowers, toward the voices of the feathered songsters, or the "colours of the flushing year."

Without further parley, then, we will assume arrival at Rickmansworth by the Metropolitan Railway; thence we cross and recross the line and find ourselves in the fine old Park admiring the Chestnuts, the Beeches, the Walnuts, the Oaks, and the Pines, to say nothing about the smaller fry which have been planted to replace the ancient monarchs of this old-time demesne. One, cannot, however, help noticing the remarkable floriferousness of many of the ornamental species, as for instance, the Wild Cherry, which, by reason of the general paucity of foliage, stands out conspicuously beautiful among the many other arboreal types of beauty which, collectively, go to make up the specific character of English scenery.

The manor which is occupied by J. W. Birch, Esq., J.P., F.R.G.S., is also a survival of more stirring times, although its present position and surroundings give it a charm and a superiority no one would care to dispute. The Park itself is elevated and undulating; hence fine views of the valley of the Chess are always in evidence. Moreover, the Park abounds in fallow deer, horned sheep, a numerous progeny of playful lambs—black and white—and groups of liquid-eyed alderneys chewing the cud, ever and anon swishing the tail, as some troublesome fly digs its mandibles into the side of its pretty victim. It is, withal, a rural scene; a quiet peaceful picture; and may well induce consolation and repose in those who are jaded by toil and moil—those who are part and parcel, as it were, of the city's haste and the city's hum.

Having, then, compassed the Park, we are made aware by the sound of falling water that the Chess is near at hand. In a few more minutes we are on the little bridge which spans the river, and audibly conscious of the appropriateness of the term "Loudwater," by which the hamlet is known. The Chess is a limpid, noisy, rapid-running little river,—noted for its trout,—which rises in the neighbourhood of Chesham, and loses itself at Rickmansworth, where its individuality becomes merged in that of the Colne, which again, lower down, goes to swell the bosom of old father Thames.

After commenting on the blue of the cultivated Myosotis and the colour of the Tulips near by, we push up the water-way, or as near to it as the owners of property on its beautiful banks will permit. In a semi private plantation we pass through we notice a fine cluster of Viola canina nestling at the foot of a Scotch Pine; here also a specimen of Myosotis sylvatica is unfolding its premature flowers. Of course such things as the purple and white Dead Nettle, Dogs' Murcury, Ground Ivy, Stitchwort, Wild Strawberry, etc., bestrew the way. The cuckoo, too, is on the wing, and the woods resound with his plaintive note. The Blackthorn spreads out its small white Rosaceous flowers to the sun and the breeze, while its congener, the White species, is only now preparing to greet the merry month of May. By the side of the sluggish pool the small black Sedge luxuriated, or the square stemmed Figwort is marshalling its forces for June and July. As we wind our way up stream, the surrounding hills, crowned in many cases with large plantations, and dotted about here and there with pretty residences lend such colour and interest to the ramble as no flat marshy district ever could possess.

In a hilly or undulating country one feels more exuberance—the blood seems to course through the veins more freely, than when one step is similar to another step, and no upward progress is effected. Gardeners may well get away occasionally from their artificial environments, not only for the sake of the diversion of their thoughts, but for the valuable hints which Nature is sure to furnish to those who will only try to read aright. Moreover, the country just now is—

"Full of fresh verdure, and unnumbered flowers," many of which are worthy a place in the best kept gardens, nothwithstanding the fact that hardy exotics are so numerous as to be quite confusing. But here is another old bridge over the Chess, on which we linger for awhile—and then—after a slight detour, due to an old man who misdirected us, and who was singularly ignorant of his whereabouts, or what he was doing—elect the water-meadows by the side of the bubbling stream. The old man here referred to was gathering Hogweed, or Cow-Parsnip (Heracleum Sphondylium) for his rabbits, but he knew not its name; in fact, he knew nothing except how to send us out of our way.

However, the path is again gained and we are soon noting the floral gems by the wayside,—the blue Veronica, the larger Celandine, the Dog Violets, the pale Primroses, the wild Hyacinths, or the Lady's Smock "all silver white." But, best of all, were the Marsh Marigolds, which, in a more or less inaccessible place were glowing with colour; and such colour too—a bright, shining, golden sheen, which affected the mental vision so much that when a detestable "notice" board was observed, its most objectionable clauses appeared to be written in letters of gold. Hence we had to beat a retreat, but—we had seen the Marsh Marigolds. The Cowslip, too, is nearly as popular as the Primrose, and with Montgomery we can say:—

"Now in our walk, with sweet surprise
We see the first spring Cowslip rise."

And bearing this in our mind and the poetry of Nature generally, we cross and re-cross our favourite Chess, mount a serpentine road, and before we are quite conscious of the truth are in the "sweet little village" of Chenies, a description of which, however, must be held over until the Editor of the GARDENING WORLD can find space to permit a rambler to ramble on.—*C. B. G., Acton, W.*

VEGETABLE CALENDAR.

THINNING CROPS.—The recent rains will have moistened the ground sufficiently to facilitate operations of this kind, and advantage should be taken to bring up arrears and complete the work among root crops. Beet may be left 9 in. apart, Parsnips the same, Carrots a little less distance; but no hard and fast line need be adopted. The principal point is to select the most vigorous and healthy plants in the rows, and remove the surplus plants with as little disturbance to the permanent ones as possible. This work is best performed by hand, and where the space between the rows has been kept clear of weeds, the work may be done rapidly. A light hoeing, a day or two after thinning, will fill up any holes, and destroy any weeds germinating, and give the crops every chance to start into vigorous growth.

TURNIPS.—It will be quite safe now to make a liberal sowing of approved kinds. Where quality is the first consideration, Veitch's Red Globe stands unequalled. The ground should be in good condition, and deeply worked for this crop, and previous to sowing a dressing of soot or guano will greatly assist the young plants to make a healthy start. Should the weather be dry the drills may be watered with a weak solution—1 oz. to a gallon of water—of sulphate of ammonia. This will act as an excellent stimulant, and also promote quick germination. Tread the seed in firmly, and dust the young plants over with lime or soot on their first appearance to check the fly.

BROCCOLI AND BORECOLE.—The latest crops of these should be sown in an open position and in good land. Veitch's Model is one of the best and most reliable late Broccolis; while of Borecoles, the Asparagus Kale is the best, hardiest, and most prolific. Where plants of the earlier kinds, such as Snow's, are strong enough for planting, advantage should be taken to get them out on some good strong land during showery weather.

BRUSSELS SPROUTS.—It is most important that this vegetable have a good long season for making growth; and where the earliest sown plants have not yet been got out no time should be lost in doing so. Where land is not limited, ample room should be given this crop. About 2 ft. 6 in. between the rows, and 2 ft. apart in the rows is the least that should be allowed for full development. Good deep drills drawn at planting time will facilitate watering until the plants are well-established; and when filled in later in the season the slight covering given the surface roots will give an impetus to growth.

PEAS.—The season for sowing these with the certainty of securing good crops will soon be past; and the present time is a good one to make a liberal sowing for late summer use. Two good kinds for getting in now are Dr. McLean and Stratagem. Both are moderate growers, good croppers, and first-rate in quality; and stand hot or damp weather better than many other kinds. It will be necessary to give liberal treatment from the moment the plants are up, as a check from drought or other causes will tell seriously against a full crop.

RUNNER AND DWARF BEANS.—If not done, a successional sowing of these should be got in. The Runners sown now will retain their vigour until late in the autumn, and give full crops until cut down with frost. A few rows sown in a sheltered position and grown without sticks, often prove useful in autumn; as a light covering thrown over the rows, will retain them from injury until a late period of the year. A liberal sowing of the dwarf form of Canadian Wonder will give a long supply of fresh beans, as this kind, under the best treatment, is almost perpetual bearing. Crops of these advancing should be encouraged in every way to get them into early bearing.—*J. R.*

THE ORCHID HOUSES.

ROOT GALLS ON CATTLEYAS.—Although the cause of these is not to be dreaded quite as much as the fly that attacks the young growths, it is a very troublesome little insect, and does a considerable amount of harm if left to its own sweet will. That it is pretty common amongst the plants in their native habitats freshly imported plants testify. As prevention is always better than cure, it is imperative that all newly imported plants should be carefully gone over, cutting away all the old roots that have the least suspicion of being affected before putting them into the house where healthy, unaffected plants are growing. The presence of the fly is easily discernible by the excrescence on the root. If this is cut open one or perhaps two little yellow maggots will be found, which if left there will of course become flies, and in turn will deposit their eggs on the point of the new roots and cause the points to swell to an abnormal size. Like most of these very small insects they do not live long, but what a lot of work they get through!

The best means that we know of for effectually dealing with them, should they happen to have got a hold of the collection, is to use the XI All Vaporisor every other night until no trace of them can be found; and cutting away and burning the affected parts.

LAELIA PURPURATA.—This truly magnificent Orchid still holds the sway as an exhibition plant. Its commanding style of growth, and the richly-coloured flowers that surmount a well grown specimen always appeal to the public, and it goes without saying that what pleases the public generally pleases the judges.

Its culture, too, is such that it need not be a source of trouble to those that are in a position to treat it as recommended for Cattleyas and Laelias generally. The plants being tall growers we accommodate ours with a position on the middle stage of the Cattleya house. Here they get a fair amount of light, air, and moisture, but are rarely allowed to become sodden, as I believe that too much moisture at the roots does more harm than good by causing the roots to decay prematurely.

EPIDENDRUM VITELLINUM MAJUS.—For some reason or other this brilliantly coloured Orchid does not as a rule stay long. We are inclined to think that we try to grow it too cool, for one thing, and keep it continually on the move—to its detriment.

Some few years ago numerous Orchids were killed annually by being subjected to too much heat and heavy shading, and now I am afraid we are—in our endeavour to keep down the fuel bill—getting dangerously near the other extreme. With the above Orchid I feel certain that cool treatment in winter is a mistake, and since adopting a slightly warmer course of treatment it has done much better. —*C.*

HINTS FOR AMATEURS.

Lupinus polyphyllus.—Although there are many charming herbaceous plants in flower at this season of the year, there is none that is more effective and conspicuous than Lupinus polyphyllus, and its charming varieties. The plant is a native of Columbia, from whence it was introduced about the year 1826. It has certainly made the best of the eighty years or so during which it has been cultivated in this country, for it would be hard to find a herbaceous border that does not contain a few specimens. Naturally it is of stately habit, a very free bloomer, hardy and easy to grow, and when cut lasts very well in water. Now as the value of the herbaceous border to a very large extent lies in the supply of materials for filling vases, &c , that it gives for a very great part of the year, it is manifest that the Lupine, with its good standing qualities should not be lacking. For filling large vases, which require tall showy subjects as a base for the smaller and lighter stuff, it is well suited. Besides growing it in the herbaceous border, it is also very suitable for planting in semi-sheltered spots in the wild garden, for in such positions it grows with great luxuriance.

In addition to the type, which has dark blue flowers and runs to about 4 ft. in height, there are several varieties that are well worth growing, the two principal ones being the following :—

L. p. albus, as the name signifies, is a white form, and one of great beauty and value. When the flowers first open there is a creamy-yellow shade about them, but this soon goes, and pure white is left. It is rather shorter than the type, being about 3 ft. in height, but occasionally when doing well there is little difference in stature to be observed between the two.

L. p. Foxii is a kind of intermediate stage as far as colour is concerned. The flowers are dark blue striped with white. The white is most conspicuous upon the upper petal or standard, where it is confined to the centre of the petal, the margin being of dark blue; but as the sides of the standard are folded back, the white and not the blue is seen by the casual observer. In height this variety grows from 3 ft. to 4 ft.

The name of the genus is said to be derived from the Latin *lupus*, a wolf, from a malign influence that the plants were supposed to exercise upon the soil, viz., that of destroying or impairing its fertility. It is almost needless to say that this fallacy has been long exploded—to the advantage of the Lupine and lovers of flowers as well.

Linum grandiflorum.—This is a hardy annual, and thus unlike L. narbonense which is a perennial, but it possesses the same free flowering qualities, and is nearly, if not quite as useful, although much dwarfer in habit. The flowers are rather larger and crimson-rose in hue. There is a form named L. g. rubrum which is equally good. Both these forms do not bear transplanting well, and thus it is advisable to sow them in patches at the beginning of April in the herbaceous border or rockery in the places where they are intended to flower. By this time the seedlings will have reached a good height, having grown wonderfully since the recent showers after the drought of the greater part of May. It will be well, therefore, to put in a few light stakes round the clumps and connect them with fine strands of matting. This will be all the support required.

Japanese Maples.—At least one useful feature of the late Temple Show was the way in which the decorative value of the so-called Japanese Maples was brought into prominence, three exhibits of them having been made by different firms. These groups were justly admired by visitors, many of whom were heard to remark that they had no idea that such pretty little trees could be grown in small pots. That is usually the *crux* of the whole matter, "if people only knew." It would be very difficult to find prettier foliage plants for the decoration of conservatories and small villa gardens than these. At an early age the plants exhibit the mature characteristics of colour and cutting of the leaf, while there is apparent none of that hideous distortion that marks the dwarfed Japanese plants in the Royal Botanic Society's Gardens at Regent's Park, which were referred to in a recent issue. When grown in pots, and fed during the growing season with liquid manure it is astonishing how long the plants will remain in health and condition in the same pots; indeed they always seem to do better when thoroughly pot-bound—a state of affairs that many plants would not stand. Naturally enough the quantity of water that such pot-bound plants require is very great, and during hot weather it is very difficult indeed to give them too much. On this point it is to be feared that many amateurs fall short. Comparatively few seem to know the quantity of water that should be given at one time in order to soak the balls of the plants properly. As long as the surface looks damp they think it is all right, when in reality it is all wrong. It is of importance, therefore to warn intending cultivators against the practice of giving water in dribbles.

There is a great number of forms in cultivation; thanks to the care and assiduity with which our nurserymen have developed new varieties. They are all the progeny of two species, viz. A. japonicum and A. palmatum, and these two have proved extremely variable under cultivation. The following will be found a good selection, although it does not by any means exhaust the list, but is simply representative.

A. palmatum itself attains to a height of about 20 feet in its native country, Japan. It was introduced into this country in or about the year 1820.

A. p. atropurpureum has bold leaves with large lobes, bronzy-purple in colour. This form readily assumes a dense, bushy habit, and is most effective in shrubberies near to the house.

A. p. dissectum is a variety with very finely divided leaves. It makes a most graceful pot plant, the foliage being elegant in the extreme. There are several sub-varieties of this, differing from each other in the colour of the leaves. A. p. d. purpureum has very fine bronzy-copper foliage. A. p. d. variegatum affords a strong contrast to this. The leaves are bronze-green, variegated with light pink and white. A. p. dissectum and its forms are deservedly great favourites.

A p. flavescens has the leaves not so deeply divided as the afore-mentioned. The lobes too are larger and bolder. The colour is white-green with bright green veins and midribs. Grown side by side with the dark leaved plants, this form gives a charming contrast and is most conspicuous. It is certainly one of the handsomest of the light foliaged varieties.

A. p. septemlobum is very variable in the number of lobes to the leaf, which varies from 5 to 7 as the varietal name foreshadows, and occasionally 8 or 9 are found, so that the name after all is not a really descriptive one. A. p. s. elegans purpureum is well set up for names, but it is a charming form with rich vinous red foliage, very rich and effective in a good specimen. It is not so good in a small state, but the colour improves with age.

A. p. tricolor is bright green, prettily splashed and suffused with rose.

A. p. roseum marginatum has very small palmately five-lobed leaves, light green in colour, with a distinct margin of rose-pink. Small plants of this usually exhibit the characteristic colours and marking to perfection.

A. p. involutum is a curious form with very small leaves divided to ½ or ¾ of their length. They are green with bright red petioles, and the margins are regularly involute.

A. japonicum also reaches a height of about 20 ft. in Japan. It was brought to this country in 1863, that is 43 years after the advent of A. palmatum. The leaves are large, palmate in shape, and in colour green, slightly tipped with red.

A. j. laciniatum is a very pretty form in which the lobes of the leaves are in their turn cut or laciniated. This laciniation is somewhat variable in degree, but improves the appearance of the foliage, making it look much more elegant.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Watering a Peach Border.—Will you tell me if once a fortnight is too often to water the border of a Peach house? The trees are healthy, and are bearing a fair crop. Is it necessary to warm the water? *Subscriber.*

If the border is well drained and the trees are healthy ones, a fortnight will not be too often to give water during the summer months. If the water is obtained from a pond or tank open to the influence of the sun, the water will be quite warm enough, but if it is taken from a covered tank or well by means of a pump, warm water should be added in sufficient quantities to raise its temperature to 60° Fahr.

Budding Roses.—*M. O.* July is the month for budding. The exact time will depend upon the condition of the briers. When the bark lifts easily the bud may be inserted, but not before.

Potting Chrysanthemums.—*R., Hereford.* If the plants are put into their flowering pots early in next month, they will be in good time. Certainly some people start in May, but only in cases where the plants are either very strong or in the case of the stock being very large, a proportionate length of time being needed to finish potting.

Calceolarias.—*G. North.* The Calceolarias will do very well on the border facing east. They will not get too much sun there, and they seem to like a shady place. C. Golden Gem is, perhaps, the most useful of all, and is very largely grown. C. amplexicaulis is good when well grown. It has very large trusses of pale yellow flowers, and is much later. You may grow both.

In the situation named the blue African Lily, Agapanthus umbellatus, and its white form would do very well. The standing them in water would suit them capitally. Cannas in pots would also do, and even Castor Oil plants. We should not advise you to try Fuchsias.

Wallflowers.—*Mayflower.* Do not delay another day in sowing the seed. It would have been better had it been in three weeks ago.

Cocos weddeliana.—A plant of this that I have had in my sitting room for the last month appears to be in a bad way. The edges of the leaves have all died off, and on looking at the young leaves in the centre, I see that the edges are all tipped in the same way. What can I do with it? *Clara C.*

Give it to a friend who has a warm glasshouse to take care of for you. This Cocos is not a good plant for dwelling rooms, and careful as you may be, we fear you will not be able to grow it under such conditions.

Window Boxes.—*T. Ennerton:* Serviceable and handsome window boxes may be made by nailing together a few planks, and fastening sheets of virgin cork to the side facing outwards. The cork hides all the woodwork and presents a rustic appearance, which agrees well with the plants. If boxes of greater strength are required the services of a carpenter should be requisitioned. Even in such a case the expense should not be heavy.

Rockery.—The situation is too hot and too exposed, *G. Tarleton*, and the plants suffer from the heat of the sun and the drought. Plant a few Lombardy Poplars next autumn so as to throw a little shade. These grow quickly, and, while they do not take up a lot of room or overhang the plants, give the shelter required.

Litter for Strawberries.—*W., Reading.* We should strongly advise you not to use the mowings from the lawn for littering down the Strawberries, unless you would like a grand crop of Daisies which will keep you employed rooting them up. Clean straw is the best thing to use. Failing this, shake out some of the cleanest of the stable litter in the sun, and dry and sweeten it well. If the plants are at all dry give them a thorough soaking of water before you put the litter on.

Tomato on a Wall.—*Amateur.* Three feet run of wall space may certainly be covered by a single Tomato plant if you allow the side shoots to develop. We should prefer, however, to put in three plants instead of one, for you would then get the wall covered more quickly, and your yield of fruit would be heavier. If you have three plants you must take up a single stem only and keep all the laterals pinched out. Be careful to distinguish between the latter growths and the trusses of flowers.

I. Gratus. II. Mrs. Heal.

New Types of Hybrid Streptocarpus (See p. 634).

NEW TYPES OF STREPTOCARPUS.

In our report of the Temple Show last week, we mentioned the fact that Messrs. J. Veitch & Sons, Limited, Chelsea, exhibited five types of hybrid Streptocarpus of which four were new. Three of them are now being put into commerce for the first time, and the accompanying illustration (p. 633), obligingly placed at our disposal by the Messrs. Veitch, shows two of them. Gratus is the older of the two and represents a new race obtained by the crossing of that remarkable species, S. Dunnii with Veitch's hybrids. S. Dunnii is remarkable for possessing only a single leaf, a yard in length, and half that width, when well grown. Such a plant produces an enormous number of tubular, brick-red flowers on a multiplicity of stems arising, apparently, from the base of the huge leaf. Veitch's hybrids have numerous leaves and larger flowers of various colours, and the progeny being intermediate are decided improvements upon the originals. Already there are numerous varieties belonging to this new race which flowers profusely carrying 20 to 30 blooms on a scape. The solitary flower above the plant shows the natural size. Awards of Merit have been granted this strain by the Royal Horticultural Society and the Royal Botanic Society.

The strain known as Mrs. Heal was produced from S. Wendlandii (which is no less remarkable than S. Dunnii for its solitary huge leaf) and a magenta-rose variety of Veitch's hybrids. The progeny is taller than that of Gratus, being 12 in. to 15 in. high, and intermediate between the parents. There are numerous flower stalks from a crown, each carrying a cyme of ten to fifteen large flowers, 1½ in. in diameter or more, as the detached flower in the illustration shows. The tube of this race is relatively wide, bluish-red above and nearly white beneath. The lamina is violet-blue, shaded with purple and very handsome indeed. The throat of the flowers is yellow along the centre, ornamented with maroon spots and streaks and white blotches. Whatever it may give rise to the strain is already full of promise both in the matter of size, colour and abundance of blossom. It has been accorded an Award of Merit by the Royal Horticultural Society.

SYSTEMS OF VINE PRUNING.

Nearly every species of fruit tree cultivated in gardens has to be pruned in some form, either in their early stages of growth, or when the trees are fully developed and have attained the size which the cultivator may desire. To say which is the most satisfactory method to pursue would be difficult to decide, as opinions and manipulation are so varied. Even the Vine, which is mostly cultivated on the spur system, is not exempt from many forms of pruning, and uniform success attends all methods.

Healthy soils, in which there is vigorous root action, are items which are most conducive to success. The system of cutting to the "best bud" had many votaries over 30 years ago, and a few successful men produce excellent fruit in abundance every season by this system still; but this practice is more common in England than in Scotland—where the orthodox system of close pruning is strenuously maintained—there being such antipathy to unsightly Vines in the north that the "best bud" practice is persistently eschewed. Indeed, in my wanderings in Scottish gardens, I have never seen any system of pruning in practice, except short pruning sometimes to one, two, or three buds from the rod. In most cases the well-known successful grape-growers in the north cut very close. They get good bunches, and the extra well-ripened buds produce the most compact bunches, if not always the largest.

I adduce examples which may be seen at leading graperies while I write. At Clovenfords (where there are such marvellous crops of the finest grapes ever seen) the Vines are closely pruned—perhaps with some exception of such sorts as Duke of Buccleuch which have a few more buds left. Muscats are every year of the greatest excellence, and the spurs still remain short. The other Vines are as productive as ever they were. The close proximity to the stores of the well known manure may have something to do with such vitality. There are other large plants well known where immense crops are year by year cut and sent to market in the finest form, and the Vines are closely pruned.

Parkhall is a large place for grape culture, and the grand exhibits of Mr. Murray have testified again and again what that place can produce (Murray & Son now rent the glass), and the crops are not likely to be less nor the bunches and finish inferior to what they have been so long. One long range has been cleared of the Vines, which were increasing in vigour, to make room for Muscats for market. The Forth Vineyards (now very extensive) of Messrs. Buchanan at Kippen near Stirling produce capital fruit, examples of which are often tabled at the large northern shows, and are on the short spur system; but among the champion exhibitors we have seen nothing of "best bud" system of pruning in evidence. Among these are Messrs. Kirk, of Alloa, Rutherford of Airthrey, Leslie of Pitcullen, and others who are as well known on exhibition days at Edinburgh as at their own firesides.

But going back to older champions such as Mr. Meredith, when at Garston (his Black Hamburghs were marvellous examples of high class culture), Mr. Thomson when at Archerfield (and we have on all hands heard that at Drumlanrig the prospect of great crops of first rate Grapes this year almost surpasses the excellence of former years), and the late Mr. Johnstone, of Glamis, we find that they all stuck closely to short spur pruning. Then why do some of our clever friends render their vineries unsightly by what they call their "faggots"? In private places, the proprietors generally look upon order and neatness as an essential warranting the maintenance of their gardens.

It is true that unsightly Vines are seen now and again where the spurs almost meet across the glass from rafter to rafter. A friend told me some time ago, that he could not make up his mind to change his Vines to obviate the "unsightly spurs" as they year by year produced such capital Grapes on bunches four to five pounds each, and a wise man too.

Reverting to long spurs, I once gave advice to a market grower as to how he could find room for his bunches on long gnarled spurs. I advised him to turn his shoots at pruning time, in the opposite direction to that which they had been trained, which took the bunches close to the Vines and was a great success. The lease of the place was nearly run out and this market grower did not wish to loose a crop, or replenish the vineries which were so soon to supply Grapes for a new proprietor. I have often met difficulties by going well out of the usual course of pruning. One was to maintain the supply of Grapes from old Vines with spurs like staghorns for length and crookedness. I let shoots grow to over three feet along the Vines. All the spurs were removed the next year, and the short rods lashed to the old Vines, and the crop and quality of the fruit was most satisfactory. A shoot from the base of the Vine in due course soon displaced the short shoots and old Vines; and by lifting the roots inside one year, and those in the outside border the following season, the best results followed. The summer stopping of shoots is practised in a variety of forms—some keeping to a leaf beyond the bunch, removing all other growths, and others allowing all the growth there is room for. The difference in results is more nominal than real, but the "best bud" method has not yet won our esteem.—*M. Temple, Carron, N.B.*

WISTARIA SINENSIS.

The Wistaria, or Chinese Bean tree, like many other flowering trees, has been exceptionally fine this season. The finest specimen, however, which has come under my notice this year, is at Wargrave, a "sweet, pretty" village on the Thames, near Shiplake. This occupies the entire front of a large red-brick house, with bay windows to match, the colour of the house having a decided effect in throwing into bold relief the bright bluish-mauve, gorgeous-looking drooping racemes of this remarkably free-flowering hardy tree or shrub.

On another house—or rather a series of houses—in the quaint old-and-new high-street, there is one which measures forty-five paces, or about 100 ft.; and, although this is not so showy or compact as the one above-mentioned, it is, I think, worthy of comment. Moreover, this particular specimen acts somewhat in the nature of an advertisement, for does not the "Family Grocer" lie concealed—or so much of him as the exigencies of business will permit—behind the profuseness of its richly tinted, pea-shaped blossoms. Again, the pendent, grape-shaped racemes, remind one of the luscious fruit of the Vine, that remarkable plant which has been subject to cultivation for at least 6,000 years.

The Chinese Wistaria may be seen in remote villages and old-world towns, which speaks volumes for its popularity, seeing that it was not introduced to this country till 1816. Many of the specimens, too, have attained a huge girth, so that they may well be classed as trees, although they seem to require support until they become established, when their true arboreal character becomes apparent.—*C.B.G., Acton, W.*

THE TEMPLE SHOW.

May 26th, 27th, and 28th.

The undermentioned notes constitute the remainder of the report of the Temple Show of the Royal Horticultural Society, prepared for our last week's issue, but unfortunately crowded out for want of space.

STOVE AND GREENHOUSE PLANTS.

Gloxinias of excellent quality were contributed by Messrs. John Peed & Sons. The plants exemplified a very fine strain with large boldly-erect flowers. Many of the plants were this year's seedlings resulting from seed sown in January last. These were accommodated in small 48-sized pots. Besides these there was a number of larger plants in 6 in. and 7 in. pots, all full of flower and in the pink of condition. The foliage was especially good and bore unmistakeable evidences of superior culture. Maidenhair Ferns in small pots were freely used in the arrangement of the group, and the bright and varied hues of the flowers appeared to the utmost advantage peeping out from the setting of soft green. Many of the best forms bore distinctive names. Of these, Beacon was the most conspicuous, not only on account of its numerical strength, for a considerable number of it was staged, but also by reason of the beauty of the flowers. These are fiery crimson-scarlet in colour, shading to deep crimson in the throat. Aigburth Crimson is a still darker flower. It is deep crimson passing nearly to black in the tube, and is a very rich looking and handsome form. John Peed has a broad white margin with a zone of crimson next to it. At the entrance to the throat is a band of rosy magenta, whilst the base of the tube internally is creamy white, dotted brown. Duchess of York is a charming flower, in colour light lilac, spotted with a deep shade of mauve. Both its size and colour assisted in making it very much in evidence amongst the rest of the varieties submitted. The Messrs. Peed obviously know how to grow Gloxinias.

Messrs. J. Carter & Co had also a fine strain of Mimulus, which they have been improving from year to year. The size no less than the colour was remarkable, for the original or wild Mimulus would appear a puny thing by comparison with its modern garden representatives. Strictly speaking there were several strains, with variations of each as noted amongst the flowers. Jubilee is a huge crimson flower with yellow margins to the segments. Princess Beatrice is densely spotted all over with small crimson markings on a white and yellow ground. Ruby is characterised by being of a light, coppery-orange indicating that M. cupreus was at least one of the parents. The flowers of Gloriosa are much darker, being crimson and coppery-orange. Others were notable for the great size of their blotches. All were grown in small 48-size pots.

Messrs. Wills & Segar, South Kensington, contributed a splendid group composed entirely of fine foliage plants. As may be expected from this firm, the arrangement was most effective. A central feature was fine specimens of Kentia canterburyana, K. belmoreana, Stevensonia grandifolia, and Verschaffeltia splendida, backed up with fine plants of Cocos flexuosa, C. Wallisii, and C. Bonnetti. Several new varieties of Alocasia were A. Mrs. Martin Cabuzac, A. argyrea and A. rodriguesiana, all magnificent leaved kinds. Fine plants of Dracaena Lindenii, D. goldieana, and D. latifolia, some splendid coloured pieces of Ananassa sativa variegata, Crotons of various kinds and fine leaved Begonias were very effective, arranged over Maidenhair Ferns, and Asparagus plumosus. The latter was also very effectively used in clothing the stems of the most prominent Palms. Of the smaller growing plants Phrynium variegatum was very effective in the front of the group. This with Tillandsia splendens, Heliconia illustris, Licuala

grandis, Leucostegia immersa, Dieffenbachia Bausei, Maranta kerchoveana and Begonia Marquis de Pirather, and others of a rosy hue added much to the brightness of the group. The fringe was composed of Lycopodium denticulatum, Hydrangea variegata and Panicum variegatum. An undergrowth of slender growing Bamboos, and one variegated kind gave lightness and finish without the appearance of overcrowding.

Mr. W. Iceton, Putney, showed a most effective group of mixed foliage and flowering plants. Palms 10 ft. to 15 ft. high, in the rudest health form a fine healthy background. Blending with these were bright coloured plants of Acer Negundo variegatum. Some fine masses of Lilium Harrisii, half shaded by the arching foliage of the Palms were very conspicuous. Groups of Azalea mollis surrounded with Maidenhair Fern and masses of grandly grown Lily of the Valley with spikes 1 ft. in length blend effectively. A few fine specimens of Caladiums, Crotons, and Dracaena goldieana, richly coloured were conspicuous. A margin of dwarf and highly coloured Caladiums, intermixed with Maidenhair Ferns and dwarf Carex completed a most beautiful group of plants, remarkable for high culture and effective arrangement.

Messrs. W. Balchin & Sons, Brighton, exhibited a unique collection of the choicer kinds of greenhouse plants, well grown and profusely flowered. Half grown specimens of Pimelia decussata, Erica Spencerii, Genetyllis tulipifera, stood out prominently. These were supported with masses of densely bloomed plants of Boronia serrulata, B. heterophylla, and Leschenaultia biloba major. Compact plants of Erica perspicua nana, with beautifully coloured plants of Coprosma baueriana variegata and an edging of Isolepis formed a good finish to a group that ought to have a tendency to revive the interest and culture of this neglected class of plants. A background of Rhapis flabelliformis with a prominent group of Phoenocoma prolifera Barnesii, surrounding a specimen Erica Spencerii, was a fine bit of colouring.

Messrs. R. & G. Cuthbert, Southgate, exhibited a remarkably bright group of the various hybrids of Azalea mollis. Some fine yellow forms have resulted from crosses with A. sinensis. A few densely flowered plants of A. rustica fl. pl. in many shades of colour were very effective. The whole collection represented over fifty distinct varieties.

Messrs. J. James & Son, Farnham Royal, make a grand display of their noted strain of Calceolarias with over fifty fine specimens in splendid bloom. The size of bloom was remarkable, and the quality up to the usual standard. A few deep coloured selfs were very effective, while the spotted kinds gave variety to the group.

CARNATIONS.

Messrs. Wm. Cutbush & Son, Highgate, and Barnet, made a huge exhibit of Carnations in the corner of the large tent on the left hand side of the passage from No. IV. From a scenic point of view the effect was splendid. A background of Palms and Bamboos served as an admirable foil to the flowers. The Carnations themselves were worthy of the highest praise. The whole of the plants were dwarf and stocky, the foliage being particularly good. The flowers were large, of good form, and the colours beautifully developed. Princess of Wales, Blush Malmaison, and Princess May, were the best of the Malmaison section, whilst border varieties, like Germania, La Villette, Gloire de Nancy, The Pacha, Mrs. Reynolds Hole, and Cardinal Wolsey, showed up bravely in clumps dotted here and there amongst the Malmaisons. A fringe of Maidenhair Fern, and Isolepis gracilis imparted a finish to a fine exhibit.

Mr. T. Whillans, gardener to His Grace the Duke of Marlborough, Blenheim, Woodstock, occupied the corner of the central stage opposite to the Messrs. Cutbushs' group with a fine lot of Carnations. The front ranks were filled with some superb specimens of Malmaison Princess of Wales. The size of the blooms here was almost startling, and the colours magnificent. Carnations are evidently understood at Blenheim. Another special feature was a batch of the new yellow tree Carnation Duchess Consuelo. This is a strong growing free-flowering form. The individual flowers, moreover, are of large size and good form. The variety should prove exceedingly useful.

Mr. John Forbes, Hawick, N.B., exhibited a grand batch of the new perpetual Carnation Yule-tide. The flowers are large, of excellent form, and bright scarlet in colour. The great point, however, is the wonderful floriferousness of the variety, for it thoroughly merits the name "perpetual" since plants will flower for eighteen months without cessation.

In Tent No. II. Mr. Geo. Stevens, St. John's Nurseries, Putney, set up a group of tree Carnations. A considerable variety was manifest, and the plants were well flowered.

HARDY HERBACEOUS PLANTS.

Messrs. Geo. Jackman & Son, Woking, Surrey, had a showy little group of hardy cut flowers near the entrance to Tent No. IV. Centaureas, single Pyrethrums, Erigeron Roylei, Onosma tauricum, Thermopsis montana, and Poppies were all bright and good.

Messrs. James Backhouse & Son, York, had erected a charming little rockery at one end of Tent No. III., and this received a great deal of attention from the visitors during the course of the show. Bamboos were employed as a background. Darlingtonia californiaca, Primula Auricula marginata, Armeria setacea, Saxifraga diapensoides, Campanula tridentata, Anthyllis montana rubra, and Dianthus alpinus were all in fine condition. The whole exhibit was splendidly conceived and executed By the side of the rockery were plants of Arundinaria pumila, Meconopsis cambrica plena, and Carnation Margery Pearce.

Mr. Pritchard, Christchurch, staged hardy flowers in considerable quantity, although his exhibit was more conspicuous for quality. Aquilegias, Double Pyrethrums, Inula glandulosa and Lupines were very praiseworthy here.

Messrs. J. Cheal & Sons, Crawley, Sussex, put up a very pretty rockery, in which a close imitation of red sandstone had been made. Amidst these surroundings the various plants looked particularly happy and effective. A collection of cut blooms of bedding Violas was also contributed by the same firm.

Mr. R. Dean, Ealing, contributed dwarf bedding Violas in pots. The plants were more than ordinarily floriferous.

Mr. B. Ladhams, The Shirley Nurseries, Southampton, has a great name as a cultivator of hardy flowers, and the group of cut material set up by him was in every way worthy of his reputation. Papavers, Centaureas, Lupines, and Campanula glomerata dahurica were all very gay, and the whole group literally blazed with colour.

J. T. Bennett Poë (gardener, Mr. Downes). Holmewood, Cheshunt, had a small collection of florists' Tulips that were in first-rate condition considering the advanced season, as well as the trying character of the last few weeks.

Hardy flowers were present in great quantities from Mr. T. S. Ware. Both plants and cut flowers were shown. Among the former were splendid specimens of Spiraea japonica aurea reticulata, palmata, and S astilboides floribunda, and some fine panfuls of Trillium discolor, Gnaphalium Leontopodium, Phlox setacea Vivid, Verbascum phoeniceum album, and Ramondia pyrenaica. Clematis Madame André was also well shown. Arum Dracunculus, a curious looking and villainously scented aroid, was the object of much curiosity on the part of visitors, who were attracted by its quaint appearance. Mr. Ware's exhibit was one of the largest and certainly one of the finest in the whole of the show.

HARDY TREES AND SHRUBS.

Messrs. Jas. Veitch & Sons', Ltd., array of hardy trees and shrubs in the large tent was a truly magnificent effort. Not only was the area covered large, but the quality and variety of the material were remarkably fine. In the background, immediately in front of the tall Bamboos and copper-coloured Prunus Pissardii that formed the back row were giant specimens of Cytisus scoparius andreanus, Hydrangea paniculata grandiflora. Halesia tetraptera, Clethra alnifolia, Cytisus praecox, Hydrangea hortensis var., Paeonies, Azaleas, Daphne cneorum major, and Weigela rosea Eva Rathke were other notables. Acer palmatum sanguineum was very showy, and superb spikes of Eremurus robustus and large clumps of Lilium longiflorum Harrisii added their quota to the general effect.

Messrs. W. Fromow & Sons, Sutton Court Nursery, Chiswick, W., had a very varied and highly attractive group of Japanese Maples in Tent No. IV. These varieties of Acer palmatum exhibited a wonderful difference of leaf cutting as well as an extensive range of colour from the deep blood-crimson to light green and white; indeed the various shades of green were exceedingly bright.

On the opposite side of the tent were shown a similar group of material contributed by Messrs. Thos. Cripps & Son, Tunbridge Wells Nurseries. Two large plants of A. p. atropurpureum and A. p. palmatifolium were noteworthy here.

Messrs. Wm. Paul & Son, Waltham Cross, sent sprays of Golden Chestnut, Crataegus Crimson Queen, and a number of trusses of varieties of Rhododendron. Messrs. Cheal & Sons, also sent sprays of hardy foliage and flowering shrubs, including Acers in variety, Genista, Viburnums and Weigelas.

Owing to the lack of space some of the trees and shrubs were crowded out, and among these was a magnificent lot of stuff sent by Messrs. Fisher, Son and Sibray, Ltd., Handsworth Nurseries, Sheffield, It comprised a number of grand Japanese Maples, Golden Oaks, Elders etc. All the material was good, and it is seldom indeed that an exhibit up to this standard is made. In the background were some huge and grandly-leaved specimens of Acer polymorphum atro-sanguineum. Euonymus Silver Gem, Cornus Spathii aurea, Andromeda japonica variegata, and Hedera canariensis Crippsii were some of the brightest and most notable members of this fine collection.

Mr. J. Hudson, gardener to Leopold de Rothschild Esq., Gunnersbury House, Acton, showed a large group of specimen trained Myrtles and scented Pelargoniums. The plants were large and superb examples of their kind. These also found a place on the grass outside. Another special feature were four large trained Marguerites. The plants were of superb shape, having been carefully and well trained, and the quantity of flower they bore was surprising. The two largest plants were fully 6 ft. in diameter, and about 5 ft. in height.

Japanese Maples were shown by Messrs. John Waterer and Son, Limited, Bagshot, Surrey. A great deal of variety was evident here, and the plants looked happier outside on the grass than their relatives within the tents.

What was evidently an overflow from Messrs. Jas. Veitch and Sons' large group of trees and shrubs in the large tent was placed on the grass outside, and although little attempt had been made at arrangement the result was very gay and bright.

BOUQUETS AND TABLE DECORATIONS.

As usual this was a very attractive part of the show and much interest centred around it. Mr. L. H. Calcutt, Fern Bank Nursery, Stoke Newington, put up a number of charming epergnes, wreaths, and sprays. The greatest taste and skill in the manipulation of the flowers was evident throughout, everything being light, bright, and effective.

Messrs. Jones & Sons, Shrewsbury, had a very imposing exhibit of bouquets, epergnes, sprays, and buttonholes. The large bouquets showed up grandly against the screen of dark velvet which had been erected. Orchids and Liliums were extensively used, and there was a thoroughness and finish about the execution of the devices that could not be gainsaid.

Miss Mary Forden, Marlowe's Nursery, Hemel Hempstead, sent three pretty epergnes in which yellow Irises had been largely used.

Mrs. W. Green, The Nurseries, Harold Wood, Romford, had a very handsome dinner table, and the taste and skill which had been displayed throughout in the making up of the various pieces could not easily be exaggerated. Mrs. Green is evidently a floral artist of the first water.

Mrs. Phippen, Reading, staged an imposing array of floral devices against a screen of dark velvet. All the wreaths and bouquets were massive and well finished. A gorgeous but somewhat garish cross of scarlet Pelargoniums and Anthuriums was the central feature.

Mr. Henry O. Garford, Stoke Newington; Mr. J. Prewett, 11, Lancaster Gate, Bayswater; and Mr. Moyses Stevens, 146, Victoria Street, Belgravia, all sent excellent floral decorations, which space alone forbids us alluding to in detail.

Messrs. Perkins & Sons, Coventry, as usual, came out strongly with floral decorations, and their skill and taste was apparent throughout their exhibit, which was a huge and imposing one.

FRUITS.

Certainly one of the most noteworthy exhibits in this department was that which came from Messrs. T.

Rivers & Sons, Sawbridgeworth. It consisted of Nectarines in pots. Cardinal and Early Rivers were the varieties shown. The trees bore heavy crops of medium sized, well-coloured fruits, and were a perfect picture of successful cultivation. A Cherry tree, loaded with fruit was also included. It was stated to be over twenty years of age. The variety was Guigne Annonay.

Messrs. George Bunyard & Co., Maidstone, showed sixty dishes of Apples in first-rate preservation. The colour too was surprisingly good, and very little shrivelling was apparent. Three dishes of Pears were also shown. Behind the dishes of fruit were pot plants of Peaches, Nectarines, and Plums, all bearing crops of fruit in its early stages.

Mr. J. McIndoe, gardener to Sir Joseph Pease, Bart., M.P., Hutton Hall, Guisborough, sent a first-rate condition of fruit, comprising Grapes, black and white; Nectarines, Peaches, Cherries, Oranges, Lemons, Strawberries, and Pears.

A collection of fruit including Strawberries, Pears, Melons, and Grapes, black and white, came from Mr. W. J. Empson, gardener to Mrs. Wingfield, Ampthill House, Ampthill, Bucks. A huge truss of fruit of Bananas was a conspicuous feature here.

Messrs. Laxton Bros., Bedford, showed Laxton's Leader and Laxton's Monarch Strawberries in excellent condition. These varieties appear to be first-class for pot work. A group of Melons was staged by Mr. Meades, gardener to A. Henderson, Esq., Farringdon, Berks, and included some good fruit.

Mr. G. Wythes, gardener to Earl Percy, Syon House, Brentford, had a capital collection of fruit. Peaches, Nectarines, Grapes, and Melons were first-rate; also a grand truss of fruit of Musa Cavendishii.

Mr. James Hudson had a grand display of fruit trees in pots. All the trees bore heavy crops of luscious fruit, and constituted an admirable object lesson of what may be accomplished by pot culture. Grapes, Peaches, Cherries, and Plums were included. There were also dishes of plucked fruit of Cherries, Frogmore, Early Bigarreau, May Duke, Empress Eugenie, and Early Rivers, and Nectarines, Cardinal and Early Rivers. All the fruits were of capital quality.

Sir W. G. Pearce, Bart. (gardener, Mr. C. Beckett), contributed a grand collection of fruit. It comprised six bunches each of black and white Grapes, ten Melons, four dishes of Strawberries, three dishes of Peaches, one dish of Figs, one dish of Nectarines, and nine dishes of Tomatos. Excellent quality was noticeable throughout.

Mr. G. Featherby, The Vinery, Gillingham, Kent, staged a mixed collection of fruit and vegetables, the former predominating. Grapes, Black Hamburgh, and Muscat of Alexandria, Nectarine Early Rivers, and Peach Dymond were first-class. The French Beans and Cucumbers sent by Mr. Featherby were also good.

Mr. W. Palmer, Junction Road, Andover, exhibited a box each of Strawberries and Mushrooms. The Strawberries were gathered from plants of Royal Sovereign, which were layered in the open ground, planted on an allotment, and lifted and potted about six weeks ago. Over 400 of them were potted, and now carrying a splendid crop of fruit. The fruits shown were of splendid size and colour, and attracted a great deal of attention from visitors. The Mushrooms were grown in a small bed in a cool shed.

VEGETABLES.

A mixed exhibit of fruit and vegetables was made by Mr. Frank Chapman, Colchester. The Grapes, Tomatos, Strawberries, Melons and Peaches, were of the best, and such vegetables as French Beans, Cucumbers and Asparagus were deserving of very high praise.

From the Horticultural College, Swanley, came a comprehensive collection of vegetables. Peas, Lettuce, Tomatos, New Potatos, Cucumbers, and Mushrooms were well grown, the Peas especially being well filled.

A great portion of one side of Tent No. I was occupied by the exhibit of vegetables sent by Mrs. Wingfield (gardener, Mr. W. J. Empson), Ampthill House, Beds. This was of sterling merit throughout. In the back rows were Broad Beans and Peas in pots, and in the front ranks set out in a most attractive manner were Leeks, Onions, Asparagus, young Carrots, Turnips, Tomatos, Cucumbers, Cabbages, Lettuce, French Beans, and Broccoli. All were in capital condition, and demonstrated that not only must the strain of seed from which they were raised have been good, but the cultivation up to a high standard.

Messrs. J. Veitch & Sons, Ltd., staged a similar exhibit of about the same dimensions on the opposite side of the tent. Peas and French Beans in pots were of first quality here; also Cucumbers, Broccoli, new Potatos, Melons, and saladings of all descriptions. A notable feature was a fine bank of mushrooms, which it would be exceedingly difficult to beat. French Bean Early Favourite is a heavy cropping, early variety of first-class quality.

M. A. Belin, 27, Route de Saunons, Argenteuil, Seine and Oise, France, sent a bunch of Asparagus about a foot in diameter. The individual heads were of mammoth size, and constituted a unique exhibit.

The Marquis of Northampton (gardener, Mr. M. M. Hayes), staged a first-class collection of vegetables. Leeks, Asparagus, Tomatos, Broccoli, young Turnips, French Beans, New Potatos, Vegetable Marrows, and saladings of all descriptions were of the best, and it is very seldom that such a comprehensive exhibit is before the public thus early in the year.

Messrs. Jas. Carter and Co. exhibited a quantity of vegetables. These appeared at one end of their huge and unique floral exhibit, and included pot plants of Carter's Model Cucumber heavily laden with well shaped fruit; Peas, Early Morn, Carter's Forcing, and Carter's Lightning, with crops of fine well-filled pots; Tomato Duke of York, and Lettuces Harbinger, and Green Fringed, the latter being a specially handsome Cabbage variety.

MISCELLANEOUS.

Messrs. Edwards & Son, Sherwood, Nottingham, exhibited a table filled with Edwardian ware. There were numbers of devices of pots, fancy baskets, etc., which were filled with Ferns and foliage plants, and looked wondrously pretty. The ware is not at all gaudy, but quaint and effective; and, moreover, appears to suit the plants perfectly.

GOLD MEDALS.

Messrs. James Veitch & Sons, Ltd., Chelsea, for hardy flowers, shrubs, Cacti, Caladiums, Streptocarpus, vegetables, &c.

Leopold de Rothschild, Esq., Gunnersbury, for fruit trees in pots, Myrtles, &c.

Messrs. T. Rivers & Son, Sawbridgeworth, for fruit trees in pots.

Messrs. Fisher, Son, & Sibray, Handsworth, Sheffield, for hardy plants.

Mr. Geo. Mount, Canterbury, for Roses.

Baron Schroder, The Dell, Staines, for Orchids.

Note.—Sir Trevor Lawrence, Bart., President of the Society, would have received a Gold Medal had his Orchids been for competition.

CUPS.

Sir W. G. Pearce, Bart., Hungerford, for fruit.

Messrs. F. Sander & Co, St. Albans, for new and rare plants.

Messrs. Carter & Co., Holborn, for a group of Calceolarias, Gloxinias, &c.

Mr. C. Turner, Slough, for Roses, &c.

Messrs. J. Laing & Sons, Forest Hill, for a group of Caladiums, Begonias, &c.

Messrs. Jones & Sons, Shrewsbury, for decorations.

Messrs. H. Cannell & Sons, Swanley, for group of Begonias, Calceolarias, Cannas, and Gloxinias.

Messrs. Sutton & Sons, Reading, for a group of Begonias, Caladiums, and flowering plants.

Messrs. Hugh Low & Co., Clapton, for a group of Orchids, Caladiums, Cannas, &c.

Messrs. William Paul, Waltham Cross, for Roses, Rhododendrons, &c.

Messrs. Paul & Son, for Roses, Cannas, and Alpine plants.

Messrs. Charlesworth & Co., Bradford, for Orchids.

Messrs. Barr & Sons, Covent Garden, for herbaceous plants.

Messrs. J. Backhouse & Son, York, for Alpine and hardy plants.

Messrs. R. Wallace & Co., Colchester, for Lilies, Irises, &c.

L'Horticulture Internationale, Brussels, for Orchids.

Messrs. Dobbie & Co., Rothesay, for Violas, Pansies, &c.

Sir J. W. Pease, Bart., Hutton Hall, Guisborough, for fruit.

Mrs. Wingfield, Ampthill, Beds, for fruit and vegetables.

SILVER GILT FLORA MEDALS.

Mr. H. B. May, Upper Edmonton, for Ferns, &c.

Messrs. W. Fromow & Sons, Chiswick, for Maples.

Messrs. Thos. Cripps & Son, Tunbridge Wells, for Japanese Maples.

Messrs. Wills & Segar, Onslow Crescent, South Kensington, for Palms, &c.

Mr. W. Rumsey, Waltham Cross, for Roses.

Messrs. Kelway & Son, Langport, for Paeonies, &c.

Mrs. Phippen, Reading, for floral decorations.

Mr. Moyses Stevens, 146, Victoria Street, S.W., for decorations.

Mrs. W. Green, Romford, for table decorations.

Messrs. Perkins & Sons, Coventry, for decorations.

Miss M. Foden, for table decorations.

Sir F. Wigan, Bart., East Sheen, for Orchids.

Messrs. W. L. Lewis & Co., Southgate, for Orchids.

Mr. J. Cypher, Cheltenham, for Orchids.

Mr. H. J. Jones, Ryecroft, Lewisham, for Begonias, &c.

Mr. J. R. Box, Croydon, for Begonias.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, for Begonias, &c.

Messrs. J. James & Son, Farnham Royal, for Calceolarias.

Messrs. Wm. Cutbush & Son, Highgate, N., for Carnations.

His Grace the Duke of Marlborough, Blenheim, for Carnations.

Guildford Hardy Plant Nursery, for hardy plants.

Messrs. J. Waterer & Son, Ltd. Bagshot, for Rhododendrons and Maples.

Messrs. J. Peed & Sons, Norwood Road, for Gloxinias and Caladiums.

Earl Percy, Syon House, Brentford, for Orchids and fruit.

SILVER GILT KNIGHTIAN MEDAL.

Messrs. Geo. Bunyard & Co., Maidstone, for fruit trees in pots and Apples.

SILVER FLORA MEDALS.

Messrs. Geo. Jackman & Son, Woking, for Clematis, herbaceous flowers, &c.

Mr. B. Ladhams, Shirley, Southampton, for hardy flowers.

F. Hardy, Esq., Tyntesfield, for Orchids.

Messrs. W. & J. Brown, Stamford, for cut flowers.

Mr. H. O. Garford, Stoke Newington, for decorations.

Messrs. Edwards and Son, Sherwood, for decorations.

L. Mond, Esq, Regent's Park, for Orchids.

E. Piret, Argenteuil, for Orchids.

Mr. John Forbes, Hawick, N.B., for Carnations and Polyanthus.

Mr. G. Stevens, Putney, for Carnations.

Messrs. A. W. Young & Co., Stevenage, for Gloxinias, &c.

SILVER GILT BANKSIAN MEDAL.

Pantia Ralli, Esq., for Caladiums.

J. T. Bennett Poë, Esq., for Tulips.

Messrs. W. & J. Birkenhead, for Ferns.

Mr. W. Iceton, for foliage plants.

Mr. Geo. Featherby, for Grapes, &c., &c.

Marquis of Northampton, for vegetables.

Mr. Prewett, for table decorations.

Mr. L. H. Calcutt, for table decorations.

Messrs. B. S. Williams & Son, for Orchids.

W. A. Gillett, Esq, for Orchids.

W. S. Ellis, Esq., for Orchids.

W. Thompson, Esq., for Orchids.

Messrs. R. Smith & Co., for Clematis.

Mr. M. Prichard, for hardy flowers.

Messrs. Balchin & Sons, for hard wooded plants.

Messrs. J. Cheal & Sons, for herbaceous plants.

SILVER KNIGHTIAN MEDAL.

Mons. A. Belin, for Asparagus.

Mr. F. Chapman, for Asparagus.

Messrs. Laxton, Bros., for Strawberries.

Hor. College, Swanley, for vegetables.

Mr. W. Palmer, Andover, for Strawberries and Mushrooms.

SILVER BANKSIAN MEDAL.

Malcolm S. Cooke, for Orchids.
Major Joicey, for Orchids.
Mons. A. Peeters, for Orchids.
Messrs R. & G. Cuthbert, for Azaleas.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

The Fifty-eighth Anniversary Festival Dinner of this institution was held at the Hotel Metropole, London, on May 26th. The Rt. Hon. Lord Rothschild occupied the chair, and was supported by Lord Wandsworth, Sir Trevor Lawrence, Bart.; The Rev. W. Wilks, M.A.; Mr. N. N. Sherwood, Mr. H. J. Veitch (treasurer); and about 170 horticulturists and friends. After the usual loyal toasts the chairman gave "The Institution," and spoke in very appreciative terms of its usefulness and length of service. His Lordship remarked that "the society was almost co-existent with the reign of Queen Victoria, so we are almost celebrating our Diamond Jubilee to-night and there were some now present who could remember the Accession, and would realise that during the last fifty years botany, arboriculture, and floriculture had made tremendous strides. Steam navigation has brought into prominence many grand plants, notably the noble Water Lily (Victoria regia), that lovely Orchid named after the Princess of Wales, and other exotics. Our descendants sixty years hence would probably gloat over the production of other hybrids and the introduction of new subjects that would have made that period also glorious in the annals of horticulture. Those who like myself obtain a vast amount of pleasure from their gardens should also delight in assisting this society to pay the annuitants, who have either been gardeners or are the widows and descendants of gardeners." His Lordship concluded with a strong appeal to all his friends to undo their purse strings in favour of the Gardeners' Royal Benevolent Institution."

Mr H. J. Veitch, the treasurer, most heartily thanked Lord Rothschild on behalf of the executive and friends of the institution for the kindly interest taken, an interest in all probability created through the great and real knowledge of gardening which his lordship had acquired. In speaking about the society the worthy treasurer remarked that its report each year was full of interest, and if any further points were required the committee and secretary would gladly furnish them, as the management would bear any investigation. This year they had elected twenty pensioners, the largest number yet elected at one time. When the Queen became patroness and the Prince Consort patron in 1851, they had thirty-five pensioners, whilst they now had 161. Up to 1865 they were able to allow the male annuitants £16 and the females £12 per year, but since then the amounts had been £20 and £16 respectively. In 1851 there were fifteen candidates, of whom two were elected, the highest number of votes obtained being 480. In 1897 there were forty-nine candidates, twenty elected, with 3,762 as the highest number of votes recorded. The pensioners in 1851 received a total of £512, in 1897 they had £3,000. After giving some further statistics the speaker said that he claimed that they were a real test for good results. They now wanted funds to enable them to give £5 to each of the unsuccessful candidates at the last election, in honour of the Queen's Diamond Jubilee; they also wanted to raise £5,000 for the Victorian Era Fund, which sum should be invested and the interest devoted to assisting applicants in distress previous to election. The institution required at least £3,600 each year to keep on the present number of pensioners. Mr. Veitch referred in very feeling terms to the loss sustained this year through the lamentable deaths of Mr. James Webber and Dr. Hogg; the former had been a valuable and hard-working member of the committee for twenty-one years, whilst the latter was trustee for many years. As an additional item showing the interest which the family of the noble chairman took in the institution, he was pleased to announce that the Hon. Walter Rothschild had graciously consented to succeed Dr. Hogg as trustee. Mr. Veitch also made a well-deserved reference to the manner in which Mr. George J. Ingram carried out his duties as secretary.

The toast of "Gardening" was ably spoken to by Mr. George A. Dickson. Sir Trevor Lawrence spoke in very cordial terms of the chairman, whilst Mr. Ingram announced that £5,300 had been subscribed up to that time, and that the Victorian Era Fund would remain open till the end of this year.

We have to commend Mr. Ingram for the unique arrangements of the dinner and musical interludes, and to beseech all our readers to assist this grand institution, both on behalf of the General and the Victorian Era Funds.

VIOLAS AT CROYDON.

For several weeks, and until recently, the weather has been detrimental to this class of plants owing to to the aridity of the east winds. Nevertheless, during that dry period we received a bouquet of Violas from Mr. J. Seeger, Bandon Hill, Croydon. Snowflake is a white variety that usually does well in spring; but Beautiful Snow is white and rayless. Countess of Kintore, with violet centre and white edges, is a variety that stands the drought of the southern counties and flowers profusely. One of the darkest and finest of its group is Archie Grant, with intense violet, self-coloured flowers. Stanstead Rival is a dark crimson-purple flower in the way of Trentham Purple, but having more of the maroon shading in it. Blue Cloud is a beautiful spring flowering variety, that is, it is always best in spring. The white flowers are well set off by the broad ultramarine blue edges. In some quarters the bright blue Souvenir is equally well-known and beautiful in its way. The change of weather that set in on the 25th ult. has already proved beneficial to this class of plants.

OBITUARY.

Mr. Duncan M'Lellan.

This noted gardener and park superintendent died at his residence, 7 Kelvingrove Terrace, on the 19th ult., in the 83rd year of his age. He was a native of Luss, and gained a wide experience under several well known gardeners, and occupied positions of trust both in Edinburgh and Glasgow previous to his appointment as superintendent of parks at the latter city in 1853. At that time Glasgow Green was the only park in the city, but the Corporation had purchased the lands of Kelvingrove as a public park in 1852, and obtained a plan for laying out the place from Sir Joseph Paxton. The newly appointed superintendent was entrusted with the putting of this plan into effect; and he carried it out with such judgement and skill, that the Corporation recognised the great capacity of its servant for work of this nature. It is believed that the scenery of his native locality awakened in him a taste for landscape gardening.

Four years later the Queen's Park was acquired and Sir Joseph Paxton was again consulted; but by the time the Corporation acquired the Alexandra Park, they had realised the value of their parks' superintendent, and entrusted him with the planning and laying of it out. Mr. M'Lellan did his work with a display of talent which only a master hand could wield. Maxwell Park he dealt with in the same way. Mr. M'Lellan retired in 1893, and his portrait, which was presented to him on the 16th August of that year, now adorns the Corporation Galleries. He was succeeded by Mr. James Whitton. Glasgow Green in 1853 consisted of 136 acres, but when Mr. M'Lellan retired in 1893 after 40 years of service, the parks and open spaces extended to 699 acres. He was a man of kind and genial temperament, much liked by every one with whom he came in contact, and he leaves three sons and one daughter to mourn his death.

Mr. Alfred George.

In Mr. George, who passed away at the age of sixty-nine, Devonshire has lost as good a gardener as ever wore the blue apron. He was not only a most lovable man, but brimful of gardening knowledge which he was ever ready to impart for the benefit of his craft. For over ten years he had charge of the famous gardens and grounds of Bicton, when the late Lady Rolle was proprietress of that fine estate. Preceded by an able gardener—Mr. Barnes—Mr George was, a few years after he left, succeeded by a no less able man, the present gardener, Mr. Mayne. Under such men and with the highly favoured climatic conditions which surround the estate, Bicton has been and is now one of the finest places in the County of Devon. A few years ago Mr. George was appointed as a lecturer on horticulture for the county and was one of the most successful, as evidenced by the numbers and good attendance at the classes he formed. While imparting sound technical instruction, he did so in a happy sort of way of his own, which established a kindly feeling between himself and his audience. Nothing seemed too much trouble to him, and nothing pleased him more than to be asked the why and the wherefore of the operations he suggested and directed. Undoubtedly a first-rate gardener, he was particularly well up in fruit culture and could handle the pruning and the budding knife with dexterity and consummate skill. He will be much missed around Exeter, for he had a wide circle of friends who were much attached to him.—*Devoniensis.*

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Peach trees diseased.—*Omega*: Your Peach trees are in a very bad way if they are all like the example you sent us. They have got the Peach Blister, caused by a fungus named Ascomyces deformans. You cannot apply anything that will kill the fungus without killing the trees, as the Ascomyces lives in the tissue of the branches and leaves, so that when once attacked in this way the tree shows the malady year after year in a more or less virulent degree. If the disease is present only to a small extent you may stay its ravages by cutting off the leaves and shoots affected, and burning them. If the trees are very much injured the best thing you can do is to root them out, burn them and plant others in their stead next autumn. You may not care to do this immediately if the trees bear fair crops of fruit, but unless you can keep the disease in check by the above plan, you will sooner or later be obliged to destroy them, as they become fruitless and practically useless.

Fumigating a Fernery.—*Alister*: While they are making their growth, there are some of the Maidenhair Ferns which are liable to get injured with the fumes from the XL All Fumigator, while the greater number of them receive no injury whatever. It is difficult or impossible to say why this should be so, but the fact cannot be ignored. Those coming under our notice that are liable to suffer in this way are Adiantum Ghiesbreghtii (scutum), and A. farleyense, but particularly the former. It might have been owing to the young fronds being at a particular stage of their growth; but several other species in the same house and bearing a greater or less number of young fronds did not suffer in the least. When the fronds begin to get firm, however, all danger is past. We should advise you to remove some of the more tender kinds into another house till the operation has been performed, after which you can take them back. This plan is often pursued in houses containing mixed collections of plants.

Manure for Carnations.—*D. W. D.*: The cold nature of the weather after they were planted explains sufficiently why your Carnations have made little progress, and unless the temperature has risen considerably in your district rapid growth would be impossible. The flower stems are so far advanced about London that they have been staked in many cases. Naturally, however, they will be much later with you. While the ground remains cold and wet you should be very sparing with the watering pot, but when dry and warm you could assist your plants with weak liquid manure once a week, and twice a week when the flower stems are well advanced. It is rather late to get the full benefit of artificial manures, because you would want some phosphates in the shape of bone meal, and kainit or wood ashes instead. These should be worked into the first six or nine inches of soil when digging the ground in winter. The third ingredient of an artificial manure is nitrate of soda, and this might be applied alternately with liquid manure at the rate of ¼ oz. to a gallon of water. This should not be given too often, however, as much stimulating manures for Carnations are dangerous. If your soil is poor, a good plan would be to mulch the ground with some well-rotted farmyard manure and water with liquid manure once a week in fine weather.

Names of Plants.—*C. W.*: Leptospermum scoparium, usually grown in a greenhouse, but hardy on the south coast.—*W.*: 1, Nephrodium Filix-mas cristata; 2, Adiantum pedatum; 3, Polypodium Dryopteris.—*A. K. L.*: 1, Pernettya mucronata; 2, Rhododendron dahuricum; 3, Lonicera Xylosteum; 4, Symphoricarpus racemosus; 5, Epimedium pinnatum; 6, Scilla hispanica alba.—*E. J.*: 1, Ribes speciosum; 2, Crataegus Oxyacantha punicea plena; 3, Kerria japonica flore pleno; 4, Cardamine pratensis flore pleno.—*J. L.*: 1, Odontoglossum Pescatorei; 2, Odontoglossum luteo pur-

pureum var.—*J. D.*: Staphylea pinnata, a hardy shrub known as the Bladder-nut tree, and having smaller flowers than S. colchica, which is often used for forcing.—*E. W. M.*: 1, Asplenium bulbiferum fabianum apparently, but no spores present and not in character; 2, Nephrolepis exaltata; 3, Asplenium bulbiferum minus; 4, Asplenium flaccidum; 5, Aspidium angulare var.; 6, a species of Polypodium apparently, but no spores present. *C. McK.*: 1, Rhododendron (Azalea) flavum; 2, Rhododendron (Azalea) amoenum; 3, Genista praecox, a garden hybrid.—*Sigma*; Salix repens, a small leaved form. —*Omega*: 1, Austrian Leopard's Bane (Doronicum austriacum); 2, Red Campion (Lychnis diurna).—*James Mayne*: Cotoneaster nummularia.

Bed of Princess Beatrice Begonia.—*One in a fix*: The fresh arrangement you propose for the large bed would answer very well; but a bed of such size would be all the better for a double edging of Lobelia, either blue or white (we should give the latter the preference as it would show off well against Robert Fish Pelargonium). You must be guided, however, by the material you have at command. All the fibrous-rooted Begonias are well adapted for bedding purposes, and we should advise you to work up a stock of the red-leaved one, which may be had from different sources under the name of Crimson Gem, Vernon's var., and atropurpurea. These names apply to red-leaved Begonias which may not all be identical, because they are raised from seeds by the thousand, and vary slightly in colour. The flowers are of a rich carmine or crimson-red, and the foliage has a bronzy-red metallic appearance, contrasting well almost with anything. For instance, it would have formed an admirable outer band to Princess Beatrice; and would look equally handsome in a bed by itself, or for making panels in beds forming designs with various plants.

A Hawkweed—*A. Reid junr.*: We are not surprised that you should have been puzzled with the Hawkweeds, for they form a very troublesome lot. The specimen sent does not agree exactly with Hieracium murorum, which has broad, ovate or cordate leaves. They are also thin in texture, green, and mostly radical, with one leaf placed high upon the stem. You will find it agrees more nearly with the description of H. sylvaticum sub-sp. vulgatum, which has oblong, deeply lobed leaves, more or less narrowed to the base and purplish beneath. It is, moreover, an extremely variable plant, differing in different districts.

Vines attacked with Mildew—*Ciotat*: The malady may be partly owing to the peat moss litter creating undue moisture in the house, but we should not lay much stress upon that. Chemical manure would not affect the case at all if used in the proper quantities. The mildew is often encouraged by a spell of dull moist weather, causing it to spread very rapidly. Cold weather and a stagnant atmosphere are also favourable to its development. You should watch the very first outbreak of it and use every effort to check its progress. The first safeguard is to give plenty of ventilation from early morning onwards, leaving a little on at nights. Then paint the hot-water pipes with a mixture of flowers of sulphur in water; you must not on any account use it upon a flue nor light the sulphur in any way as it would assuredly destroy the vines. The most effectual remedy is to dust the leaves all over with flowers of sulphur. The principal points to observe are to use plenty of ventilation, keep the atmosphere of the vinery dry, especially during cold and sunless weather, even if it is necessary to use fire heat, and to employ sulphur in the way recommended. Always begin early.

Communications Received.—C.—C. B. G.—African Critic.—A. D. W.—Agent General for Queensland.—G. L.—W. M.—Amateur.—N. W.—Ward.—Westman.—A. L.—J. O'B.—J. E. J.—C. B. G.—Meisenbach Co.—Peach, next week.—M. L.—T. S.—R. M.—L. L. A.—Mens.—George Cathcart.—Y. Y.—C., Tonbridge. — Kentish. — Amateur.—M. R.

TRADE CATALOGUES RECEIVED.

J. W. Wimsett & Son, Royal Ashburnam Park Nursery, Chelsea, S.W.—Bouquets, Presentation or Bridal Bouquets, Cut Flowers, &c.

John Laing & Sons, Forest Hill, London, S.E. —Tuberous Begonias; also New Dahlias for 1897; Descriptive Catalogue of Carnations, Pinks, Cannas, 1897-98; Special Catalogue of Fancy-leaved Caladiums, &c.; and Summer List of Select Bedding and Border Plants, &c.

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G. Bunyard & Co....625

Weed Killers.
Acme Chemical Co....640
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Mark Smith Ltd....625

COVENT GARDEN MARKET.

June 2nd, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bushel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100lbs.		
Grapes, per lb	2 0	3 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	2 6	4 0
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips .....per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 0	3 0
Bouvardias, per bun.	0 6	0 9
Carnations doz. blms.	1 0	3 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	2 6
Geranium, scarlet, doz. bunches	3 0	6 0
Iris, various doz. bun.	6 0	18 0
Lilac, White (French) per bnch.	3 6	4 6
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	0 6	1 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Narciss, various, doz. bunches	1 6	4 0
" double "	3 0	6 0
Orchids, doz. blooms	1 6	12 0
Paeonies, French doz. bun.	5 0	9 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	4 0	6 0
Polyanthus, 12 bun.	1 0	2 0
Pyrethrum doz. bun.	2 0	4 9
Roses (indoor), doz.	9	1 6
" Tea, white, doz.	1 0	2 6
" Niels	1 6	6 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch	3 6	6 0
Tuberoses, doz. blooms	1 0	1 6
Wallflowers, 12 bun.	1 6	3 6

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Azaleas, each	2 0	3 6
Arbor Vitae (golden) per doz.	6 0	12 0
Aspidistra, doz.	18 0	36 0
" specimen	3 0	5 0
Arum Lilies, per doz.	8 0	12 0
Cineraria, per doz.	6 0	9 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Genista, per doz.	6 0	9 0
Heliotrope...per doz.	6 0	9 0
Hydrangeas per doz.	8 0	10 0
Ivy-leaved Geranium, per doz.	4 0	8 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia .....per doz.	4 0	6 0
Marguerite Daisy doz.	6 0	12 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ...doz.	9 0	15 0
Spirea.....per doz.	8 0	10 0
Scarlets .....per doz.	3 0	8 0
Roots and bedding out plants plentiful and great variety.		

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For Bedding or Conservatory.

I HAVE a large Stock in fine condition. The quality is A1, and really worth double the money. Finest Single mixed in all shades of colour, 12, 3/6; 50, 13/-; 100, 24/-. Finest Single mixed in shades of bronze, orange, copper, fawn, etc., 12, 3/6; 50, 13/-: 100, 24/-. Finest Singles in 10 distinct colours, 12, 4/-, 50, 14/6, 100, 26/6. All the above can be sent in or out of pots as the purchaser may desire.

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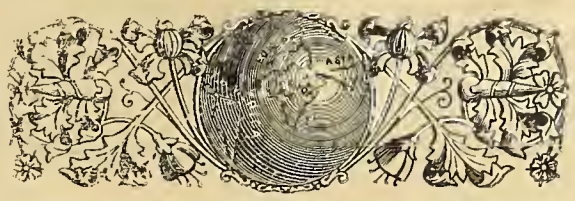

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 12th, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, June 15th.—Royal Horticultural Society; meeting of committees at 12 o'clock.
Ryde Rose Show.

WEDNESDAY, June 16th.—York Floral Fete (three days).
Sale of Specimen Palms, stove and greenhouse plants, &c., by Messrs. Protheroe & Morris.

THURSDAY, June 17th.—Meeting of the Linnean Society.

FRIDAY, June 18th.—Sale of imported Orchids by Messrs Protheroe and Morris.

SUNNINGDALE PARK IN SPRING.—There is no better time to visit the country than in spring and early summer, when the trees are in full leaf, many of them in bloom, and everything fresh and beautiful. Last week found us at Sunningdale Park, Sunningdale, Berks, the country residence of Major Joicey. This beautiful demesne lies close to Sunningdale railway station, but extends away up the hill a considerable distance on the way to Sunninghill. The mansion itself stands at a considerable elevation, but is, nevertheless, considerably below the crest of the rising ground. A considerable portion of the estate is covered with wood, and the rest is laid out in paddocks surrounded by trees, with the exception of the pleasure grounds around two or three sides of the mansion, and the kitchen garden not far off, but all surrounded or interspersed with trees. Entering by the end of the drive nearest the station in company with Mr. F. J. Thorne, the gardener, we proceeded uphill by a winding pathway, rather closely surrounded with tress of a varied description, but consisting largely of Sweet Chestnuts, Beech, Larch, and Scots Fir, in front of which great banks of Cherry Laurels and Rhododendrons come close up to the drive. Towards the top of the hill, the prospect began to open out, and beautiful glimpses of something beyond could be obtained.

In some of these places, many of the old trees have been removed, and the ground occupied with thriving banks and plantations of fine young trees of the Douglas Fir, Silver Firs, Rhododendrons, Scarlet Thorns now in the height of their glory, Laburnums, Guelder Roses, and a host of things, herbeceous, shrubby, and arboreal. In the woods or plantations proper seedling Sweet Chestnuts, and other trees, as well as Rhododendrons, spring up spontaneously by the hundred. As we neared the mansion, the ground proved to be very much undulated, sinking very rapidly on the right into valleys and hollows, rounded in the bottom, covered with a beautiful sward, and overhung with huge, umbrageous Beeches, Oaks, Sweet Chestnuts, Limes, and others, many of them being of immense size, especially the first two named, and judging from appearances one or two centuries of age. The Oaks are peculiarly characteristic of an old English Park, but the Beech is the queen of the glade on account of its symmetry and gracefully drooping habit, and spray-like and elegant shoots and branches.

The mansion then comes in full view on a terrace above a ravine or gorge 40ft. to 50ft. in depth. On either hand the Rhododendrons begin to thicken, until they seem to burst out in full blaze everywhere, for they are certainly a leading feature of the place at the present time. On the sides of the steep ravine, they and deciduous Azaleas, of all colours, are bold and impressive. On the sides of the steep banks, masses of the prostrate blue Gromwell (Lithospermum prostratum), a yard in diameter, produce effects, as far as the eye can see them, hardly to be surpassed by the best of the dwarf blue Gentians. It is twenty years or more since we had previously seen such fine masses of this magnificent alpine.

By this time we are in front of the mansion, a white walled pile of roomy proportions, the older portion being about 60 years old, to which a large wing has more recently been added. Right in front, but at some distance from the building, is a huge oval bed of the finest named hybrid Rhododendrons, of the R. ponticum and R. catawbiense type, including the double R. Multiflorum. Close, dwarf, bushy, and floriferous, they are the picture of health, and marvels of what can be done by assisting the light and sandy soil peculiar to this district, by applying quantities of peat to the natural staple. To the left of the visitor, while facing the mansion, the ground rises abruptly in a great bank of Rhododendrons, Azaleas, Scarlet Thorns, Viburnum plicatum, White Broom, Lilacs, and a great variety of ornamental trees and shrubs that can never look better than during May and June. Behind them come the trees of the wood. Proceeding to climb the high bank we come upon a huge reservoir behind the house, almost on a level with the roof of it, and capable of holding 50,000 gallons of water. This is supplied from the company's main, and is meant for use in case of fire, besides being utilised for garden purposes during periods of drought.

Splendid views may be obtained from here in various directions, reaching for a distance of 20 miles, till the Surrey Downs at Epsom touch the horizon, and break the view. Proceeding round the house, we then descend rapidly, and note that it is built on a terrace cut out of the side of the hill. On the steep bank is a massive bush of Broom, very effective in the distance, and beside it a great bank covered with the real Heather (Calluna vulgaris) in different varieties, and thriving well. Lower down on the smooth shaven sward is one of the most symmetrical Beeches we have seen, about 80 ft. high, and sweeping the grass on all sides with its long drooping limbs. The trunk girths 13 ft. 6 in. from the ground, and the sweep of branches has a circumference of 106 paces.

The lake grounds are now in the height of their glory, and occupy the ravine or gorge above mentioned, on the south front of the mansion, but at a much lower level, the descent being almost precipitous. Yet, the whole of the slope is planted with Rhododendrons, old and young, and the overgrown old ones having been cut down six or seven years ago are now 4 ft. to 6 ft. high, and floriferous. Deciduous Azaleas of all colours are also abundant, together with double Scarlet Thorns, and Yellow Broom. Here occur the blue sheets of Lithospermum above mentioned, together with Rock Roses, and Silene maritima fl. pl. On the face of the slope are footpaths and several narrow terraces, on which are series of iron arches covered with Crimson Rambler, Dundee Rambler, Ayrshire and other climbing Roses, which flower profusely

and ripen their wood well. The soil of the estate is a light but rich sandy loam, but mostly sand.

The lake at the bottom is artificial, but is fed by a perennial and natural spring or fountain a little way up the slope. On the banks of the ornamental water are clumps and masses of Iris florentina, I. pallida, I. germanica atropurpurea, and various others in the height of their glory. On the level portions of the ground are large beds of the finest modern hybrid Rhododendrons, including Mrs. John Clutton, white, the Queen, blush; John Walters with huge, compact trusses of scarlet flowers; John Waterer and Charles Noble, also well-known; Formosum, intense rose; and Kate Waterer, with huge trusses of large pink flowers. Ingrami, with a great black blotch on the base of the upper segments, shows the influence of the finely spotted R. catawbiense, one of the original parents used in hybridising a great many of them. Here also are beds of Roses, standards and and dwarfs mixed.

Most of these improvments have been effected by Mr. F. J. Thorne, and the tons of soil that have been moved are something remarkable. Improvements are still in progress from year to year. An account of Major Joicey's Orchids will be found in next week's issue.

Mr. John Ruskin devotes some hours daily to working in the garden.

Fahrenheit, who invented the thermometer, so much in use in this country, and bearing his name, was born 211 years ago on the 21st May.

A White Blackberry, a white Black Currant, and a white Red Currant are now amongst the paradoxes of horticultural literature and nomenclature.

Bamboo furniture may be cleaned by means of a small brush dipped into a solution of salt and water, the salt bleaching as well as cleaning.

The perishable products of Canada, by the cold storage, rapid transportation scheme, will be placed upon the British markets in great quantities after the end of June.

The White Rhinoceros, according to African travellers, frequently dies from eating poisonous plants, whereas they are never eaten by the black one. The wonderful faculty of smell possessed by the latter may be the means of saving it.

Rhododendron means literally rose-tree, and comes from two Greek words, *rhodos*, a rose, and *dendron*, a tree, the latter allusion referring to the height the plants attain in Asia Minor. Many of the Himalayan species of more recent introduction than R. ponticum are more arborescent, forming small trees.

Aspidistra lurida and its variegated variety prove the most useful, durable and easily grown plants for window culture. Being nearly hardy they pass through the severest winters, if not too close to the glass. No matter how arid the atmosphere of dwelling rooms may be, the leathery leaves are capable of resisting the ungenial atmosphere where hundreds of other plants would succumb.

A Farm of 1,500,000 Acres.—The largest farm in America, and probably in the world, according to the *Irish Farming World*, is situated in the south-western part of Louisiana. It extends 100 miles to the north and west. In 1883 it was purchased by a syndicate of northern capitalists who still work it. At that time it was simply a cattle pasture. Now it is divided into stations every six miles apart for pasture. The land is well adapted for rice, sugar, corn, and cotton. Portions of this vast estate are ploughed by means of steam engines. There are no horses on it except those used by the cow boys, there being 16,000 head of cattle. There are three steam-boats on the estate of which there are 300 miles of navigable water way.

Mr. William Arthur has been appointed gardener to Col. The Hon. L. P. Dawnay, Benningborough Hall, York.

Kew Gardens will be closed to the public on the Diamond Jubilee Day, by order of the First Commissioner of Works. The same arrangements will be observed as on Christmas Day.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, June 15th, in the Drill Hall, James Street, Westminster, 1 to 5 p.m. A lecture on "The Physiology of Plants" will be given at 3 o'clock by Prof. S. H. Vines, F.R.S.

The Cobham Rhododendrons. — Some 10,000 visitors went to see the Rhododendrons at Cobham Hall, the seat of the Earl of Darnley, on Sunday last. So numerous were the vehicles that the roads were almost blocked although all conducted themselves in an orderly manner. The Rhododendrons are grand at the present time.

The Rabbit continues its depredations in Australia. Within the last seven years New South Wales has spent £831,457 in combating the pest, and during the same time has erected 956 miles of rabbit-proof fence at a cost of £50,000. Notwithstanding all this rabbits continue to multiply apace, and are said to be learning to climb trees and fences, and to squeeze themselves through what was considered to be rabbit-proof netting.

Earlier Opening of Kew Gardens.—Visitors to Kew Gardens on Whit Monday were afforded an opportunity outside each of the entrances for signing a petition for the earlier opening of the gardens, and it is quite likely that a considerable number of signatures was obtained, although, as the *Daily Telegraph* sagely remarks, those most eager to affix their names being those who, unfortunately, can only enjoy the gardens on a Bank Holiday.

The Market gardeners of Brittany have apparently woke up to the fact that there is a lucrative market to be found here for their garden produce. Last year, as an experiment, a steamer plied between Brest and Plymouth for a period of five weeks, making two journeys weekly. She brought to Plymouth cargoes of Strawberries, Peas, and other vegetables. Evidently the experiment proved successful from a financial point of view for notification has been made that the service is to be resumed this year. Two steamers have been chartered for six weeks, and wil make a trip each day, Plymouth again being their goal. From thence the produce will be despatched per special train for the Birmingham, Liverpool, Manchester, and Newcastle-on-Tyne markets, only a a small proportion going to London.

Royal Horticultural Society.—The schedule for the Great Autumn Show to be held by the Royal Horticultural Society at the Crystal Palace on September 30th, and October 1st and 2nd, is now before us. The schedule itself is issued in book form as in previous years and runs to 28 pages, inclusive of advertisements. The prize list is a lengthy and comprehensive one, and the prizes offered are very substantial, totalling £250 in all. Minute directions are given for the guidance of exhibitors so that it is hardly possible for them to go astray. Lists have been drawn up of dessert and cooking Apples, Pears, and Plums, each variety being allotted to the section under which alone it will be recognised as an exhibit. This has been done with a view to the removal of the doubt aud difficulties as to the distinction between dessert and culinary varieties, and also for the guidance of judges. As the notes on p. 24 of the schedule state, "it would be impossible to draw up lists to which everyone would agree as to the position assigned to each individual variety, and it is only by mutual concessions that a general working agreement can be reached"; still the council has made a step in the right direction in making an attempt to dispel the confusion that has hitherto existed between the two sections. In the short preface to the schedule fruit growers generally are reminded that the prospect of future annual fruit shows depends entirely upon the raising yearly of £100 by those interested in order to aid the prize fund.

A Saturated Solution of Napthalin in carbolic acid is said to be an effective specific for driving away ants in houses.

Mr. John Waugh, for the last 3 years, head gardener to The Rev. W. H. Arkwright, The Hall, Wirksworth, Derbyshire, has been engaged as head gardener to Col. Burstall, Hessle Mount, Hull, Yorkshire.

A fine variety of Laelia tenebrosa turned up at the Sale Rooms of Messrs Protheroe & Morris on the 4th inst. All parts of the flower were of a dark, bronzy-purple. It found a bidder at 13 guineas. Amongst fine varities of other Orchids, Odontoglossom crispum was knocked down at 4½ guineas; Cattleya Schroderae albens at 5 guineas; and Cattleya speciosissima alba at 5½ guineas.

Floral Emblems.—Says the *African Critic*, certain people in South Africa—notably in Port Elizabeth—are anticipating "a United South Africa" by discussing the floral emblem of that Union. The Aloe is most generally fancied, and appears to me eminently suitable. Meantime, in Boston and elsewhere in America, a debate is proceeding with regard to a similar symbol for the United States. It goes almost without saying that Columbia leans towards the Columbine.

Bristol Amateur Horticultural Society.—At the monthly meeting held at Colston Hall on the evening of June 2nd, the president, Mr. G. M. Dyer, gave an entertaining address on "Tuberous Begonias." He dealt with propagation by seeds and cuttings, and gave hints on bedding out. Mr. House, of Westbury-on-Trym, followed with "Notes on the Pansy," illustrating his remarks by a fine display of Pansies and Violas. Mr. House's paper was likewise of a very practical nature, and was much appreciated.

Fruit as Food.—The digestibility and nutritive values of various fruits are dealt with in an article appearing in a recent issue of the *Rural World*. Apples are stated to be one of the most nutritious and (except in rare instances) digestible of fruits, but all the varieties are not equally so. Hence it becomes important to select well-ripened fruit of sweet varieties. Ripe Pears are even more digestible, but are less nutritious. Grapes are excellent, but the seeds and skins should not be eaten; indeed the skins of all fruits from their corky nature ought not to be eaten. Raisins are less digestible than, but quite as nutritious as grapes. Bananas are good in both respects. Oranges and Melons are too watery to be of much value as food, but make fine thirst quenchers. All fruits should be eaten standing or walking rather than sitting; also grain foods must be included in a fruit diet, Apples and brown bread being a typical combination.

Not so prosaic after all.—Carrots are usually regarded as being very ordinary and every day sort of vegetables, and not the sort of thing that one would be likely to wax eloquent over. Sir George Birdwood, in a recently published memorandum issued by the India Office, evidently thinks otherwise. He discourses upon their botanical, agricultural, and dietetical history and value in a manner that is simply — "Birdwoodian." Here is a tit-bit:—"Between forty and fifty years ago, when the Royal Western Yacht Club at Plymouth had their club house in Mellbay, it was famous for a sweet-savoured Carrot pudding made by their cook, a Mrs. Cornish, if I remember rightly, wife of the steward. She boiled the roots with the tops, then pressed them through a sieve, and adding a little syrup of Angelica, together with some stiffening stuff, such as isinglass, set the dainty dish to bake. The almost metaphysical subtleties of its simple quality were the very ecstacy of taste. She also confected of less transcendental dulcitude, a soft (*glacé*) candy of the chopped root, most toothsome morsels." After this we are not surprised that the late huge shipment of seeds to India, in consequence of the famine, that was made by Messrs. Jas. Carter & Co, High Holborn, contained a large quantity of Carrot seeds. No less than 108 tons were shipped by this firm within nine days of the receipt of the order, and we are informed that if there had been another steamer available within the time limit the whole of the quantity ordered (200 tons) would have been despatched.

The Duke of Devonshire has sold the whole of his landed and other property in the village of Lothersdale, near Skipton. The tenants, with one exception, became the owners of their holdings.

At the recent Temple Show we omitted to state that the Ichthemic Guano Co., Ipswich, staged a neat little group of plants grown with Ichthemic Guano. Azaleas, particularly, were well flowered.

Lune rousse is the name given by gardeners to the moon which, beginning in April, becomes full at the end of that month or during the first fortnight in May. In some quarters the cold weather experienced at the beginning of May was attributed to the malign influence of this moon.

Shakespeare's Oak.—On the tercentenary of the birth of the poet, April 23rd, 1864, Mr. Samuel Phelps planted a tree on Primrose Hill, which has ever since been known as Shakespeare's Oak. Mrs. Linnaeus Banks took part in the planting of the tree, and her death recently has been the means of bringing the tree into notice. Mrs. Banks baptised the tree with water taken from the river Avon, which flows past Shakespeare's native town. The tree is still in a flourishing condition, and protected by an iron fence, but until recently without label or inscription of any sort. Mr, Truelove, another gentleman who took part in the planting of the tree, recently notified the Office of Works of this fact, and at his suggestion, it has been arranged that a tablet appropriately made at Stratford-on-Avon is to be placed at the foot of the tree. Mr. Truelove is now in his 88th year.

Devon and Exeter Gardeners' Association.—The previous summer outings of this society have been attended by such marked success, and have been so thoroughly enjoyed by those members who participated in them, that the custom is evidently not intended to fall into abeyance. An outing has been arranged for Wednesday, July 14th, the destination being Mount Edgecumbe. Mr. Richards, the gardener at that fine estate is well known as a good exponent of the way in which grounds and gardens should be maintained, and with him as guide the visitors will not be likely to be other than deeply interested and greatly entertained. On the return journey it is proposed to pay a visit to the Royal Dockyard at Devonport. Tea will be subsequently provided at Mr. John Wills', Battery Hotel, Stonehouse. A special arrangement with the Great Western Railway Company has been made by which the journey and the return can be made on the payment of single fare; moreover, saloon accommodation will be granted to those who take their tickets a week beforehand, so that gardeners may make the trip in grand style. The fare, there and back is five shillings. A light luncheon and knife and fork tea will be provided for 2s. 6d. inclusive. We wish the society a full measure of success.

Fruit Culture in Cornwall.—On the afternoon of Tuesday, the 1st inst., Mr. Ilott of the Cornwall County Council visited Devoran House, the residence of J. F. Tyacke, Esq., where he gave an interesting demonstration on the summer management of fruit trees. The lecturer said summer pruning was very greatly neglected, the season's growth, as a rule, being left until winter, and then cut back. This was conducive to the formation of wood, but not to the development of fruit spurs. The trees should be gone over and the strongest shoots cut back to within about 2 in. of the base, the weaker shoots being dealt with a week or so after. The blister of leaves in Peaches he attributed to the cold winds, for he had recently seen at Trelissick which had one of the finest walls of Peaches to be seen in England, numbers of trees which were blistered badly. For canker he recommended the following mixture:—12 lbs. superphosphate, 10 lbs. nitrate of soda, 4 lbs. salt, 2 lbs. sulphate of magnesia, 11 lbs. sulphate of iron, and 8 lbs. sulphate of lime. These ingredients should be well mixed together, and applied at the rate of 4 lbs. per square yard for young trees, and 8 lbs. per square yard for old ones. This was not an absolute cure but was a strong stimulant and thus checked the ravages of the canker to a great extent.

The Wilderness, a tract of wooded land near Greenwich Park, formerly fenced as a deer run, has been thrown open to the public.

Mr. T. Carrington Smith has been elected chairman of the Dairy Produce Committee of the Central and Associated Chambers of Agriculture.

Blasting the Root of a Tree.—George Cherriman, a labourer of Coombs, near Steyning, Sussex, put a large quantity of gunpowder under the root of a tree, in order to blast it. He then lighted a brownpaper fuse, and stood near to watch the effect. He leaves a widow and seven children.

The Live Oak of the southern states of America bears acorns which sprout before they fall. The root pushes out for a distance of several inches before it penetrates the soil, so that the young tree is often six inches from the acorn. The germination of this tree is considered to be the most remarkable of any American tree.

Work at the New York Botanic Garden is proceeding apace. It may be remembered that the Bronx Park is being transformed to serve the purpose of a botanic garden for the city of New York. Five or six hundred species of herbaceous plants have already found a home in the grounds. Seedlings of some 3,000 species of plants have been raised from seeds obtained from Kew, Berlin, Geneva, and other European botanic gardens.

A go-ahead Corporation is that of Liverpool. In addition to discharging ordinary public duties this body evidently believes the decoration of private houses to be within its legitimate sphere of influence. The Parks and Gardens Committee have distributed broadcast among the poorer inhabitants of the great seaport who signified their willingness to look after them, window boxes, ready filled with various suitable plants. This is a laudable and practical attempt to grapple with and obviate the dulness and monotony of the poorer streets but we are waiting expectantly for the view which will be taken of this devotion of public funds by the general body of rate-payers. If the good citizens of Liverpool do not object we may see the example of the municipal authorities of that city followed by others.

Cricket. — Hurst & Son v. Gloster & Son.—This match was played at Woking on Whit-Monday, June 7th, and the following is a list of the scoring:—

HURST & SON.

1st Innings.		2nd Innings.	
Sampson, c D. Gloster, b Shears	29	b C. Laker	28
Swinfen, c F. Duffet, b Laker	8	c Cobbet, b G. Gloster	2
Squire, c D. Gloster, b C. Laker	53	b G. Gloster	3
Cochrane, h C. Laker	4	b G. Gloster	3
Main, c Duffet, b C. Laker	25	c G. Gloster, b G. Gloster	7
Delacourt, b G. Gloster	3	c and b G. Gloster	6
Blyth, c D. Gloster, b Laker	0	c and b G. Gloster	14
Jerry, c Knobs, b Gloster	1	c Laker, h G Gloster	17
Laker, not out	4	b G. Gloster	0
Thake, c Cobbet, b Gloster	0	not out	0
Turner, b Laker	0	b C. Laker	0
Extras	2	Extras	3
	129		83

GLOSTER & SONS.

1st Innings.		2nd Innings.	
Duffet, c Sampson, b Swinfen	1	not out	7
Aylott, c Swinfen, b Sampson	3	run out	0
C. Laker, b Main	27		
Shears, h Swinfen	11	b Swinfen	3
G. Gloster, b Main	5	not out	33
Knobbs, c Cochrane b Main	7		
Bearman, b Swinfen	2	b Swinfen	3
Butt, run out	2		
Cobbett, not out	2		
Goodyear, lbw, h Swinfen	2		
D. Gloster, c Squire h Main	0		
Extras	13		
	75		46

Other good matches were (1) Hurst & Son, 130 for 5; and Spottiswoode 41, played at Nunhead, on the 29th May; (2) Hurst & Son, 132 for 5; Mizen Bros. 14, played at Walthamstow, on the 5th inst.

ENTRY OF MR. M. H. F. SUTTON INTO THE FIRM OF SUTTON & SONS READING.

THE enthusiastic gathering of the members and relatives of the firm of Messrs. Sutton & Sons, Reading, and their employees, in one of the large rooms of the establishment on the evening of the 1st. inst., to which we briefly referred on p. 628, we now deal with a little more fully. The object of the gathering was to welcome the entry of Mr. Martin Hubert Foquett Sutton into the partnership of the firm. The wives of the employees were also present, and the party numbered about 500.

The chair was taken by Mr. Martin John Sutton, supported on his right by his father, Mr. Martin Hope Sutton—the founder of the firm—and on his left by his son, Mr. M. H. F. Sutton. Amongst others present were:—Mrs. M. J. Sutton, Mr. Arthur W. Sutton and Mrs. A. W. Sutton, Mr. Leonard G. Sutton, Miss Emma Sutton, and the Misses Alice. Eveline, Jessie, and Kathleen Sutton, Master Phil. Sutton, the Rev. and Mrs. Claude Sutton, the Rev. Edwin Sutton, Mr. Reginald Sutton, and the Rev. S. H. Soole.

Mr. Martin John Sutton, in proposing the toast of the Queen, said that Her Majesty had been proposed for at least 60,000 times during the past 60 years in the United Kingdom, and it had also been proposed every night in other portions of the Empire. It had been proposed without cessation since she came to the throne. His father came to those premises some 60 years ago, so that it was their Diamond Jubilee year also. In connection with the Queen's Diamond Jubilee, they proposed as a firm to give their employees their wages on Jubilee Day, and next morning to present them with a week's wages extra. The toast was received with great enthusiasm.

Mr. Martin John Sutton next proposed the "Prince and Princess of Wales and the rest of the Royal Family." The Prince had honoured the firm by taking the chair at a Masonic banquet in that room some years ago The Princess of Wales was a great lover of horticulture, and she honoured their stand at the recent Temple Show, and remarked that she had never seen such Gloxinias and Begonias in her life. At her express wish some plants of Gloxinias were taken to Marlborough House and left there for her. They now had the honour of naming one the Princess of Wales. His (the speaker's) father, his son, and himself had been photographed in a group at the express wish of his father on his 82nd birthday, and every one of the male hands would receive a cabinet photograph that night. His father, Mr. Martin Hope Sutton, had associated with his gift, on the occasion of the Diamond Jubilee, a Testament which would be handed to every one at the same time as the photograph. God bless the Prince of Wales was then sung with much gusto.

After some further speaking Mr. Martin Hope Sutton, the founder of the firm, rose to propose the principal toast of the evening, that of Mr. M. H. F. Sutton, his grandson. They would remember the meeting held in the Abbey Hall some time since to bid farewell to his grandson who was going to foreign parts. They rejoiced that night that Mr. Hubert had joined the business. They would, he was sure, honour him and love to see him possess the exceptional capabilities in the business which he had inherited from his father; and they must have seen how thoroughly at one the members of the firm were, and with those who worked with them at home and abroad. Mr. Livings also spoke in support.

Mr. M. H. F. Sutton replied, saying that his breath was almost taken away by the reception given him. He thanked his revered and honoured grandfather and Mr. Livings for the way they had proposed the toast. It was not many firms that could be represented by three generations, as their's was. Concerning the business he desired to help carry it on under the old traditions under which it had always been carried on. It was also his earnest desire to become acquainted with all the employees individually. From the older employees who had borne the burden and the heat of the day, perhaps he might look for counsel in order to carry on the great business, and to the younger he should look for enthusiasm in the work to carry it on as heretofore. He thanked them and hoped to prove himself worthy of their trust.

Mr. J. Farmer then proposed "The Firm of Sutton & Sons," remarking on the great growth of the business The firm had a very large English trade, and he felt sure the foreign orders would also increase as the home trade had done. Mr. A. W. Sutton in reply spoke of what his brother Mr. Martin John had done for the business during the past 31 years. He did not know any one in Reading whose letters had been publicly read at Marlborough House by the Prince of Wales as his brother's had been. His cousin, Mr. Herbert Sutton, was so well known in connection with education work in Reading that the Oxford University had recently thought fit to confer on him an M. A. Degree. His brother Leonard was well known to every man and boy in the firm and the more they knew of him the more they liked him.

Mr. Leonard Sutton proposed the ladies in eulogistic terms, and referred especially to the grand influence of the mothers, which had a great deal to do with their sons' success in life. He warmly welcomed his nephew (Mr. M. H. F. Sutton) as a partner.

ASCOTT, LEIGHTON.

The beautiful gardens of Leopold de Rothschild, Esq., have a distinct character peculiar to them, as has the fine mansion; and probably much of the beauty and charm in both cases may be traced to the same cause, viz., to the fact that the present mansion was designed to arrange with the portion of the previously existing building, which bears date 1606; and the idea of the gardens was in a great degree in harmony with it, and with the pretty little orchard in the dell beside the house, and which is still retained, the old trees being made still more beautiful by being used to support climbing Roses and Honeysuckles, some of which are already beginning to tell among the showy Apple blossoms. The greater part of the mansion is clad with climbing Roses and other trailing plants and climbers, two of the most beautiful of which at the present time are Wistaria chinensis and Wistaria multijuga, the latter bearing a profusion of racemes of flowers about 2 ft. in length.

Upwards of 30 acres are kept in garden trim, and the gardens proper are made to merge into the surrounding pleasure grounds, so that the beauty of the scenery and its harmony with the magnificent views around is unbroken. Around the house are beautiful shrubberies and groups of rare Conifers in which those with a golden hue are much used and are very effective. Carefully planted with a view to effect are flowering trees and shrubs, many of which are now covered with flowers; and here and there great masses of Rhododendrons give brilliant colour. Specially fine this year have been the now waning varieties of Pyrus Malus, and in the height of their beauty are the Lilacs, Thorns, Berberis Darwinii, B. stenophylla, and other Berberis; Azalea mollis and other hardy Azaleas; and as brilliant in colour as any of the flowers are the fine bushes of Acer polymorphum sanguineum, one of which is supposed to be the largest in the country.

Here and there are beds of old-fashioned plants such as Paeonies, Iris, Papaver bracteatum, Delphiniums, borders of Musk, beds of Sweet Brier, Forget-me-nots and Roses. Excellent effect is got by massing large beds of Austrian Briers of various hues with the Penzance Sweet Briers intermingled, and all are set well with buds which promise a better show of bloom than ever this season. Throughout the whole garden a splendid display is made by the patches of the finer varieties of Tulipa gesneriana, which are planted here and there throughout most of the borders and beds, and which have given a magnificent show of rich crimson colour throughout the spring, and are still almost as good as ever. These fine old Tulips, when planted in this manner, are charming, their long flower-stems adding to their attractions as they display the colours of the flowers well above the other plants and shrubs planted with them. Another fine Tulip which made a great show early in the season was Tulipa Kauffmanni, which is planted, together with a large collection of Narcissus and other spring flowers, in the natural grass beyond the massive fountain, and very beautiful they look as one after the other they send forth their flowers. Near by is a plantation made of the old Apple trees removed from the kitchen garden and which are now well in flower. Beneath these the ground is being prepared to form a sort of orderly wild garden, in which annuals and perrennials will take part.

Ascott has a series of gardens rather than a garden, for every nook is made perfect in itself, and Mr. John Jennings, the excellent gardener there, is never happier than when he sees the completion of one of those improvements which is continually being carried out. The herbaceous plant garden, with its arches of Roses, is just coming into its beauty. Here, too, the masses of Tulipa gesneriana macrospila are fine, and harmonise well with the bright yellow of the patches of Doronicum, &c. The neat little rock garden is bright with the prostrate Phloxes, Aubrietias, Saxifragas, &c., and pretty with the young growths of the Ferns, one of the most effective being a large tuft of Hypolepis anthriscifolia. Of the flowering plants one of the best is Meconopsis cambrica flore pleno with very double yellow flowers, and appearing over the rocks at the highest point are Honeysuckles and Roses, the former in flower, the latter in bud.

In some parts of the garden, clipped Yews are planted and give variety; and beds of Bamboo, of Gunnera manicata (which grows well around the water-plant garden), and other foliage plants appear; indeed, nothing that is likely to add to the beauty and interest in the garden is excluded. Among the rarer Conifers may be noted a strong specimen of the golden-leaved Cedar of Lebanon; and a noble example of the blue-tinted Abies concolor violacea, which is one of the handsomest trees in the garden. One little garden forms a sun-dial, the figures being formed by clipped dwarf Box, and the indicator to tell the time by its shadow falling on them by a clipped Yew.

The Glasshouses

are devoted mainly to the production of flowers for cutting or for use for decoration, and in most instances fragrant flowers have the preference. Souvenir de la Malmaison Carnations take up a large proportion of the space, and to these, which are admirably grown here, many houses are devoted. Already the first house has flowered and the second is in full beauty, the whole house being filled with the large fragrant blooms, borne on stout, vigorous plants. Of those at present in bloom the greater part are of the bright pink variety, Princess of Wales, which is the favourite at Ascott. Several houses, full, as well as later stock in the frames, are well set with buds, so that the supply of bloom will be long-continued. Of other Carnations in pots which have been keeping up a constant succession of bloom since January last Carnation Mrs. Leopold de Rothschild is the best, most charmingly tinted and most fragrant, its fine flowers being of the peculiarly attractive pink tint seen in some of the light Tea Roses. Another grand flower is Carnation Mr. Arthur Sassoon, the best bright yellow self; and specially good are James O'Brien, the best scarlet, but lacking the fine perfume of some of the other varieties; Almeira, a good yellow; Niphe'os, white; Seftou, a scarlet flake; Waterwitch, blush white; and Duke of York, President Carnot, and General Stewart, all fine dark varieties.

Two houses have the greater part filled with Begonia Gloire de Sceaux, their fine heads of light rose flowers showing well above the dark foliage. On the side stages are Golden Callas and feathery plants of Spiraea astilboides. Several houses have the roofs covered with Tea Roses which have given large supplies of flowers, beneath them still in great beauty being Moss Roses in pots, the Crested Moss being specially beautiful. Several warm spans are filled with neat plants for table decoration, and throughout the perfectly kept gardens, specially noteworthy was a fine batch of Lachenalia aurea, which Mr. Jennings grows to perfection in small pots. Some houses of Pelargoniums; a strong batch of Calanthes for winter flowering; a batch of Richardia Little Gem, which is here flowered well in 60-size pots, and is very useful, though formerly when potted on it was not satisfactory; a quantity of scarlet Nerines, and large batches of other showy flowers, are all well grown at Ascott.

In the fruit department and kitchen gardens all is in keeping with the rest of this fine establishment. Strawberries under glass have been good and the net-protected beds outdoors promise grand crops.—*James O'Brien.*

More Than 150 Varieties of Lilac are cultivated in the Arnold Arboretum in the United States.

ORCHIDS AT CHELSEA.

Early summer brings with it a great variety of Orchids and those mentioned in these notes were only a few we saw recently in the nursery of Messrs J. Veitch & Sons, King's Road, Chelsea.

Phalaenopsis House.

Only the summer flowering species and hybrids of Phalaenopsis are now in season, and those included a fine piece of P. luddeviolacea, bearing two spikes of bloom, and P. Vesta. The latter was derived from Aphrodite crossed with P. rosea leucaspis, and being intermediate between the parents is mostly white. Dendrobium Phalaenopsis Schroderiana seems scarcely ever, if at any time, out of season. Very fine was D. Bensoniae with its large maroon or black blotch. D. rhodopterygium is closely allied to D. Parishii, but differs by its more erect growth and otherwise. Curious and pretty is the dwarf D Jenkinsi with its large orange-yellow flowers on short drooping scapes; this species does best suspended from the roof of the house on a raft or in a basket.

Several Oncidiums make themselves conspicuous at this season of the year, including O. ampliatum with its great branching panicles of yellow flowers O. krammerianum still continues popular and will do so for many a year on account of the singlar form and beauty of its flowers which surpass those of O. Papilio. A remarkable contrast to both of them is presented by the tiny flowered and dwarf O. pumilum with its miniature panicles of bloom. We noted three well-grown plants suspended in pans. Several varieties of O. pulchellum were exceedingly beautiful. The plant has fleshy, triquetrous leaves but no pseudo-bulbs; and the best variety has an orange blotch on the lip and deep rose wings to the column, the rest of the flower being white. Twelve plants of O. pulvinatum, with panicles of bloom 2 ft. to 3 ft. in length, carry a profusion of brown and yellow flowers.

That uncommon West Indian Orchid, Broughtonia sanguinea, suspended in a basket, carried three scapes of its pretty purple-red flowers. In this house, likewise, was a large batch of Cypripedium Veitchi just approaching its best. The form of Anguloa uniflora having white flowers, shaded and spotted with rose, is powerfully fragrant as well as pretty. Another choice thing is Phaius Humblotii. An old but rare Orchid is Coelogyne asperata, otherwise known as C Lowii. Its sepals and petals are creamy-yellow, while the lip is heavily marbled with brownish-orange or rusty red. Handsome and pretty is Coelogyne dayana. A plant in a 24-size pot bears seven or eight of its graceful and pendant racemes of bloom. The angular pseudobulbs are of great size and the leaves are lanceolate, plaited and arching.

The Orchid Rockery.

There is always something interesting or showy in this central building with its tufa rockwork, covered with creepers of various kinds. The large white flowers of Utricularia montana bear a strong resemblance to an Orchid, though belonging to quite a different natural order. Several plants are suspended in baskets. A tall stemmed and dark-flowered variety of Sobralia macrantha has been giving a good account of itself for some time past. The same may be said of three well grown plants of that splendid hybrid, Cypripedium grande. Amongst numerous plants of that continuous-flowering Cymbidium lowianum, we noted some very fine varieties with a dark maroon blotch on the lip. The white lip and orange-brown sepals and petals of Phaius Wallichii are very handsome. Well-flowered also is Dendrobium infundibulum. Very uncommon is the purple flowered Bletia Sheperdi, of which there are numerous plants bearing two to three spikes each.

Cattleya House.

This large house was unusually gay with a great variety of Cattleyas and Laelias on the occasion of our visit. Large-flowered and handsome varieties of Cattleya Mossiae were abundant in various parts of the house. C. lawrenceana was also notable for the intense purple of its flowers; and C. Mendelii and C. Schroderae were equally fine. One of C. Mendelii had a very fine lip of an intense purple or crimson. There were also some richly coloured varieties of C. schilleriana with its huge lip. C. citrina, with its golden-yellow flowers and powerful but grateful odour was flowering freely on rafts. C. Skinneri was represented by two huge pieces carrying numerous spikes of bloom, one being a light and another a dark variety. C. Philo is a hybrid between C. Mossaie and C. iricolor, the former being the

mother. The orange blotch on the lip is very distinct. The glory of the house for the time being was Laelia purpurata, there being something like eighty spikes of bloom all open at the same time. Many of the varieties had pure white sepals and petals and a dark crimson-purple lip. Numerous plants of the sweet-scented Odontoglossum citrosmum were suspended from the roof in pans.

COOL HOUSE.

This structure has been very gay for some time past with a great profusion of flowers, chiefly Miltonias, Odontoglossums, and Masdevallias. Of the first-named there is both quantity and variety of colours. Odontoglossom cirrhosum has made extraordinary growth, some plants having stems 5 ft. high. O. laeve otherwise known as O. Reichenheimii is also well done. O. crispum is flowering in great profusion, and mixed with it are numerous samples of O. Pescatorei, O. cordatum, O. Hallii, and O. harrryanum, in fine condition. Many plants of Oncidium incurvum have panicled stems 4 ft. high. O. macranthum is also very tall, and bearing fine flowers. The glowing orange-scarlet of Epidendrum vitellinum majus is extremely handsome. The same may be said of the beautiful hybrid Disa Veitchi with its rich carmine-rose flowers. A well-grown piece of Masdevallia Veitchi bears thirty flowers of magnificent proportions. Others belonging to the same genus include M. harryana in various colours, M. ignea, the hybrid M. Chelsoni, and M. caudato-estradae, with deep purple flowers and a hooded upper sepal. Nor must we forget the beautiful uniformly clear yellow Oncidium concolor.

SATURDAY AFTERNOON HOLIDAYS.

THE thanks of all gardeners are due to THE GARDENING WORLD for espousing their cause, by advocating the shortening of the hours of labour on Saturdays, thus giving them the same, or at all events a share of the advantages enjoyed by nearly all the working classes throughout the country.

The two instances quoted on page 628, viz.: that of Messrs. Lewis, of Southgate, and Major Joicey, of Sunningdale, show that there is an increasing tendency to look upon a gardener as a man entitled to the privileges accorded the working portion of the community in general, and it is to be hoped that this custom will soon become universal.

To these two cases may be added that of Messrs. Veitch, of Chelsea, who now close their establishment at four o'clock on Saturday afternoon, which boon is much appreciated by their numerous employees. With three nurseries all claiming Royal patronage, and all situated within a few yards of one another, it was only to be expected that the others would follow the example of their more enlightened neighbour, but such is not the case, for a walk through the district on Saturday last revealed the act that the employees of the other two were at work till six o'clock.

When the trying nature of the work under glass, and the amount of study that is required to ensure even a fair knowledge of the gardeners' calling is taken into consideration, one can but say to those enlightened employers that recognise that fact, and to such journals as THE GARDENING WORLD, to whom all workers are so much indebted, "Go ye on and prosper."—*J. S.*

HARDY FRUIT GARDEN.

STRAWBERRIES.—No time should be lost in getting the Strawberry beds littered down, if this operation has been neglected up to the present. Before doing this, however, the opportunity should be taken to give the plants a thorough soaking. The recent rains have been pretty heavy in some parts of the country, but too light in others to be sufficient, especially in localities where the soil is naturally light. If a supply of good liquid farmyard manure is obtainable this will be of real value just now. It must be borne in mind that the Strawberry requires a great deal of nourishment within a comparatively short period, and thus any extra stores of nutriment that can be imparted to the soil will be of inestimable service. For littering down clean straw is, of course, the most suitable material, but if this cannot be had in sufficient quantities some of the cleanest straw from the stable litter may be employed. If this is shaken out and exposed to the sun and wind for a day or two to dry and sweeten it, it will answer very well.

NETTING THE FRUIT.—As soon as the fruit begins to show signs of colouring protection must be given from the birds. In many gardens the nets are spread over the beds with a few forked sticks, about 18 ins. in length, inserted here and there to take some of the weight of the nets off the plants. It is a tedious operation, however, to drag the nets off and on, and the foliage of the plants becomes greatly injured by so doing. A better plan is to drive in a few wooden posts so that they stand about 4 ft. above the level of the ground, and connect these by light spars of wood or thin iron rods. Over this framework the nets may be spread, the edges being pegged down firmly to make all secure. There will then be no need to remove the nets each time that a dish of fruit is required for dessert, although it will be good policy to roll them back when the heavy gatherings are made to furnish fruit for preserving purposes.

THINNING PEARS.—Where the blossom was not injured by frost the set of fruit has been pretty good, certainly far more than the trees can hope to bring to a good size and maturity. It is good practice therefore to thin out the bunches of fruit according to the vigour of the trees and the size of fruit that is of most value to each establishment. In not a few cases, particularly amongst the older trees the fruit has dropped a good deal during the past week or two. This is, of course, due to a very large extent to the drought, but the ultimate effect will be beneficial both to the trees and the fruit itself.

WATERING.—This becomes of more importance as the season wears on and we expect to get hot parching days in considerable numbers. Trees carrying heavy crops must be looked after for water if they are to finish those crops properly and well. One result of good cultivation is that the roots of the trees are kept near to the surface where they may easily be managed with regard to supply of nutriment. Thus a period of drought cannot fail to be highly injurious to them, for they have no roots striking deep down into the lower strata. Watering and mulching should therefore be practised all round, for it should be remembered that one good watering followed by a mulching is of far more value than three waterings without any mulching.

APPLES.—A watch must be kept upon all Apple trees for the caterpillars of the Winter Moth (Cheimatobia brumata), which commit great havoc among the trees which they attack. Infested trees may be cleaned by spreading cloths or mats beneath them, and giving the branches a smart rap or shaking. This dislodges the caterpillars which, falling into the mats below may be easily gathered up and destroyed. Fowls are very fond of the caterpillars, and are of great value on this account as insect destroyers. A good plan is to spray the trees occasionally with a solution composed of one ounce of Paris Green to twenty gallons of water. This must be kept well stirred whilst it is being applied. A dull day should be chosen for the operation. There is a good deal of prejudice against the employment of Paris Green, on account of its poisonous qualities, but if care is taken no harm will be done to the trees or the operator.—*A. S. G.*

THE FLOWER GARDEN.

BEDDING OUT.—Just now by ar the major portion of the interest in this department is centred around the planting out of the summer flowering subjects into their flowering quarters. In spite of the growing popularity of herbaceous gardening, the preparation of summer bedding plants is a huge tax upon the gardener's time and energies, and the culminating point comes when thousands of all sorts of plants have to be transferred to the open ground as quickly as possible. The warm weather that characterised the third week in May tempted not a few to make a start with the planting out in order to lessen as far as possible the burden of watering so many plants in pots and boxes. Fortunately the weather has been favourable since then and the recent rains came in good time to refresh the newly put out plants. Watering with cans and hoses is all very well, but there's nothing to beat the rain from the clouds.

THICK PLANTING *versus* THIN PLANTING.—Usually towards the end of the summer the plants, more particularly zonal Pelargoniums, become crowded, and one is apt to wish that they had been given a little more room in the first instance. It is not always possible to do this, however, for in many private establishments an immediate effect is required, and in order to obtain this pretty close planting is essential; still, in cases where a few weeks are likely to elapse before garden and tennis parties are in full swing, and the gardens are expected to be gay, crowding need not be practised.

The advantage which is to be had from growing the bedding stuff on in pots over the boxing system scarcely needs mention, but a sufficiency of pots is not always obtainable, and then boxes have to be utilised to some extent. In this case it will be very necessary to see that the plants are taken out with good balls of earth attached, and in order to do this the soil must not be at all dry at the time.

TUBEROUS BEGONIAS.—Where these have been planted out in frames in specially prepared beds as a shift from the boxes in which the plants were started, the plants have now reached a good size, and will fill up better and make a greater immediate display than others which were started later, and were not given this intermediate stage. For a few nights before planting out the lights should be left off entirely, as a last experience before the final change. Lift the plants with good balls of earth and carry them to the beds on the hand-barrow. The wheel-barrow is far too rough a method of transit. Bearing in mind the fact that Begonias like plenty of water, some little care in watering will be necessary if the weather keeps bright and dry.

THE TENDERER PLANTS, such as Iresines, Coleuses, Heliotropes, and Alternantheras, may also be consigned to their flowering quarters without delay. These have naturally been kept to the last so as to avoid having them cut off by possible frosts. We are pretty safe from these now, at least we expect safety when June has turned.

DAHLIAS that have been started in old baskets, skeps, boxes, etc., should likewise be planted. By thus giving the plants a little stimulus in the first stages of growth, earlier flowers are procured. It not infrequently happens that plants which are not treated thus, and are planted out in the open a little earlier, to start as they can, are only in the first flush of their blooming season when the frost applies the closure.

CARNATIONS.—As the plants commence to throw up their flower stems staking should be seen to. There is nothing cleaner and better for the purpose than bamboos, and as these need not be shortened there is no need to wait until the flower stems have reached their full length before the stakes are inserted. If a supply of liquid farmyard manure is available the plants will benefit greatly by a few doses, and this may be followed up by mulchings of short, well-rotted manure, or cocoanut fibre refuse, to check evaporation. For beds near to the house the fibre is the more useful, as it answers the main purpose of a mulching, although it does not impart direct nutriment to the soil. It is more cleanly than the manure, and to fastidious eyes has a better appearance.—*A. S. G.*

The Preservation of Rare Plants.—Some correspondence has lately appeared in the columns of *The Yorkshire Post* with, regard to the pretty alpine, Trientalis europaea. Mr. Wm. Cecil Slingsby replying to the question whether the plant was to be found in parts of Yorkshire does so in the affirmative, but takes the opportunity of pointing out to the readers of that paper the great desirability and stern necessity of not making known the haunts of the scarcer wild flowers in Yorkshire. Mr. Slingsby takes a very sensible view of the case, and his words should be echoed not only in Yorkshire but the country over. The rarer wild flowers are in great danger of extermination owing to the way in which they are zealously persecuted and the localities in which they grow made public. To ruthlessly destroy a rare wild plant, whether under a pretence of scientific research or not should be an indictable offence.

HINTS FOR AMATEURS.

Bedding Out.—The flower garden has lately been claiming more than its usual share of attention, and the "bedding out" has been the all-prevailing topic for three weeks past. In large private establishments the crush of the work is past, and it is only the tenderer and more backward plants that have yet to be dealt with. We are in hopes that all amateurs are as forward. No one can know but those who have experienced it what a relief it is to get the whole of the plants safely transferred to their summer quarters; it is just such a feeling of relief as that which comes when all the tender plants are safely housed out of harm's way in the autumn. Those who got their plants put out before the end of May reaped the advantage of the copious showers which fell during the last week of that month and the beginning of the present one. This advantage was by no means an unimportant one, for the plants were enabled to get a hold of the new soil, and recover themselves of the check consequent on shifting. This they naturally do much better in dull showery weather than they do when the hot bright sun is pouring down his rays relentlessly upon them. It is possible, of course, to give the moisture by artificial waterings, but the water thus applied is not so beneficent as that which comes from the clouds, and besides, shade is almost as important as watering.

Ornamental Vases.—There can be no denying the effect of these when well furnished and properly looked after, as they seem to impart a finish to a garden. No time should be lost now in getting them filled with plants. If they have been occupied during the winter months by small Conifers, and other hardy evergreens they should be emptied, cleaned, the drainage put to rights, and fresh soil substituted. There is a wealth of variety at the disposal of those who care to invest in it, and there should be no difficulty in obtaining a fine show. In many cases, however, vases of this kind have their value from a horticultural point of view heavily impaired because of their shallowness, the makers having turned more attention to their ornamentation than to their practical utility. Of course, by feeding well it is possible to do with comparatively little soil, but this has its limit. Obviously it is of no use to fill the vases so full of soil that they will not hold sufficient water to wet the whole of the soil through. In cases where the vases go to the other extreme, and have too great a depth the difficulty is easily surmounted.

Pot plants for Vases.—The system of simply using the larger ornamental vases as receptacles for containing pot plants has some advantages which it may be as well to touch upon. In the first place it is perhaps the best way of dealing with the very shallow vases which we have been discussing. It does not matter if the rim of the pot does overtop the margin of the vase as by judicious insertion of smaller pots around it, it can be hidden. Then again there is the advantage of being able to effect a change with little trouble should the plants become shabby or variety be desired.

Chief among subjects suitable for growing is Agave americana, the so-called American Aloe. This has a very distinguished appearance and is a great favourite for flower garden work. The blue African Lily, Agapanthus umbellatus is also admirable. The long drooping leaves have a graceful appearance, and when surmounted by the huge umbels of flower on the tall stout stalks, the effect is splendid. The white variety is not so vigorous a grower or quite so free a bloomer, but it is well worth growing for the sake of contrast. In addition to these there are some Palms that can be turned to account for the purpose during the summer months. Of these Phoenix canariensis, P. reclinata, and P. rupicola are the most useful. Kentia belmoreana, K. fosteriana, Latania borbonica, and even Seaforthia elegans will do in sheltered positions if they are carefully hardened off first. Naturally they must be taken indoors in the early part of the autumn before the weather gets too chilly. Chamaerops humilis is also a graceful little Palm. It is much hardier than any of the foregoing, and will succeed where they will not. We must also not forget to mention Curculigo recurvata. This resembles a Palm in appearance, and it is commonly, but erroneously, spoken of as being one, although it really belongs to the natural order Amaryllidaceae. The Curculigo will do pretty well if it is carefully looked after, but it will be useless to place it in wind-swept corners, for such an experience will quickly turn the leaves brown, and then the beauty of the plant will be greatly marred.

Passing on to other plants which may be employed, but are better for such vases where they can be planted right out and not grown in pots, we find a good deal of variety from which to pick and choose. The handsome and distinct foliage of the Castor Oil plant (Ricinus) is excellent for large vases which take a good deal of filling. For smaller ones, on the other hand, the plants would be too large and would look out of place in them. There is a number of varieties of Ricinus communis which vary considerably in height. For vase work the best of these is R. c. Glbsonii, which is from 4 ft. to 5 ft. in height. Both the stems and leaves are of a rich dark purple. The Japanese striped maize is a wondrously pretty plant for any subtropical gardening, and it will do very well in a vase. It is about 3 ft. in height, and the green and white foliage is distinctly out of the common.

We come now to the consideration of flowering plants which really constitute the bulk of the material. Foliage plants have many admirers it is true, but flowering subjects are even more popular. Where the vases are large enough a mixture of the two sections will afford excellent results. The zonal Pelargonium is high up on the list, both from its unfailing good temper in growing in almost any situation, and the way in which it continues to produce its flowers over a very long period. We alluded to the value of large old plants early in the season in the columns of "Hints" or of those that had been grown on for flowering last winter for vase filling purposes. These plants should have been treated to a liberal dose of the knife in the springtime in order to reduce them to shape, and then potted on. We advised this treatment at the time. Such plants are now in first-class fettle, and will give a good account of themselves. The white and yellow Marguerites are exceedingly popular, and although they are apt to become somewhat unwieldy with regard to size before the end of the summer, there is no gainsaying their fine decorative qualtities, for there seems to be no end to their production of flowers. Fuchsias are a host in themselves, and it is a great pity that they are not more extensively employed. Certainly, if they are once given a trial they will be always used. The great point is to use only very free flowering varieties. In this quality the single varieties are, if anything, superior to the doubles. The following are some of the best forms:—Rose of Castile, sepals blush, corolla pnrple, an old variety, but still one of the best as far as floriferousness goes; Cannell's Gem, tube and sepals bright red, corolla pure white; Princess May, tube and sepals blush white, corolla, cherry carmine; Lord Beaconsfield, corolla orange-scarlet, with a very long tube and large flower; Countess of Aberdeen, pure white; and General Roberts, corolla, a deep plum colour; sepals and tube rose, with very long flowers and distinct drooping habit. Wave of Life is another good old-fashioned sort. Its chief attraction is its rich golden-hued foliage, since the flowers are small and not very showy. It is well worth growing. Among the double varieties some of the best are White Phenomenal, pure white, extra large size; Rose Phenomenal, bright rosy mauve, the counterpart in size and construction of bloom, as well as habit, of the first named; Frau Emma Topper, tube and sepals, rosy coral; corolla, rose blush; and Mrs. E. G. Hill, corolla, creamy white; sepals and tube deep cerise.

Celosia pyramidalis plumosa in its several shades of red, purple, rose, and yellow is much valued for conservatory decoration, but it does not seem to be generally known that it will do quite well out of doors in the summer. Of course the plants require to be raised in heat, and they should be potted on until they are in 48-sized pots, in which they may be kept until they are just commencing to come into bloom. Then they should be gradually hardened off and planted out in their flowering quarters, taking care to disturb the roots as little as possible. The little extra trouble required to obtain a few Celosias will be amply repaid by the richness of the effect obtained. The colours they afford can be supplied by nothing else in the same graceful elegant way. It may not be beside the mark to mention here that Celosias will grow equally well when planted out in beds as they do in vases. Choose a warm and sheltered spot facing the west if possible, but slightly shaded on the south, so as to shield the plants from the fiercest rays of the sun.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Caterpillars on Apple-trees.—I enclose a few caterpillars; also a fruit spur of an Apple that has been injured by them. Would you kindly tell me what they are, and also what to do to prevent them from making their appearance next year? *Fruit-trees.*

The caterpillars are those of the Winter Moth (Cheimatobia brumata) one of the worst pests with which the fruit-grower has to contend. These caterpillars are now nearly full-grown and would fall from the trees if the latter were given a good shaking. Cloths may be spread beneath the trees to collect them or fowls may be allowed to pick them up, which they will do very greedily. Another plan is to syringe the trees with a mixture of 1 ounce of Paris Green, and 20 gallons of water. This must be kept constantly stirred whilst it is being applied. Further remedial measures must be taken in the autumn, say about the beginning of November, when the male moths may be seen flying about among the branches. The females which have only very rudimentary wings, and cannot fly, ascend the trees at that time to lay their eggs among the crevices of the bark. The trunks of the trees shonld then be wrapped in greased bands. The bands may be of brown paper smeared with some sticky stuff Cart-grease will answer, and Davidson's Composition is also good. This is made of tar and cart-grease in equal proportions.

Dwarf Mignonette.—*Enquirer* is puzzled to account for the dwarfness of the Mignonette sold in pots in the market. He has attempted to grow plants but they always look tall and straggling. He wonders if it is a special strain of seed that nurserymen keep for themselves, but will not sell to outsiders.

Undoubtedly there is a good deal in the saving of the seed from plants of suitable habit year after year, that enables the nurserymen to send out such dwarf and stocky plants, but it is good cultivation that is the secret of immediate success. Specialists in the cultivation of the Mignonette do not coddle their plants, but give them plenty of air and light, and water them carefully, hence the vigour and dwarfness. It is almost impossible for an amateur with only a greenhouse, more or less, unsuitably filled with all sorts and conditions of plants to obtain such fine results. It is sometimes astonishing that the plants thrive as well as they do.

Plants round a Fountain.—I have a small fountain in my garden which has a small ledge running round it. When the basin is full, this ledge is covered by water to the depth of 2 in. What plants could I stand on this ledge? Would Fuchsias do? *Oxon.*

The best thing would be Agapanthus umbellatus, which would do well in such a situation as you name. As far as appearance goes you could not have anything finer. The huge umbels of blue flowers on the long stout stalks (scapes) are sufficiently imposing. The white form A. u. albidus is also well worth growing for the sake of contrast. The flowers are large and pure white. A. u. variegatus is a variety with variegated leaves that is a handsome and easily grown plant. We should certainly not advise you to try Fuchsias as standing in water would not suit them.

Manure water for Strawberries.—*L. Arlington.* You may give your Strawberries manure water with excellent results. It will help to produce large fruit. Sir Joseph Paxton is a good variety, but Royal Sovereign is a better.

GRAND HALL AND STAIRCASE OF THE NEW TOWN HALL, SHEFFIELD, ON THE OPENING DAY (See p. 650).

FLORAL DECORATIONS AT SHEFFIELD.

THE floral and other decorations at the New Town Hall, Sheffield, on the occasion of its opening by the Queen, and at the Cyclops Works of Messrs. Chas. Cammell & Co. were of an elaborate character and extraordinary magnitude. The decorations at both places and elsewhere in the town were entrusted to Messrs. Fisher, Son & Sibray, Limited, the Royal Nurseries, Handsworth, Sheffield. The firm employed 100 men for a fortnight, decorating the various places.

In the New Town Hall alone 6,000 plants of various kinds were employed. On entering the golden gates from Pinstone Street, the visitors were confronted on either side by grand groups of Azaleas, also specimens of Cocos flexuosa, Kentias, and other Palms, 20 ft. to 30 ft. high. The accompanying illustration (p. 649) shows a view of the interior of the Grand Hall and Staircase. Round the sides of the former were groups of the finest named Rhododendrons, Japanese Maples, Lily of the Valley, Orchids, and Palms, which were continued up the Grand Staircase, and glimpses of the plants can be seen here and there in the illustration. The decorations throughout the building were carried ont in a most artistic manner, but on the Grand Staircase particularly, it was shown how these arrangements could be carried out so as to blend harmoniously with the mouldings and sculpture. The Handsworth firm also effected the floral decorations on the exterior of the Hall on the Surrey Street side.

At the Cyclops Works quite a transformation of the place was accomplished by Messrs. Fisher, Son and Sibray. A lodge was pulled down at the gates entering from Savile Street, much machinery was taken out, a line of rails was obliterated, and the whole transformed into a sanded carriage way, with an avenue of trees 20 ft. on either side hiding various objects. It had, indeed, the appearance of a carriage drive leading to the private residence of some wealthy merchant prince, or "Steel King." The taller trees consisted of Conifers, but there were banks of Rhododendrons in full bloom, and handsome specimens of Retinospora plumosa aurea. In front of these were grass slopes and verges. The drive extended up to the Midland Railway, which cuts the extensive works in half.

Messrs. Chas. Cammell & Co. employ some 10,000 men, and manufacture armour plate for the British and foreign navies, the works being the largest of their kind in the world. Her Majesty the Queen entered the premises by the drive above mentioned, and proceeded by a drive inside the Armour-plate Mill, ending in a grand circle where her carriage was drawn up while she was witnessing the wonderful sight of armour-plate rolling. Never before was armour plate rolled in such close proximity to ornamental trees and shrubs, some of which, covering parts of the machinery, were 20 ft. high. Since then the Queen has been pleased to confer the dignity of a baronetcy upon Mr. Alexander Wilson, Master Cutler of Sheffield, and managing director of Messrs. Chas. Cammell & Co.

Messrs. Fisher, Son & Sibray also carried out the floral decorations at the Midland Station; and also created a sensation in the original decorations of Messrs. Marples & Co.'s premises at the corner of Fitzalan Square. The lines of trees in High Street also came from the Royal Nurseries, where the resources must be of prodigious magnitude. The bouquets of Her Most Gracious Majesty, Princess Christian and the Lady Mayoress also came from the Royal Nurseries. Mr. Wm. Atkinson, under whose direction this work has been carried out, is Managing Director of the firm of Messrs. Fisher, Son & Sibray, Limited.

A Jubilee Pear tree.—A well-trained Passe Colmar Pear may be seen in the gardens of the Hon. A. Talbot (gardener Mr. Wm. Garman) Frythesden, Great Berkhamstead. It is 60 years old, 60 ft. long and 15 ft. in height. An old man who has worked in these gardens for 54 years, remembers the tree being planted and he has pruned and trained it annually since then. This is surely a record for the old man. The tree bears heavily and the fruits, which ripen in November, are of excellent flavour. It is considered worthy of the epithet of Jubilee Pear-tree.

PELARGONIUMS AT RYECROFT NURSERY.

MR. H. J. JONES, of Ryecroft Nursery, Lewisham, S.E., has for long made a speciality of the Pelargonium; and he has abundantly illustrated from time to time by his exhibits at the Temple and other shows how valuable is this charming class of plants. In former years visitors have been charmed with the exhibits of splendidly grown and flowered plants, and have gone away, let us hope, with a resolution to follow the example thus set. This year the plants are better than ever, and the display of flower more profuse. Into a comparatively limited space is collected a marvellously comprehensive collection of most of the leading varieties.

That Mr. Jones has the eye of an artist as well as the skill of the grower we already knew, and it needed not this instance to convince us. Set as the plants were in a groundwork of Maidenhair Fern, and with a background of Cocos weddeliana the glowing colours of the flowers showed up right royally, whilst the foliage was clean, healthy, and free from all suspicion of insect pests. The show and regal forms were the chief attraction, and although the pressure on our space forbids mention of all, the following varieties were of the best that the cultivator's art has produced:—Mrs. Phil Rider is a '97 introduction with salmon-pink flowers, blotched dark red, and a huge pip and truss. Vivid is crimson purple, shaded with scarlet, and a black-maroon blotch on the upper petals. Royal Rose, a bright rosy red; Delicatum, blush; and Ladas, blush rose, with a large blotch; are three grand varieties of last year's introduction. Eucharis is pure white, and admirable for cutting, as the pips have long pedicels. Mrs. W. Wright exhibits a charming rose-blush hue, shading lighter with age. Lady Duff, rich red; Mr. H. J. Jones, soft salmon rose; Mrs. H. J. Jones, blnsh white, with crimson blotch; and Scarlet Gem, bright orange-scarlet, can scarcely be praised too highly. The year 1894, in which they were sent out, was certainly prolific of good things.

In another house hard by that occupied by the show, regal, and decorative section, was a collection of Ivy-leaved sorts comprising upwards of two dozen varieties. Here there appeared a novelty in the shape of Achievement, the result of a cross between Souvenir de Charles Turner (Ivy) and a pure white single zonal. The flower is large, semi-double, and displays the characteristics of both parents. Miss Clara Walker is a charming flower of salmon-cerise hue. Miss Mabel Collins, light rose, shaded with lilac, is at once distinct and pretty. Mrs. W. E Barling is by far the best of its colour—a rich, deep magenta. All these sorts have been sent out during the present season.

Zonal Pelargoniums were massed on the other side of the same house in grand array. Such varieties as General Campbell, clear salmon; Iseult, salmon, shaded with orange; Magnificent, orange-salmon; Niagara, pure white; George Gordon, rosy scarlet; and Daisy Wright, salmon, shaded with mauve, exemplified a very high order of merit

A visit to the Ryecroft Nurseries would amply repay those who are fond of Pelargoniums, and even those who are not could scarcely fail to appreciate the general utility and effectiveness of this easily grown and popular class of plants.

CLEMATIS MONTANA.

AMONG the many species and varieties of the Virgin's Bower none, except perhaps C. Jackmanni, can produce such a wealth of blossoms as the subject of this note. Jackman's Clematis, however, is for the summer time, this one for the spring, or May suffused with June.

I have seen the mountain Clematis in several places this season, but in no instance did it attain to such magnificent proportions as the one I have in mind. And this I should never have discovered but for a "gude freen'" who showed me where it was hiding its shining light behind one of the several charming river-residences which go to give Wargrave on the Thames its unique and floriferous character. It is only, then, to those who visit the bye-ways and back lanes of little Wargrave that all its beauties are revealed.

However, the plant in question is a very fine one, and covers a large space. Its pure white, four-petalled flowers are not unlike the Wood Windflower (Anemone sylvestris) both as to size and substance; and I could not help pondering, further, how few of those who gazed upon this glorious sight wonld think of it in connection with the brilliant Buttercups, to which it is allied.

The plant is a native of Nepaul, and has only been with us about sixty-six years. It is not quite hardy, but otherwise is in no way difficult to manage; and, as it has a good habit and a good character, there is no reason why it should not be more generally cultivated.—*C. B. G., Acton, W.*

[It is as hardy as the British Oak in May, even if that may not mean much when the case is investigated.—ED.]

THE FLOWER GARDENS OF VICTORIA (AUSTRALIA).

(*Continued from p. 629.*)

AGAIN I must sing the praises of a favourite flower of mine. I refer to the double pink or Ivy-leaved Pelargonium. This plant makes the poorest garden look gay in the hottest months, and will grow in almost any place where a piece is thrown simply on the surface in the spring. I have seen several fences converted into what were seemingly hedgerows, and in one back yard, in spite of fowls and pigeons laying and making their nests in it, I have seen it all through the summer just one blaze of lovely delicate pink. Its long stalks grow through the green foliage, and blossom in huge clusters. If the pale blue Plumbago is here and there planted with it, the effect is most artistic, for this also grows splendidly—indeed, in one of our public gardens round the Melbonrne Treasury offices I have seen it in a long neatly clipped hedge some 5 feet high and full of blooms.

Towards the latter end of summer and early autumn the Liliums are in their best form, and are easily grown. The beautiful Nile Lily grows freely everywhere, and to immense size. Fuchsias are so common as to be rather despised, and embrace many kinds, the little "Baby Fuchsia," as it is called there, growing into quite a tree. Poppies are in endless variety of size, shape, and colour, and these also bloom better the hotter the day. The French varieties, and one we call the Maltese, from the cross seen in the petals, are special favourites. Cacti, crimson, pink, yellow, and white, grow splendidly and to great perfection in the hot weather. Cornflowers of four or five different colours are to be seen in nearly every garden. Eschscholtzias, Dianthus, Pinks, Picotees, Salpiglossis, Godetias, Gardenias, and Heliotropes are splendid bloomers in the summer, and always look showy. Everlasting Flowers grow to great perfection, some of the indigenons wild ones found in the country doing well with a little cnlture. Hollyhocks grow to a great size, and the flowers are very large; one fine one of a delicate lemon yellow colour looks specially attractive.

From earliest summer the Roses are in bloom, and before Christmas the Rose shows are held, and draw great crowds of exhibitors and enthusiasts. This queen of flowers grows to great perfection, and in a manner that would astonish English growers. I have heard this from competent judges. I cannot remember the names of varieties in such a large class, so can only generalise; but the old favourites, like Maréchal Niel, Cloth of Gold, Souvenir de la Malmaison, Niphetos, Safrano, Madame Lambard, and Gloire de Dijon are to be seen in scores of gardens climbing up verandahs, side fences, walls, or on lattices. La France luxuriates, and along with Safrano is a real marvel to bloom—indeed, one can almost always get Safrano blooms. The Banksias, white and yellow, are much sought after, making excellent verandah shades, and for fernery coverings. I have seen the front of a one-story house covered with the blooms of a yellow Banksia. The following note is from a letter from Australia I received about fourteen days ago:—"In our garden everything is looking so fresh and green, and quite a lovely mass of blooms of Roses, Asters, Sunflowers (the large and miniature), Gladioli, and the lovely light blue Plumbago, also a splendid crop of Gaillardias." I will ask you to note that this is in the middle of our hottest month (February), and is Nature's response to a recent rain, which has just refreshed the land. Among the later Roses introduced to Melbourne may be mentioned the charming *petite* Rose, Madame

Cecile Brunner. It is especially in favour for gentlemen's buttonholes, and grows to perfection.

Dahlias of all varieties grow magnificently everywhere, and are universal. The pretty Cactus section seems to have become a general favourite, though only comparatively recently introduced. Sunflowers raise their tall heads, and the smaller Miniature is a prolific bloomer, and makes a garden look gay in the hottest days when other things are hanging out distress signals from the heat. With the autumn, gardens are just beginning to lose their beauty, and many of the plants are in seed, or taken out. Hydrangeas are growing in most gardens, and bearing immense heads of blossom, blue, lilac, white and pink; but now we are again saved by a wealth of Chrysanthemums. These are grown to great perfection, and are immense favourites; and of hundreds of varieties blooming well on into winter Pompons, incurved, and outcurved Japanese are to be found. Everyone grows them, and one gets rather a sickening of the word, for everyone wears them, almost everyone talks Chrysanthemums, and shows are the order of the day. Some grown in Wentworth, N.S.W., by a Mr. Higgins always create a sensation. Arriving too late for the big shows in Melbourne these blooms are sent over 300 miles, and exhibited in the florists', and seem to dwarf the first prize ones in the shows. I would like to see some sent to London if it could be done, because they would then speak for themselves. Chrysanthemum growing is a mania in Australia.

During the winter months or season, which is generally well on us by the middle of May, gardens are seen at their worst, the bare deciduous trees helping in a large measure in this respect. Cold winds, rain, hail, frosts, and occasionally, in some districts, snow, all make the ground soppy and cold. Camellias are now in full flower, and the trees grow into immense size, even up to 10 ft. high. Single and double, and of all colours, the blooms grow to great size and perfection. Pyrus japonica does remarkably well late in the winter, while Bouvardias are now making a splendid sight; but, as remarked, gardens are looking bare just now.

The end of July sees the days lengthening, and the sun's rays warming up the cold sodden grounds, plants begin to put on some growth, and, by the time August is well in, Nature seems trying her utmost to make up for past misdemeanour, and is transforming everything. The fruit trees are one mass of blossom, and the bees are busy in swarms over the heavily scented blossoms. Later the green leaves and rapid growth of all spring plants can be detected. Violets are in great variety, and almost every small garden has its border or plat of them. Daffodils, Primulas, Cowslips, Oxlips, Primroses, Auriculas, Ixias, Tulips, and Crocuses, all are giving signs of great promise, and many of them flower early.

With September spring is in full tide, and the Narcissus family reigns everywhere. Daffodil shows are the order of the day, and competition is the means of bringing out beautiful displays of bulbs in full and excellent flower. Hyacinths are good, but except in the mountainous or higher grounds seem to lack something, and are not as fine as in England. Camellias (early), Bouvardias (crimson and white), and Salvias of three or four sorts are all helping to adorn the gardens. Wallflowers bloom luxuriantly, and these flowers and Mignonette can be smelt on every humid breath that blows. Wallflowers will grow anywhere with us, and well, provided the place be not absolutely cold and wet. Daisies, Marguerites, early Calliopsis, Cinerarias, Myosotis (notably a large variety whose name I do not know) now remain flowering right on into midsummer. Asters, Lupines, Larkspurs, and Anemones, one especially fine scarlet variety doing splendidly, attract much notice. The Cosmos are all coming into bloom. Melbourne, and indeed Australia, wherever a garden can be obtained, has lately had a craze for the lovely Cosmos, and I have seen them often 5 ft. high and covered with their beautiful delicate blooms of white, purple, and pink. They require plentiful watering to grow to the above height. Gaillardias are extremely hardy, and one can chop them back, and yet with a little watering they bloom persistently throughout the long summer, and sometimes the flowers reach really giant proportions. Nemophilas, Godetias, Candytuft, Sweet William, and Lobelia are now either in full flower or nearly so, and bloom for a long time.

(*To be continued.*)

A RAMBLE UP THE CHESS.

(*Concluded from p. 631*).

THE "sweet little village" of Chenies, then, is worth more than a passing remark, although the adjective "little" is, in our opinion, scarcely applicable to a place containing, say about six or seven hundred inhabitants. But there is no doubt that the other term "sweet" is well merited, for Chenies is admirably stationed and well wooded, and mostly occupies a high position overlooking the beautiful valley of the Chess. Moreover, it is situated in Buckinghamshire, a county noted for its hills and vales. The property generally belongs to the Duke of Bedford, whose agent resides in the village, and whose presence doubtless exercises a very wholesome effect on the villagers, for the cottages are picturesque and pretty, while the gardens reflect the greatest credit upon the occupiers. There is, however, perhaps necessarily, a want of originality about these vegetative appendages, for the bulk of the gardening done is of a simple and imitative character. For instance, everyone seems to "go in" for a bed or border of Wallflowers, edged with Myosotis; although here and there Tulips have been substituted for the former. A fine piece of Dicentra spectabilis, however, in one garden, took our fancy; while the old-fashioned but still effective "climber," Kerria japonica flore pleno, was golden with its fluffy balls. In reply to a question as to the *name* of the latter, a cottager stated that he did not know, but it was "something Japanese," which shows how difficult it is for ordinary people to recollect generic or specific terms. There is about this village one striking feature which everybody observes—apart from its model character—and that is the conspicuous numbers on all the cottage doors! But we must get on, and to enable us to do this we must take some slight refreshment at the "Bedford Arms," where "mine host" is always ready with pabulum. Thence, after noting the huge Cherry trees in the garden, we visit the church and the Manor-house, both of which are bound up with the history of Chenies.

As to the Manor-house, it is recorded that Queen Elizabeth and the famous Lord Burleigh passed two days and nights therein. In the churchyard, too, there is something which demands attention, for at the base of a tomb of a member of the Russell family that brilliantly coloured flower, Gentiana acaulis, exercises quite a potent spell. Near here, also, is an ancient pollard Oak of great size, although quite hollow, in which it is said ten or a dozen persons might take shelter, from the present attentions of keen-cutting Eurus. Suffice it to remark that it is still lively and measures 30 ft. in circumference about 4 ft. from the ground.

From this noble arbor we now speed on, enter a Beech-wood, through which we descend once more to the fast-running Chess. Here we ponder; again on another old bridge, note the finny tribe darting about in sportive freedom, get a glimpse of the old White Mill, or become enamoured of the beauties of Bucks—vegetative of course—and the general charms of the spring.

Avoiding the main road we continue our journey, but find ourselves, after a bit, at the top of a stony field with no apparent outlet. Oh, those deceptive paths, they are for ever leading us astray! But, never mind, some compensation is almost sure to result, and so we come across the Yellow Dead Nettle, which we should not have seen had we been able to distinguish the common track. Moreover, the field itself presented an appearance which the farmer would be the first to deprecate, although from a botanical point of view it was highly interesting. The crop was nominally Clover, but the wild flowers, or "weeds," per the agriculturist, were so much in the ascendancy that the useful little Trefoil wanted looking for. The principal of these "weeds" were the Bladder Campion (Silene inflata), Geranium pyrenaicum, which was particularly vigorous; the Field Scorpion-grass (Myosotis arvensis), and the little Heart's-ease (Viola tricolor), which, of course, as far as the farmer is concerned, is a strict contradiction of terms. The term "tricolor" likewise, in this case, was rather remote, as the form though rampant was exceedingly pale.

Having again discovered the right road, we pursue our course, and are much gratified by a beautiful view of Latimers, the charming residence of the Dowager Duchess of Bedford. The mansion occupies an elevated site overlooking the Chess, and a large artificial waterfall which hisses and foams and tumbles about in remarkable style. The gardens, too, are said to be well kept, which we are fully prepared to believe, as we understand that they are presided over by Mr. Bone, a Scotchman.

Between the river and the Chesham Road an admirable specimen of an English homestead is very noticeable, for the garden is gay with Rhododendrons, Doronicums, &c., with Roses galore for the sweet by-and-by. Just here, too, we discover—strange paradox—that we have been travelling along a road which "is closed"! Unfortunately there are too many of these "notice" boards about warning the public of the legal consequences which are likely to ensue if a simple, innocent, non-destructive wish is harmlessly gratified.

However, as we have emerged without attack, all's well. A little further on the waysides are bright with spring's wildings, and although—

"As yet the trembling year is unconfirmed,"

the denizens of the shady copse or windproof woods are safe against the biting blast or fateful frost.

These woods, it is true, only contain common flowers such as—in addition to those already mentioned—Woodruff, Wood Spurge, Jack-by-the-Hedge, &c.; but, then, these are all flowers of the prime, and therefore we love to renew their acquaintance. "I do not want change," writes Richard Jeffries, "I want the same old and loved things, the same wild flowers, the same trees and soft Ash-green, ... and I want them in the same place." Anyhow it must be admitted that the country has particular charms in the early days of the sunny year; that, in fact, every common rural road may present visions of beauty to those who have the eyes to see. And so we ponder and pass by the woods and the wild flowers, under the tender green, over the pale Primrose, and along by the Chess to Watersmeet, where we strike the dusty road and enter the old spoon-shaped town of our goal—quaint Chesham, which derives its name from the sparkling little river we have elected to explore. Here we must part, for although the old town is pleasantly situated in a fertile valley, and embraces much of interest, time and train wait for no man.

The sun, too, is setting in the distant west, darkness grows apace, the beauty of the day is o'er, but the ten or twelve miles which we have so comfortably accomplished has had at least one physical effect—it has steeled our hearts for more.—*C. B. G., Acton, W*

Gleanings from the World of Science.

Smut on Camellias.—The black appearance of Camellia leaves is due to the presence of a fungus known as Meloila Camelliae. It is not a parasite, however, but more the indirect result of true parasites, namely, greenfly and brown scale, which deposit excrement upon them, popularly known as honey dew. When this is suggested, gardeners occasionally reply that there is neither greenfly nor scale upon the leaves affected with smut. With that we are in perfect agreement; but at the same time affirm that one or other or both of these pests are upon leaves (it may be on the under side of them) above those affected with the smut. The excrement when ejected falls upon the leaves or anything else beneath them. The fungus finds this excrement a suitable nidus in which to grow and soon makes the honey dew upon the leaves as black as soot. The remedy is to sponge every dirty leaf with soft soap and water or with Gishurst's Compound, making sure that all scale and greenfly on the under side of the leaves are rubbed off. Once the leaves are clean they can easily be kept clean by means of kerosene or petroleum emulsion, with which the foliage may be syringed.

Two years' fruit on the Holly.—It may be some evidence of the mildness of the past winter that the berries of the Holly were not devoured by birds. Nevertheless it seems strange that this tree should carry its berries so long. Surely the latter can get sufficiently ripened during the first twelve months. The embryo takes a long time to germinate and it may be getting ready for that event. The circumstance, however, seems to point to a different meaning and object. The aim of the tree, probably, is to

carry its berries till plucked and carried away by birds, where the seedlings may be at a distance from the parent and have room to grow into trees. At all events the Weeping Holly (Ilex Aquifolium pendula) in Kew Gardens carried its berries till the middle of May last, when the tree was in full bloom. The young fruits were set by the 22nd of that month, and the red berries of last year are still firmly attached.

A rayless Daisy.—If the Daisy (Bellis perennis) had been normally rayless in Burns' time, he would never have sung "Wee, modest, crimson tipped flow'r." Rayless heads of the Daisy are very uncommon, yet we found a large spreading plant amongst the grass the other day, the heads of which were rayless or bore from 3 to 12 perfect rays. Where 12 were perfect, six small and narrow ones were also present. The rays of a small bloom on another plant numbered 50 and were arranged in two rows. Similar cases occasionally turn up amongst wild plants of Aster Tripolium. A variety of the Wild Chamomile, namely Metricaria Chamomila discoidea is habitually and normally rayless. The same may be said of the Tansy, the species of Wormwood, Cud-weed, Filago, Antennaria, Linosyris, Senecis vulgaris, all the Thistle and Centaurea tribe, Eupatorium, amongst British plants.

The Age of Davallia tenuifolia.—The distribution of this speceies at the present day indicates a great age, for it occurs in tropical Asia and Polynesia, ascending northwards to Japan and the Himalayas, and southward to Madagascar, Bourbon, and the Mauritius. The evidence of geology goes even further, for fossil remains in the cretaceous formation known as the Laramie beds of America show that it was a native of the western continent at a very remote period. It must have existed at a period prior to the formation of the Himalayas; but at the present day it does not exist in America in a wild state at all. The species must have existed at a period so remote that it could extend in a southerly direction over the land of the eastern and western hemispheres. That frail and delicate plants like Davallia (Stenoloma) tenuifolia, with finely and four times divided leaves should exist after so long a period, is marvellous. It is, indeed, older than the Himalaya Mountains which it serves to clothe. Yet when a form different from the type is introduced we speak of it as new.

HYBRIDS OF ROSA LUCIAE.

Those who are acquainted with the Rose that has been distributed under the name of Rosa wichuriana know that it is of creeping or trailing habit; but at the same time it may be utilised for covering arbours, walls, pillars, or chains such as are slung from pillar to pillar in the Italian Rose garden. The species is a native of Japan, but flowers freely in this country, and has very beautiful foliage of a rich dark green. Our American friends have apparently been much more diligent since its introduction to the United States, than we have been on this side of the Atlantic. The *Florists' Exchange* figures four new forms under the name of Manda's Hybrid Wichuriana Roses, three of which are double.

Manda's Triumph produces large clusters of perfectly double pure white flowers, each about 2 in. in diameter, and sweetly scented. The petals are not very broad, but very numerous and closely overlapping one another. In general appearance the clusters of Roses recall what we see in the well-known double forms of Rosa multiflora and the allied cluster Noisette Roses. The plant is of vigorous growth with an abundance of fine foliage.

South Orange Perfection would take its name from the locality of its origin, not from the colour of the flowers, which are of a soft blush pink at the tips of the petals, changing to white. The plant is of dwarf habit, and bears a profusion of perfectly double flowers, each about 1½ in. in diameter, and in clusters. The variety may be compared to Manda's Triumph, than which the plants are much dwarfer, and the flowers smaller. Bushes remain for a long time in perfection.

Universal Favourite is a stronger growing Rose than either of the above, and may be utilised for covering the ground like a prairie Rose, or in any other method by which the rambler and pillar Roses are utilised. The long, branching stems are densely covered with bright green foliage as in the case of the wild original. The flowers are double, bright rose in colour, more than 2 in. in diameter individually and deliciously fragrant.

Pink Roamer is considered an undoubted hybrid between the Sweet briar and R. Luciae, of which it bears strong evidence in general conformation, colour, and the delightful fragrance emanating from it. Growth is rampant and the foliage takes after R. Luciae in its luxuriance and glossy, leathery character. This should indicate the infusion of fresh blood into the old and ever popular Sweetbrier, so full of pleasant associations and memorable occasions in the minds of many from youth onwards. The flowers are single—not the least interesting feature of the variety—and of a rich pink, fading almost to white in the centre, where the orange red stamens furnish an additional attraction and character to the simple form of a single Rose. The individual blooms are nearly 2 in. in diameter, with broad overlapping petals, making a slightly cupped, almost perfect flower as we understand or conceive what a single Rose should be.

Certificates of Merit have been awarded to Pink Roamer, South Orange Perfection, and Universal Favourite by the New York Florists' Club. That society seem to place most value on Manda's Triumph, for which it awarded a Silver Medal. The New York Gardeners' Society accorded it a certificate, and honourable mention was accorded it by the Massachusets Horticultural Society.

A special feature of these Roses, is their hardiness, so that we may expect to see them in this country in the near future. They could be put to a great variety of purposes in parks, pleasure grounds, and other half-dressed portions of a private domain where they could hardly fail to be appreciated. Their long duration would also enable those portions of an estate to be kept gay during a long period of our summer. The leathery character of the foliage renders R. Luciae and the hybrids obtained from it exempt from mildew and insects as well, so that these are strong points in their favour. For the same reasons have we been advocating the raising of good double forms of the Ramanes Rose (Rosa rugosa); for by their use the Rose garden would be much easier to preserve in a healthy and flourishing condition. The hybrid forms of this Rose are gradually taking on the continuous flowering character of the hybrid perpetual Roses now so dominant in all modern gardens, both for exhibition and general decorative purposes.

The new race under notice might also be encouraged so as to supply us with true climbing Roses capable of resisting mildew. The name Wichuriana Roses seems somewhat unwieldy; why not call them Lucian Roses? Plants of some years duration attain a considerable size, and produce thousands of blossoms like those evolved from R. multiflora; but the new race has an additional feature in distinct and beautiful foliage that is not liable to be disfigured by mildew like the better known climbing and wall Roses just mentioned.

A NEW DOUBLE WHITE ANEMONE.

Hitherto a pure white double Anemone has not been in cultivation, but MM. E. H. Krelage & Zoon, Haarlem, Holland, have succeeded in securing one which will be offered in their bulb catalogue next autumn. It originated in their nurseries from the well-known single white A. coronaria The Bride. The new one is named A coronaria fl. pl. The Bride. To those whom it may concern, the French name is "La Fiancée, and the German "Die Braut." A box of the variety has reached us from MM. Krelage & Zoon, and we note that the sepals or parts of the flower are very numerous, and incurved but leaving an open centre as is so common in, and characteristic of, this species of Anemone. The sepals are narrow in accordance with their great number, white, veiny, and presenting more or less of a satiny gloss. Most of these sepals have been derived at the expense of the stamens, for very few of the latter are perfect. The outer part of the flower, morphologically, is also very interesting. In the most perfect flowers, the outer sepals are entire, but in other cases they are three lobed and light green, showing a reversion to involucral leaves and through them to the true leaves. The involucre in many cases has acquired a considerable number of additional leaves showing all stages from the ternately divided ones to three lobed and entire leaves, the uppermost ones being always the simplest, and sometimes white like those of the sepals. Occasionally undivided and white leaves are scattered up the scape between the involucre and the flower. The double white Bride may therefore be considered as a valuable addition to this lovely class of garden flowers.

GARDENING MISCELLANY.

DELPHINIUMS.

These, although almost universal favourites are not cultivated nearly so much as they might be. Named and choice varieties are, some of them, rather expensive, there being some few among them which do not seed freely, and do not increase so rapidly as others; but a fair amount of variety is obtainable from a packet of mixed seed, procured from a reliable source. As to the time most suitable to sow it, there is this to be said, for Delphinium and other hardy perennial seeds, that they are often recommended to be sown in June. This is all very well in some years, but, as it frequently happens, we have a dry time then. I submit that early in the spring is preferable, when the soil is moist; and when sowing a mixture it is best to grow them for one season in a nursery bed, as they will differ very considerably in height. All plants intended for the mixed borders should be marked with their various colours and height, so that proper positions are secured for them.—*W. B. G.*

YELLOW RAMBLER ROSES.

There are at least two claimants to the title of Yellow Rambler amongst Roses which have recently been put into commerce. One is Claire Jacquier recently mentioned in our pages, and the other is Aglaia. Seeing that each have got special names it will be necessary to employ them in order to distinguish clearly which is meant. Aglaia was raised and put into commerce by Herr P. Lambert, Trier, Germany, and is, in fact, new for 1897. It is stated to be the hardiest yellow climbing Rose ever introduced, as it will withstand without protection a temperature at zero. The plant is very vigorous, making, when well established, shoots 8 ft. to 10 ft. high in a season. The flowers are of a clear, decided yellow, and produced in immense pyramidal trusses, each consisting of 50 to 150 blossoms, which are perfectly double, sweetly scented, and last a long time in perfection.

HELICOPHYLLUM RAWOLFII.

A considerable number of Aroids bear flowers possessed of a most disagreeable smell, and this is certainly one of the number. A specimen was in flower quite recently in the Alpine house at Kew, and the first whiff of the foetid odour prevented a second trial on our part of its perfumatory qualities. The plant is distinctly curious in habit. The flower is apparently sessile amidst a tuft of leaves. The spathe is from 4 to 5 in. long, a deep black-maroon hue inside, and with a white-green base, and green externally. The spadix is about two thirds the length of the spathe, its upper portion being of the same dark hue as the spathe internally. The leaves are petiolate, deep shining-green in colour, and elliptic-sagittate in shape, *i.e.*, the greater part of the lamina presents a true ellipse, whilst it is produced at the base into two long lobes. These, in the older leaves more especially, turn upwards, and twist to a greater or less extent. The plant is not unornamental, but is rather more curious than pretty, for although one cannot fail to be attracted by the rich colouring of the flower, there is an uncanny look about it that is rather repulsive.

GESNERIA LONGIFLORA.

This is one of those old plants which are comparatively unknown. The probability is that there are many who grow Gesneria zebrina and its varieties in quantity who have never seen it; yet if they would take it in hand would be highly gratified with the results. It is just one of those things which, whilst of remarkable easy culture are most useful and beautiful. An intermediate house suits it best and a suitable mixture of soil is one third loam and the rest peat with plenty of sharp sand. At the same time

it will do well in almost any good potting mould. It grows erect from two to three feet; the foliage stems and branches are hirsute and of a greyish green colour. The flowers are white and sweet scented, being borne on the upper part of the stem; their form is that of a long narrow tube with a widely expanded mouth. For grouping purposes it is very effective as its long flower stems admit of its being dotted about among more formal growing subjects.—*W.B.G.*

BEES AND GRAPES.

Now and again in this country hive bees get blamed for attacking Grapes, but the wasp is more often blamed for attacking soft fruits of various kinds, and deservedly so. With regard to bees, some experiments have been conducted in Texas, U.S.A., in order to prove whether they are guilty or blameless. When the Grapes of a Worden Vine were ripe, all broken or damaged berries were removed as well as some of the leaves so that the bees might be able to move about freely. The Grapes were enclosed in a space of 300 cubic feet and a colony of Italian bees was confined without food, other than that stored in their hive, for twenty-one days in this enclosure with the Grapes. At the end of that time the bees were removed and the Grapes examined without finding any injury whatever. The inference is that bees are not likely to injure Grapes when at liberty, seeing that the fruits were entirely unmolested by the confined insects. If the skin of the Grapes is broken then the hive bees will avail themselves of the juice, but that is quite natural.

VIOLA PEDATA.

This is a rare and rather curious looking Viola, but a very pretty one withal. The bronzy green pedate leaves do not look like those of a Viola. They are about seven parted, the segments being linear in shape, although they vary to some extent in width. The margins too are occasionally toothed at the apices of the leaflets. At other times they are quite entire. The flowers, which are light blue in colour, are large for the size of the plant, being from ½ in. to ¾ in. in diameter. The petals are also of great width and substance, but the spur is very short. This is a very pretty alpine plant and is well worth a place in every collection. Messrs. Barr & Sons have a fine stock of it at their nurseries at Long Ditton, and a batch of about a dozen plants was one of the most conspicuous features on the miniature rockery exhibited by them at the late Temple Show.

SOCIETIES.

MANCHESTER.—*June 4th-10th*

This annual Whitsuntide flower show (the first under the management of Mr. P. Weathers, curator of the Royal Botanical Gardens, Old Trafford) was held under the most favourable auspices, the weather on the opening day—the most important factor—proving all that could be desired.

The exhibits although not so extensive as we have seen them formerly, fully sustained the high reputation of the Northern Whit-week show. The glory of the prominent features of the early shows, if not fully departed, are most certainly dimmed. The huge specimens of stove and greenhouse foliage and flowering plants, including wonders of culture of New Holland and hard-wooded plants, have gradually given way to the more fashionable and undoubtedly more useful exhibits in varied forms of Orchidaceous plants; and the executive may justly claim to be pre-eminent in the north as the caterers in this important feature of horticulture, as they were 25 years ago with the marvels of culture of huge specimens.

ORCHIDS.

Five classes were devoted to this section, and in addition to the competitive exhibits, many magnificent groups were staged by the leading growers, not for competition, which nearly filled the large show house.

For the best miscellaneous collection in bloom (amateurs), W. Thompson, Esq., Walton Grange, Stone, secured the premier honours with a magnificent bank covering nearly 200 square feet, staged on moss with Adiantum interspersed. Special mention should be made of the strong spike and fine varieties of Odontoglossum vexillarium, Laelia purpurata in fine variety, Cypripedium rothschildianum giganteum, Laeliocattleya Hypolita, Odontoglossum Pescatorei, O. crispum, &c. E. Ashworth, Esq., Harefield Hall, Wilmslow, was second, and J. Richardson, Esq., Hale Croft, third.

For the best collection (nurserymen), Mr. James Cypher, Cheltenham, was to the fore with a double half circle including fine forms of Laelia purpurata Duchess, L. p. Distinction, Epidendrum vitellinum well flowered, Odontoglossums with grand spikes, &c. Mr. John Robson, Bowden, was second.

For the best collection of Cattleyas and Laelias (open), Thomas Statter, Esq., Stand Hall, Whitfield (gardener, Mr. Johnson), was first with some twenty plants of Laelia purpurata splendens, L. p. statteriana, and L. p. formosa, which were of special merit. Mr. James Cypher followed with fine types of Cattleya gigas, C. Mossiae, &c.

For the best collection of Cypripediums the amateurs were again to the fore, E. Ashworth, Esq., winning with C. chamberlainianum, C. volonteanum, C. bellatulum album, and others. Thomas Statter, Esq., followed with a good lot.

For ten specimens in bloom (open), E. Ashworth, Esq., was again to the fore, staging Laelia purpurata, Cattleya Mossiae, and Masdevallia harryana, which were very good. A. Warburton, Esq., Vine House, Haslingdon, was second.

STOVE AND GREENHOUSE PLANTS.

For ten stove and greenhouse plants in bloom, Mr. James Cypher was in fine form, staging Pimelia Hendersonii, Clerodendron Balfourii, Erica ventricosa, Aphlexis macrantha rosea, Anthurium scherzerianum, A. s. majus, Hedaroma tulipifera, Erica depressa, E. spenceriana, and Azalea Extranii.

For six stove and greenhouse plants in bloom Miss Lord, Oakleigh (gardener, Mr. Wilks), Ashton Mersey, had the best including Ixora Pilgrimii, Clerodendron Balfourii, Dendrobium fimbriatum oculatum, with 150 spikes; Anthurium scherzerianum, &c. The same exhibitor was first for the best groups of miscellaneous plants in or out of bloom (200 sq. ft.) which was undoubtedly won by the tasteful arrangement, Humeas, Palms and Bamboos adding lightness to a pleasing arrangement of blooming plants. Mrs. Blair was second.

For the best group (nurserymen), 250 sq. ft., A. J. A Bruce, Esq., Chorlton-cum-Hardy, also won by lightness with a miniature lake in the centre, Bamboos, Palms, Hydrangeas, and Laelias, being prominent. Messrs. R. P. Ker & Sons, Liverpool, were second with grandly grown plants, but lacking the lightness; this group found many admirers.

For six fine foliage plants Miss Lord won with good plants. For six Roses in pots, James Brown, Esq., Heaton, Mersey, won with good plants. For ten Exotic Ferns, Mrs. Blair was to the fore with nice fresh plants. For eight table plants, Mrs. Fielden was first. The twelve Cinerarias of Miss Lord took the lead. For twelve Calceolarias, E. Thwaites, Esq., Bolton, had the best. For twelve hardy herbaceous and alpine plants, James Brown, Esq., secured first honours. For ten hardy Ferns, Messrs. W. & J. Birkenhead, Sale, staged a grand lot. For six tuberous-rooted Begonias, Mrs. Schofield, Whalley Range, won. In the class for a flowering stove plant, Miss Lord was first with Dendrobium densiflorum. Mrs. Schofield staged the best Fern with Davallia polyantha. For a collection of Carnations, not less than fifty pots, Messrs. W. Cutbush & Son, Highgate, London, won the Society's Gold Medal with a large group of about 400 plants containing many fine blooms, the admiration of everybody.

NON-COMPETITIVE EXHIBITS.

These greatly enhanced the beauty and success of the exhibition. Messrs. Charlesworth & Co., Bradford, received a large Gold Medal for a magnificent collection of Orchids. They received First-class Certificates for Cypripedium leysenianum and Laeliocattleya Lady Wigan.

Messrs. F. Sander & Co., St. Albans, received a large Gold Medal for Orchids, a Botanical Certificate for Bulbophyllum barbigerum, First-class Certificates for Sobralia macrantha alba, S. Veitchii, Laeliocattleya Queen Empress, and Davallia hirta, and Awards of Merit for Laeliocattleya Fire Queen, Cypripedium E. Holt, Eriocnema fascinator, Petunia Mrs. F. Sander, and Begonia Jewel.

Messrs. H. Low & Co., Clapton, London, received a large Gold Medal for Orchids, First-class Certificates for Cattleya Mossiae Gloriosa and C. M. Ashworthii, and Awards of Merit for Cattleya Mossiae Mrs. S. Greatrix and Cypripedium Gertrude Hollington var. illustre.

Messrs. B. S. Williams & Son, Upper Holloway, London, received a small Gold Medal for a group of Orchids; Messrs J. Cowan & Co., Liverpool, a small Gold Medal for a collection of Orchids; Messrs. W. L. Lewis & Co., Southgate, a small Gold Medal for Orchids and a First-class Certificate for Cattleya hardyana Lewisii. Messrs. J. Backhouse & Son, York, were accorded a large Gold Medal for rockwork and a group of alpines. Messrs. Waterer & Son had a large Gold Medal for a splendid collection of hardy Rhododendrons. Messrs. Richard Smith & Co., Worcester, received a small Gold Medal for a group of Clematis. Messrs. Paul & Son, Cheshunt, were accorded a small Gold Medal for Roses in pots; Messrs. J. Laing & Sons a small Gold Medal for Caladiums and Begonias, First-class Certificates for Caladium Garten Direcktor Giveand, Begonia Admiral Rawson, B. Hon. Cecil Rhodes, and B. Lady Pearson; Messrs. Dicksons, Chester, a Silver Medal for cut flowers; and Messrs. Barr & Sons, London, a Silver Medal for hardy herbaceous cut flowers and a First-class certificate for Iris amoena Mrs. H. Darwin. They also had a magnificent collection of single and double Pyrethrums.

R. I. Measures, Esq., (gardener, Mr. H. J. Chapman), Cambridge Lodge, London, received a Silver Medal for Orchids, and First-class Certificates for Cypripedium Chapmani magnificum (C. bellatulum crossed C. Curtisii), C. leucochilum, and Laeliocattleya Lady Wigan, Cambridge Lodge var., and an Award of Merit for Cypripedium Rembha. Mr. J. Cypher secured an Award of Merit for Laelia purpurata Niobe, L. p. Duchess, L. p. schofieldiana, L. p. striata, and L. p. Meteor; G. Yeld, Esq., Clifton Cottage, York, an Award of Merit for Iris Umbro and I. Verbenna; W. D. Rappart, Esq., Liscard, a First-class Certificate for Cattleya Mossiae rappartiana; and G. W. Law Schofield, Rawtenstall, an Award of Merit for Dendrobium Bensoniae album.

W. Thompson, Esq., secured a First-class Certificate for Cypripedium rothschildianum giganteum, and Award of Merit for Odontoglossum Coradinei roeblingianum and O. crispum Jubilee; A. Warburton, Esq., a First-class Certificate for Cattleya Mossiae Cahuza, and an Award of Merit for C. M. Jubilee; Thos. Statter, Esq., an Award of Merit for Laelia purpurata statteriana; Mrs. Briggs (gardener, T. Wilkinson), First-class Certificate for Laeliocattleya Iolanthe; and E. Ashworth, Esq., a First-class Certificate for Cattleya Schroderae Harefield Hall, and an Award of Merit for C. Mossiae Merdenia.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Plan of Bedding.—*Arthur Keen*: We have marked the plan you sent us and returned it. You will see by it that we advocate Begonias for the eight circular beds round the circumference of the plan. We think that this would make a very pleasing change from Pelargoniums which were too freely used last year, forming a kind of bedding that is getting rather worn out on account of its abundance and annual repetition in some form or other. We have left the Henry Jacoby Pelargoniums in the same place as last year; but if you cannot get sufficient Begonias this year to do all the eight beds you might transfer Henry Jacoby to the four beds marked for tuberous Begonias, and fill the four around the centre with young plants of white Marguerites. If you use tuberous Begonias, two beds might be filled with pink or rose varieties and two of them with scarlet or bronze varieties. On the other hand if you prefer Begonia semperflorens Crimson Gem plant two of the beds of it at the circumference of the plan and two others with Princess Beatrice. Both these latter are also known as fibrous-rooted Begonias, and are dwarf and extremely floriferous all the season. Crimson Gem has deep carmine or crimson flowers, and bronzy-red foliage. It may be used in a great variety of ways in different designs. You will see that we have marked white Lobelias as an edging to it; but various other plants might have been employed. If you had given us the names of the

various plants you have at command, we might have suggested some other arrangements. Princess Beatrice has pink flowers with a white centre. You will be almost sure to use some of these again if you give them a trial The tuberous Begonias should always be selected to colours. Both the tuberous and fibrous-rooted Begonias may be propagated hy seeds or cuttings, the latter heing taken at any time during summer. Seeds may be sown in January, but only the B. semperflorens will be ready to plant out the same year. Either tubers of the previous years seedlings or of cuttings of tuberous Begonias should be used for regular bedding, so as to have them in flower early.

Peach trees Blistered.—*Peach*: The leaves you sent were not affected with the true Peach hlister which is caused by a fungus named Ascomyces deformans. On the other hand they are suffering to some extent from the silver leaf disease, but the appearance may partly be due to the effect of the cold east winds of May, the drought by day and the frost at night. All these acting upon the foliage of trees recently lifted could hardly fail to leave some bad result. We have frequently seen Roses under similar conditions affected in the same way. If that is really what is the matter the trees will yet partly recover with more genial weather, and be about all right next year. The slight blistering of the leaves we helieve to be due to an attack of aphides while they were just expanding and tender. We have frequently seen the leaves of Peaches much more curled and wrinkled from that cause. We should advise you to closely examine the trees whenever there are young leaves upon growing shoots, and if aphides are present syringe the trees and give the affected shoots a good dusting of tobacco powder. The syringing is merely to make the powder stick on; it can be washed off in a day or two if the fly has been destroyed. Next spring as the buds commence to open keep a sharp eye upon them, and whenever aphides make their appearance give a good dusting of tobacco powder.

Carpet bedding designs.—*Arthur Keen*: There used to be a considerable numher of designs for carpet bedding in the "Guide to Hampton Court," and probably there are so yet. The book is not costly, something like 6d. Apply to the Superintendent, Hampton Court, Middlesex.

Names and addresses of Gardeners.—*Inquirer*: The book you require is "The Garden Annual." It is sold at the office of *The Garden*, 37, Southampton Street, Strand, London, W.C.

Tomatos diseased.—*Alister*: The samples you sent us were affected by the black spot of Tomatos caused by the fungus Cladosporium Lycopersici. Usually it does not spread very rapidly nor do very extensive damage, unless the conditions are more than usually favourable to its growth. The spores that fall upon the dead and decaying style on the top of the fruit, germinate there, and so enter into the interior, causing the skin to become shrunken and hlack. You cannot do anything to cure the fruits so attacked; therefore cut off and burn every one of them that shows the disease, to prevent its spreading. Keep the atmosphere of the house cool and dry by plenty of ventilation all day, leaving a little on at night to carry off all vapour that may arise. Expose your plants to full sunshine. They do not require shading. The heavy soil you mention has nothing to do with the malady. If you follow these directions the disease will not spread to any serious extent. The moist atmosphere is what you have got to guard against.

Names of Plants.—*T. McB.*: 1, Arisaema speciosum; 2, Boronia heterophylla; 3, Eulalia japonica variegata.—*S. Mitchel*: 1, Phlox canadensis; 2, Syringa persica; 3, Cotoneaster Simonsii; 4, Cotoneaster microphylla; 5, Rosa spinosissima, a double variety.—*R. W.*: 1, Masdevallia harryana; 2, Odontoglossum luteo-purpureum var.; 3, Oncidium pulvinatum; 4, Oncidium sphacelatum; 5, Dendrobium infundibulum; 6, Lycaste plana.—*T. M.*: 1, Piptanthus nepalensis.—*Colonel E. W. Bahrby*: 1, Cattleya Mossiae; 2, Masdevallia coriacea.—*J. H. W.*: 1, Ranunculus aconitifolius flore pleno; 2, Centaurea montana alba; 3, Pulmonaria officinalis; 4, Veronica gentianoides; 5, Saxifraga hypnoides; 6, Hesperis matronalis.—*W. C.*: 1, Erinus alpinus; Claytonia sihirica; 3, Saxifraga muscoides atropurpurea; 4, Astragalus Hypoglottis; 5, Rubus arcticus; 6, Tiarella cordifolia; 7, Saxifraga Aizoon; 8, Anemone dichotoma; 9, Saxifraga hypnoides leptophylla. Please put some slightly damp moss with the specimens next time, as they were very much dried up.

Communications Received.—Sutton & Sons.—Jas. Barthewan.—J. O'B.—S. C.—A. Outram.—W. L. — J. C. S. — C. — R. D. — M. M'L. — T. Cockerill.—P. McArthur.—P. J—R. S.—W. L G.—Amateur.—W. H. J.—Ney.—B. K.

Carnation Germania.—*Amateur.*—The yellow Carnation Germania although a fairly old variety is still a good one. Its constitution might be better certainly, but good cultivation must overcome that difficulty. You have done well to include it in your collection

Malmaison Carnations are propagated by layering the cuttings round the sides of the pots in July, *Y. Y.* A good plan is to knock the plants out of their pots and plant them in a prepared bed of soil, which method of procedure gives a greater amount of room.

Melons.—*Mens.*—Hero of Lockinge, Countess, Sutton's A.I., and Blenheim Orange, are all good varieties, and you may depend upon any or all of them. For a Cucumber we prefer Rollison's Telegraph, although many growers like Lockie's Perfection.

Chinese Primulas.—*L.L.A.*—A cold frame with an ash bottom will suit the plants capitally. Water carefully, and shade them from the sun. You may keep the frame close for a day or two after the removal from the warmer house, but then you may give a fair amount of air.

Filmy Ferns.—*R. Madoc.*—It is hopeless for you to attempt to grow Filmy Ferns in your greenhouse, unless you enclose them in a separate glass case, The atmosphere is far too dry, and in order to do them well it should be at saturation point. If you can give them a special case in a corner of the house and shade them carefully, well and good.

COVENT GARDEN MARKET.

June 9th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.		s. d.	s. d.
Apples.....per bnshel			Grapes, per lb	2 0	3 6
Black Currants ½ sieve			Pine-apples		
Red " ½ sieve			—St. Michael's eacb	2 6	6 0
Cherries half sieve...			Plums per ½ sieve.....		
Nova Scotia Apples per barrel			Strawberries, per lb.	2 6	4 0
Cob Nnts per 100lbs.			Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
ArticbokesGlobe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus, per bundle	2 6	3 0	Horse Radish, bnndle	2 0	4 0
Beans, French, per pound	1 0	1 3	Lettnces ...per dozen	1 3	
Beet..... per dozen		2 0	Mnsbrooms, p. basket	1 0	
Brussel Sprouts, per balf sieve			Onions.....per bunob	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunob	0 3	
Carrots ... per buncb	0 3		Radisbes... per dozen	1 0	1 3
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket	1 0	1 3
Celery.....per bnndle	1 0	1 6	Small salad, pnnnet	0 4	
Cncnmbers per doz.	2 6	3 0	Spinach per busbsl	3 0	4 0
Endive, French, doz.	1 6	2 0	Tomatos..... per lb.	0 6	1 0
			Turnips .....per bnn.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d		s. d.	s. d.
Arnm Lilies, 12 blms.	2 0	4 0	Orcbids, doz. blooms	1 6	12 0
Asparagus Fern, bun.	2 0	3 0	Paeonies, Freuch doz. bun.	5 0	9 0
Bouvardias, per bnn.	0 6	0 9	Pansies 12 bun.	1 6	2 0
Carnations doz.blms.	1 0	3 0	Primula, double, doz sprays	0 6	0 6
Eucharis ...per doz	3 0	4 0	Pelargoninms, 12 bun.	4 0	6 0
Gardenias ...per doz.	1 6	2 6	Pyrethrum doz. bun.	2 0	4 9
Geranium, scarlet, doz. bunches	3 0	6 0	Roses (Indoor), doz.	6	1 0
Iris, various doz. bun.	4 0	12 0	" Tea, wbite, doz.	1 0	2 6
Lilac, Wbite (French) per buch.	3 6	4 6	" Niels	1 6	6 0
Lillum longiflorum per doz.	2 6	4 0	" Safrano	1 0	2 0
Lily of the Valley doz. sprays	1 0	2 0	" (Englisb),		
Marguerites, 12 bun.	2 0	4 0	Red Roses, doz.	2 0	4 0
Maidenhair Fern, 12bs.	4 0	8 0	Pink Roses, doz.	3 0	5 0
Narciss, various, doz. bunches	1 6	4 0	Smilax, per bunch ...	3 6	6 0
			Tuberoses, doz. blooms ...	1 0	1 6
			Wallflowers, 12 bun.	1 6	3 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.		s. d.	s. d.
Azaleas, eacb	2 0	3 6	Hydrangeas per doz.	8 0	10 0
Arbor Vitae (golden) per doz.	6 0	12 0	Ivy-leaved Geranium, per doz.	4 0	8 0
Aspidistra, doz.....	18 0	36 0	Lilium Harrissii, per pot	1 6	3 0
" specimen	3 0	5 0	Lycopodiums, doz.	3 0	4 0
Arum Lilies, per doz.	8 0	12 0	Lobelia .....per doz.	3 0	5 0
Dracaena, various, per doz.	12 0	30 0	Marguerite Daisy doz.	6 0	12 0
Dracaena viridis, doz.	9 0	18 0	Marguerite Yellow, per doz.	5 0	9 0
Euonymus, var. doz.	6 0	18 0	Myrtles, doz.	6 0	9 0
Evergreens, Invar. doz	6 0	24 0	Palms in variety, each	1 0	15 0
Erica, various, per doz.....	9 0	18 0	Palms, Specimen ...	21 0	63 0
Ferns, invar., per doz.	4 0	12 0	Pelargoniums ...doz.	9 0	15 0
Ferns, small, per 100	4 0	6 0	Spiraea ...per doz. ...	8 0	10 0
Ficus elastica, eacb	1 0	5 0	Scarlets .....per doz.	2 6	5 0
Foliage Plants, var., eacb	1 0	5 0	Roots and bedding out plants plentiful and great variety.		
Heliotrope...per doz.	6 0	9 0			

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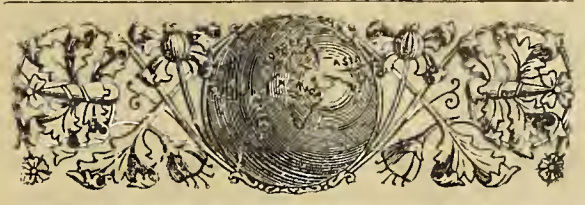

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 19th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, June 21st.—Imperial Fete and Fancy Fair at the Royal Botanic Society's Gardens, Regent's Park (6 days).
WEDNESDAY, June 23rd.—Victorian Era Flower Show at the Crystal Palace (2 days).
National Rose Society's Show at Portsmouth.
Richmond Show.
Royal Agricultural Society's Show at Manchester (5 days).
THURSDAY, June 24th.—Colchester Rose Show.
FRIDAY, June 25th.—Maidstone Rose Show.
Sale of Orchids by Messrs. Protheroe and Morris.
SATURDAY, June 26th.—Dorking Rose Show.
Windsor Rose Show.

THE JOURNAL OF THE KEW GUILD.—This hardy annual, the fifth of the series, opens with a portrait of Mr. John Gilbert Baker, F.R.S., F.L.S., keeper of the Herbarium and Library, Royal Gardens, Kew. Old Kewites will recognise the features of Mr. Baker at a glance, few in the establishment being more familiar to the students or young gardeners by reason of his delivering a course of lectures on systematic botany annually, and being frequently in the gardens examining, studying and naming living specimens of plants from all parts of the world. Mr. Baker commenced collecting and drying British plants when he was only twelve years old, and in time became one of the best of amateur British botanists. Since he joined the establishment at Kew thirty years ago the amount of botanical work which he has gone through is simply marvellous. Garden botany is one phase of his work for which gardeners have to be thankful. We need only mention Ferns, Irids, Amaryllids, and Bromeliads as an instance of this, leaving out of count his numerous and valuable monographs of garden genera. His source of popularity amongst the students, fogged and labouring amongst the labyrinthic intricacies of plant life, was his lucidity and the emphatic way in which he defined the absolute differences between one so-called species and another; between orders, families, genera, races &c. We grasped this idea of Mr. Baker's style after hearing a lecture or two, and have no doubt the same experience served to nerve many another contemporary student in grappling with the intricate science of botany.

We note from the Journal that there were 1,396,875 visitors to Kew Gardens during the past year; that 86,399 entered the gardens in one day—May 25; and that the smallest number in any one day was 62 on March 18. This should be news to those writers who advance theories in the newspapers that the gardens are practically unknown. Let us hope they were led into error by entering the gardens on the March 18th, 1896, above quoted. One lady gardener has been appointed head gardener from Kew, to a private establishment in Wales. This was Miss A. M. Gulvin who gained the Gold Medal of the Royal Horticultural Society against all comers from the British Isles, in 1895. At present there are three lady gardeners at Kew. The latest poetical sketch by Mr. Ingram, an old Kewite, entitled "The Lady Gardener," is amusing, and the imaginary professor, pitted against the equally imaginary antics of the ladies, ought now to exhibit his gallantry by taking a back seat.

Newsy paragraphs, from various distant correspondents, are again a feature of the publication and are doubly welcome to all by whom they were known. A pithy note on this same subject by Mr. F. W. Burbidge, M.A., F.L.S., Trinty College Gardens, Dublin, expresses, we feel sure, the sentiments of not a few. Mr. R. Derry says "We are located on a mountain eight miles from Taiping, at an elevation of 3,600 feet. The temperature is simply delightful, and we can live comfortably without sweating." This, too, is at Perak, in the Malay Peninsula. After relating the varied nature of the work he has to accomplish for the Government, he speaks of a Pepper-garden he has to manage. Well, that at least ought to be warm; but when he says "This locality would suit Jack; we have tigers, elephants, rhinoceros, snakes, &c., galore," we fancy that must be warmer still—in fact too warm for us. Mr. O. E. Wüg writes from Norway in a somewhat different vein "a beautiful place in summer, but cold and dismal in winter, when one sees nothing but miles and miles of Pines and Birches laden with snow. The London fog cannot be much worse than this. Still we have a fair amount of success in gardening, our air being clear and the light good, whilst hard work is not so fatiguing as I found it at Kew, for instance." From such brief sketches an enterprising writer might fabricate a modern view of purgatory; but the old Kewites are not a bit discouraged; oh, no; they have not yet had enough of the brimful and changeful amenities of their new and hopeful situations. Already "there are no less than eighteen Kewites now occupying important positions in various parts of the African Continent, and this number bids fair to be doubled in a short time when the political atmosphere clears and Britishers settle down to work." Some short sketches of Cape gardens from the pen of Mr. W. J. Mathews, make very interesting reading; but we need not anticipate the Journal's arrival in distant quarters by quoting any of the sketches; suffice to say that the smaller gardens would appear to be the more interesting, because the larger ones are mostly copies of European originals, as is usually the case. We cannot blame the pioneers even if they do take models with them from the old country; it always was Nature's plan of evolution to convert or transform an old thing into a new or at least a different shape. Old favourites are also taken with the pioneers into their adopted homes; but sparrows in America, rabbits in Australia, and Opuntias and Argemone mexicana in Africa should act as monitors warning Britishers not to take pets with them unless guaranteed to be of good behaviour in the new country.

Under the heading of "Distinguished Past Kewites," the short sketches of past men who have made their mark in the history of the establishment, are continued. Some half a dozen of such men are reviewed. "A Present Kewite on Kew" supplies an article that is at once instructive and most amusing. We cannot imagine in what happy hunting ground he gained his experience in the matter of lodgings; but we quite admit that our fifteen years' habitation in Kew is not a wide experience, though fairly long. He says "I was robbed right and left, my food was often garbage, my bed too "lively" for words except very strong language. . . . . And my landlady's retort when I complained of the food was, that if

I worked harder my appetite would improve." This is probably one good reason why the Kew men prove good enough for any emergency when they go abroad. We advise "Present Kewite" to stick to it, and he will triumph sooner or later.

The marriage of fourteen Kewites is recorded under "Wedding Bells." In the chapter "In Memoriam" are recorded the deaths of six past Kewites, of whom portraits of Mr. J. Smith, Mr. W. Truelove, Mr. Bruce Findlay, of Manchester, and Mr. W. G. Head, of the Crystal Palace are given. The two latter died comparatively recently. The two former died some years ago after their retirement from Kew. The first is distinguished as John Smith II, and the following sentence will describe both him and his predecessor of the same name:—"He was remarkable rather as a practical gardener than as a man with scientific sympathies, in which respect he differed markedly from his predecessor "Jock" Smith, who was more botanist than gardener." The present addresses of many of the past Kewites are still represented by blank spaces.

The Temperature at Windsor on the 12th inst., was 127° in the open.

Primula elatior.—At a meeting of the Linnean Society on the 17th inst. Mr. Miller Christy, F.L.S., read a paper on the distribution of Primula elatior.

So great was the heat in London and the suburbs last Sunday that the young shoots of established Rhododendrons hung down quite limp long before the day was over.

Mr. F. W. Meyer, Messrs. R. Veitch & Son's landscape gardener has been successful in winning prizes for designs of Jubilee Parks, at Yeovil and Crediton. At Yeovil Mr. Meyer headed the list of nine competitors.

A pretty Custom is still observed in some parts of France It was inaugurated by the Bishop of Noyon in the sixth century. It consists in offering annually to the maid of each village, who has during the year earned for herself the greatest reputation for modesty and virtue, a crown of Roses. The nomination is made by the villagers, and the presentation is made the occasion of public rejoicing.

Helianthemum Breweri.—I was in Anglesey last week, and found a plant but little known to British botanists, namely, Helianthemum Breweri. It grows some 400 ft. above sea level at the entrance to the South Stack Lighthouse. I am told by the author of the Flora of Anglesey, Mr. Griffith, who has done so much for botany in that part of the country, that this little Rock Rose was named after Dr. Brewer, who first discovered it on his arrival at Holyhead on a walk from London to that place with his friend Dillenius; and so struck was he with it that he made Holyhead his winter quarters so as to make sure of being able to gather the seed in the following summer.—*J. C. Stogdon.*

Orchids at the Sale Rooms.—Some fine varieties of various things turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 11th inst., including the beautiful Cattleya Mossiae arnoldiana which sold for 19 gs. C. gigas in handsome form fetched 5½ gs. A fine variety of Laelia purpurata went for 5½ gs. At the fall of the hammer Laeliocattleya canhamiana had run up to 13 gs., and Laeliocattleya arnoldiana to 7 gs. The handsome hybrid Cymbidium eburneo-lowianum reached 9 gs., though a grand specimen of the typical C. eburneum only reached £3 15s. This latter shows that during summer while many people are away on their holidays, and others waiting for the advent of Jubilee Day, fine additions can be made to a collection at small cost. Those commencing to get a collection together could not attend these sales at a more favourable time than the present.

Cleopatra entertained Marc Antony in a room, the floor of which was covered to a considerable depth by Roses.

The Greeks and the Romans loved the Rose. The former consecrated it to Aurora, Venus, Cupid, and Harpocrates the god of silence.

Stakes and Mistakes.—I sent the boy to stake the Peas, but the world is full of mistakes, and he utilised the latter very largely.—*Snaggs.*

Owners Rights.—A Brooklyn (U.S.A.) magistrate recently decided that a lot owner has a right to cut the roots of a neighbour's tree which find their way into his locality.

How to raise Vegetables.—*Amateur Farmer*: Don't know what ails these Peas; they won't come up.
Sympathetic Friend: Why don't you give 'em an emetic.—*The Florists' Exchange.*

The Oldest English Glee extant contains the following lines:—

"Summer is y comen in,
Loud sing cuckoo;
Groweth seed
And bloweth mead,
And springeth the weed new."

Bournemouth and District Gardeners' Association.—Mr. Wm. Watts of the Palace Nurseries, Bournemouth gave a paper on large-flowering Cannas at a recent meeting of the society. The lecturer gave hints for the cultivation and propagation of the plants, and concluded with a list of the best varieties of recent introduction.

Paris Battle of Flowers.—The late battle of Flowers held in the Bois de Boulogne at Paris was a truly brilliant spectacle. From the Arc de Triomphe down the Avenue du Bois de Boulogne were crowds of gaily dressed people, and streams of carriages laden with flowers. President Faure and many members of the government and the diplomatic corps attended.

Spermatozoids in Gymnosperms.—Dr. D. H. Scott, F.R.S., F.L.S., exhibited, at the meeting of the Linnean Society on the 17th inst., preparations by Prof. Ikeno and Dr. Hirase of Tokio, Japan, illustrating their discovery of spermatozoids in the Maidenhair-tree (Ginkgo biloba) and Cycas revoluta. If such a remarkable and important discovery as this can be confirmed, it will form a strong connecting link between the higher vascular cryptogams such as Ferns and the Gymnosperms amongst phanerogamous plants.

Tiverton Flower Show.—Messrs. R. Veitch & Son, of the Royal Nurseries, Exeter, made a grand display at the Tiverton Flower Show. A varied and comprehensive collection of plants was staged, including Richardia elliottiana, Cannas in varieties Hydrangea hortensis, H. paniculata grandiflora, Japanese Maples in a great profusion of forms, Roses and Orchids. Some of the newer Streptocarpuses such as Mrs. John Heal were also very interesting. A miniature rockery well and tastefully furnished with hardy plants was exhibited. Amongst the latter were hardy Opuntias, Sarracenias and Aster alpinus. Cut hardy flowers assisted the display. Fine samples of early vegetables were also shown by the firm, Lettuces, Early Milan Turnips, Tomatos and Cauliflowers being in excellent condition.

The Influence of electric light on Liliums.—At a recent meeting of the Horticultural Club, of Cornell University, U.S.A. notes were presented upon experiments made with the electric light upon Liliums. The plants grown under the naked light were more robust, the leaves were greener and more glossy, and the development all round was more uniform than in the cases of plants which had the light passed through a pane of glass which cut off some of the ultra violet rays, or those which had the light passed through a black canvas curtain. From the results obtained it is probable that electric light will be used extensively in the forcing of Lilium Harrisii, although it will not be utilised until the buds are about an inch long in order to hasten their expansion. It was found, moreover, that the light must be passed through glass in order to avoid burning of the expanding flower segments.

Queen of Flowers.—The title "Queen of Flowers" is said to have been given to the Rose by Sappho, the Grecian lyric poet some 200 years ago.

The One and All National Flower Show is to be held at the Crystal Palace on Friday and Saturday August 20th, and 21st. The prizes include £350 in cash besides gold, silver, and bronze medals. Mr. Edward Owen Greening is the hon. secretary.

Early Fruit and Vegetables at Tenby.—Mr. E. Griffiths, Tenby, gathered fine ripe Strawberries from the outdoor garden on the morning of June 4th. The plants had not been sheltered in any way. The week previous, *i.e.*, the last week in May Mr. Griffiths also dug new Potatos, likewise from unprotected plants in the open.

Crystal Palace Flower Show.—Amongst all the many Jubilee celebrations the floriculture of the period is not to be neglected, for the Crystal Palace authorities announce a grand flower show to be held on Wednesday and Thursday, June 23rd and 24th, in which the great feature will be a magnificent display of the flowers and plants specially cultivated during the Victorian Era.

The Couch Grass which gardeners and farmers hate so much, and wage an eternal war against is not without a use of some kind. It is stated that dog fanciers know well its value from a medicinal point of view when their pets are afflicted by either round or tape worms. The dogs themselves instinctively select this grass when they are suffering in the manner indicated, and the cure usually follows. It is recommended that a few blades of the Couch Grass should be chopped up and mixed occasionally with the soft food given to dogs and puppies.

Horticultural Show at Cheltenham.—The Whitsuntide show of the Gloucester and Cheltenham Royal Horticultural Society, which opened on the 5th inst., was satisfactory in all respects with the exception of Roses which were not well represented. Mr. James Cypher, of the Queen's Nurseries took the leading prizes for groups of miscellaneous plants as usual and in spite of some keen rivalry. The Mayor of Cheltenham (Col. Rogers) secured prizes for fruits, flowers, and vegetables. Viscount Deerburst took several prizes for fruits and vegetables including leading prizes in two classes for Grapes.

Eastbourne Horticulturists.—There was a large attendance at the last monthly meeting of the Eastbourne Horticultural Society. Councillor Sharp occupied the chair. Mr. Capon read a letter which had been received from Mr. William Camm, gardener to the Duchess of Cleveland, stating that her Grace would be pleased for the members of the society to visit Battle Abbey on the day selected for the annual excursion. The date fixed, thereupon, was Thursday, 8th July when the president of the society Mr. George Boulton will entertain the members to lunch at the Star Hotel, Battle. Mr. Capon moved that the secretary write to Mr. Milne, gardener to the Earl of Ashburnham, and Mr. Allen, gardener to Lord Brassey, to ask permission to inspect their respective grounds. Mr. Reed seconded, and the motion was finally carried.

The Annual "Flower Sermon" was preached in the church of St. Katherine Cree, Leadenhall Street, London, on the evening of the 8th inst, by the rector, the Rev. J. Miles. The first "Flower Sermon" ever preached in England, was delivered in St. James' Church, Aldgate, in 1853, by the Rev. W. M. Whittemore, D.D., the late rector of the parish. Since that date the practice has become an annual institution in various parts of the country. There was a large congregation of young people, most of whom carried a bunch of flowers which were collected and divided between the City Infirmary at Bow and one of the Children's Hospitals. "The desert shall rejoice and blossom as the Rose" was taken as the text by the rector who engaged the attention of his youthful audience by the simplicity of his phraseology. The Rose was only twice mentioned in the Bible, and most likely Narcissus Tazetta was meant rather than the Rose as we know it. This Narcissus is very plentiful in various parts of Palestine and is now generally believed to be the Rose to which Isaiah referred.

In Aid of the Royal Gardeners' Orphan Fund—In connection with the Queen's Reign, Mr. Henry Rumsby Cannell, M.S.A., will give a lecture, exhibiting original tinder box, flint and steel, showing the old-fashioned mode of producing fire; also the old matches known as brimstone ends. He will explain numerous alterations and events that have occurred, also the rise and progress of the people, and of the country. He will also show the old pattens (which are still in use in old-fashioned towns), snuffers, &c., showing the ways and customs of 50 years ago. The proceeds will be handed over to the Royal Gardeners' Orphan Fund, of which Her Royal Highness the Princess of Wales is a patroness, His Grace the Duke of Bedford, president, and Mr. Henry Cannell one of the founders, and takes a great interest in its maintenance. Seventy widows are at this moment receiving 5s. per week from the Association. Tickets for admission are only 6d., 3d., and 1d. each.

THE DIAMOND JUBILEE.

A Remarkable Floral Visitor.

DENDROBIUM VICTORIAE REGINAE.

A distinguished and unexpected visitor, who is likely to create some stir in horticultural circles, has reached our shores at an opportune moment. Orchid collectors and growers, and they are daily becoming more and more numerous, are well aware that amid all the varied shades and colourings which adorn these lovely flowers, blue has hitherto been conspicuous by its absence. But the year of the Diamond Jubilee has brought and is bringing to us many wonderful persons and things so flora, not unmindful of the event, has deemed it a fitting occasion to present us with a blue Orchid as our votive offering for the great celebration.

The ambassador selected by the goddess on this occasion is Mons. C. Roebelen, well-known as an intrepid and reliable collector, who in April last, in an almost inaccesible spot in the Phillipine highlands, chanced upon a group of Orchids bearing rich blue flowers. The discoverer, rightly considering this unique flower worthy to commemorate "the longest reign," has christened it "Dendrobium Victoriae Reginae," and forwarded a collection to this country by the *S.S. Sidon*.

These arrived on Tuesday, and will be disposed of on Friday afternoon (the 18th inst.) by Messrs. Protheroe & Morris, Cheapside, at which function, no doubt all our leading growers, both amateur and professional will be present or represented.

SATURDAY AFTERNOON HOLIDAYS.

It is difficult to comprehend the reasons adduced which prevent under-gardeners from enjoying the privileges of other citizens in regard to hours of labour and holidays. In Scotland there is generally less to complain of than in England. Many northern nurserymen shut their seedshops, as do most of other tradesmen on Saturday afternoons, and in the nursery grounds the labour is also then suspended. There is, of course, the usual work of attending to glass and other matters which necessitates the employment of some of the men, who take duty in turn as the case may require their services.

In many private gardens the half-holiday for garden employees has been general for a number of years. Indeed, those who have not the half-holiday in this country are in a small minority. Some of the proprietors themselves pressed the matter, and with some head gardeners it was cases of *nolens volens*. Some proprietors have gone further than this, and established the nine hours a day system! Many new lodges for housing the men have been erected in different parts of the country, giving each single man a separate apartment; bathrooms are duly considered; homes for men with these comforts, and a woman to cook and clean for them are not likely to be under-rated. I need not add that by such human considerations employers reap substantial benefit, as well as command the esteem and confidence of their employees. "Unionism" has been suggested as being likely to advance the interests of gardeners. No one has yet propounded a course which can safely be pursued. It has been tried in the north, and with all the force which intelligent men could bring to bear on the cause. It became a huge failure, many of the best of the young men had to find quarters in the army, gardening not being a necessity of the populace, all action failed; and the great finale was most disastrous.—*M. Temple, Carron, N.B.*

TREATING FRUIT TREES FOR CANKER.

On taking up The Gardening World this morning (June 14th) I notice a report of a demonstration I gave at Devoran some time ago, and in treating for canker I am reported to say that I advocate; 12 lbs. superphosphate, 10 lbs. nitrate of soda, 2 lbs. sulphate of magnesia, 11 lbs. sulphate of iron, 8 lbs. sulphate of lime, then apply 4 lbs. to the square yard for small trees, and 8 lbs. for large.

What I said was as follows:—"12 lbs. superphosphate, 10 lbs. nitrate of soda, 4 lbs. sulphate of magnesia, 1 lb. sulphate of iron, 8 lbs. sulphate of lime, mix well together, apply 4 ozs. (not lbs.) to the square yard for young trees, or 8 ozs. for large ones. —*Charles Ilott, Instructor in Horticulture, Cornwall C.C., 15, River Street, Truro.*

SEEDLING LILIUM GIGANTEUM.

Most cultivators of this giant Lily are perfectly satisfied if they succeed in flowering the bulbs, but Mr. M'Laren, The Gardens, Fernielee, Murtle, has carefully watched and nursed a batch of seedlings to the flowering stage. The seedlings have been increasing in size annually, making larger leaves and bulbs every year, until last season the radical leaves had attained striking proportions. They had, in fact, attained the flowering stage, as is proved by their sending up gigantic flower stems, at least a number of them. The tallest had attained a height of 5 ft. 9 in. last week, but will yet get taller before the flowers expand. The stoutest stem then girthed 11 in. at a foot from the ground, and appears to arise from the strongest bulb, which was later in commencing to throw up its stem than the others. It is also throwing up several smaller stems from the base, which seem as if they intended to flower. It may be stated that the seedlings have been raised in a cold frame, but even then the result is more than satisfactory from such a northern latitude as Aberdeen. Choice hardy plants and aquatics of various kinds receive close attention from Mr. M'Laren.

ENGLAND'S FLORAL EMBLEM FOR JUBILEE DAY.

Since the receipt of the following letter from the Very Rev. the Dean of Rochester, Dr. Hole (copy herewith), sympathising with my suggestion that the Rose should be worn by everyone on Jubilee Day, hundreds of communications have reached me to the same effect. This is "The month of Roses," and after the refreshing rains we have recently had there will be an abundance of Roses for the eventful day. Their beauty and fragrance will be very welcome. In the times of the early Kings of France, "Chamber's Book of Days" inform us "The Parliament, placed between Royalty and the Church, formed one of the great powers of the State, The Kings felt a real esteem and respect for the judiciary body, and regularly attended its sittings; besides, it was not always stationary in Paris, but made an annual tour, when Princes and Princesses of Royal blood were accustomed to follow its laborious peregrinations, and thus add to the brilliance and pomp of its meetings. It was in 1227, during one of these judicial pilgrimages, that the custom called "The Tribute of Roses" was founded, one of the most charming of which the Parliamentary annals speak. The ceremony was created by a woman and for a woman, by a powerful and illustrious Queen for the wise and lovely daughter of the first President of the first Parliament of Paris, and possesses at the same time the majesty of all that comes from a throne and the grace of all that comes from a woman."

It would be most appropriate that in all future years, a day in June should be set apart in this country as a national holiday and "commemoration day" of our Queen's Diamond Jubilee, when "The Tribute of Roses" might form one of the leading features of the occasion and be popularly known as the "Royal Rose Day."- *Ellis Lever, Colwyn Bay, June 15th, 1897.*

Mr. Ellis Lever's happy suggestion that the Rose should be worn on Jubilee Day, has elicited the following communication from the Very Reverend the Dean of Rochester:—

The Deanery, Rochester,
May 22nd, 1897.

Dear Sir,—I thank you for reviving pleasant memories. Your suggestion has my heartiest sympathy, and I shall gladly adopt it on the day of Jubilee, and wear England's emblem, the Rose, in my coat. It is right that the "Queen of Flowers" should be thus associated with the "Queen of Queens."—Believe me to be, sincerely yours,

S. Reynolds Hole.

Ellis Lever, Esq.

ORCHID NOTES & GLEANINGS.

By The Editor.

Laelia purpurata Waddon House var., *Nov. var.*—This very choice variety has turned up in the collection of Philip Crowley, Esq., F.L.S., F.R.H.S., Waddon House, Croydon. Those who are accustomed to seeing him at the fruit and vegetable committee meetings of the Royal Horticultural Society are apt to think that his attention is entirely given to subjects such as are brought to that table; but he has a collection of Orchids as well to which additions continue to be made. The beautiful Laelia under notice is one of the recent additions, and since it came into bloom has proved to be worth many times the price for which it was secured. The sepals and petals are pure white, the latter being ovate-elliptic, wavy above the middle, and very broad. The whole flower is compact with a relatively short tube to the lip, this portion being creamy-white on both surfaces, and handsomely lined with crimson internally, the lines also showing to some extent on the outer face. The lamina of the lip is almost orbicular, wavy at the margins and of a rich crimson-purple, including the side lobes, externally and internally; there is the usual rosy-purple blotch at the apex. Altogether the flower is very neat, compactly built and handsome, so that both the owner and his gardener, Mr. Harris, may well feel proud of this fine addition to the Waddon House collection.

Cymbidium lowianum viride.—C. lowianum is not subject to much variation, but two green forms have appeared, the first of which was a pale greenish-yellow or soft apple-green variety which we described in The Gardening World when it first appeared in the nursery of Messrs. Pitcher & Manda, at Hextable. We refer to C. l. mandaianum, which was described later in the *Orchid Review* as C. l. concolor; at least we have never been able to distinguish the difference between the two, and others concur in the same opinion. The subject of this note flowered in March 1896 in the collection of A. H. Smee, Esqr. The Grange, Carshalton, and from this a coloured figure was prepared and appears in the *Orchid Album Pl. 527*. The flowers have sepals and petals of a uniform and decided green, while the usual maroon-crimson blotch at the apex of the lip has given place to golden yellow, which is very pretty. The disc of the lip is white.

Odontoglossum Pescatorei limbosum.—The sepals and petals of this variety are white, slightly tinted with rose on the back. The lip which suggested the varietal name is the most ornamental part of the flower, being white, with three dark crimson-carmine blotches in front of the crest, numerous blotches at the base and over the crest, and a longitudinal band of the same colour towards the apex. This latter band is the most distinct and most characteristic feature of the flower. The variety has been flowering for some time past in the nursery of Mr. J. Seeger, Bandon Hill, Croydon.

Cattleya Mossiae Mondii.—We first described this beautiful light coloured Cattleya in The Gardening World Vol. XII. p. 621, and we still think highly of it. The variety turned up in the collection of Ludwig Mond, Esqr., F.R.S., at The Poplars, Avenue Road, Regents' Park, under the able management of his gardener, Mr. J. O. Clarke. A coloured plate of it now appears in the *Orchid Album Pl. 528.*

The sepals and petals are of the most delicate and beautiful shade of rosy-pink. The front portion of the lamina of the lip is almost white, with an oblong deep purple band along the centre; the margins are also white. The throat of the lip is furnished with the usual large orange blotch which here extends on to the lamina for a considerable extent and is very prominent. The interior of the tube is purple, beautifully veined or lined with white. It takes rank amongst the finest of the light varieties of C. Mossiae.

Cypripedium Fraseri.—As this continues to get well established it appears to greater advantage under the treatment accorded by Mr. H. J. Chapman, gardener to R. I. Measures, Esqr., Cambridge Lodge, Camberwell. We recently noted two pieces of it, the larger one having much the finer flowers both in size and colour, but particularly the latter. The dorsal sepal is purple, lightly tinted with green, and white at the margins. The drooping, twisted petals are 1½ in. to 2 in. long, yellowish on the lower two-thirds of their length and beautifully spotted with black, the upper portion being rosy-purple as in C. hirsutissimum, one of the parents. The lip is deep purple. In these respects the colours are much more decided and attractive than when the hybrid first appeared in public. The collection of Cypripediums at Cambridge Lodge is pretty extensive and continues to grow.

Cypripedium insigne vars. — Three new varieties of this species appear in the *Lindenia Pl. 563.* That named C. i. fuscum has very large flowers with long and broad petals of a bright yellow hue, heavily overlaid with fuscous brown, while the lip is even of a darker brown. The glory of the flower, however, is the dorsal sepal, which is marked all over with large brown blotches, except at the very wavy apex, which is white. C. i. picturatum is the most heavily blotched variety we remember to have seen. The ground colour of the dorsal sepal is white, shaded with clear yellowish-green, and thickly covered with large, contiguous, blackish, purple-brown blotches, similar to those often seen in C. villosum Boxallii. The petals are broad greenish-yellow and handsomely blotched to the very apex, the spots being much larger than is usually the case in this species. The variety C. i. immaculatum is very pale, the dorsal sepal being greenish-yellow, lightly spotted with brown in the lower half, while the upper half and the margins are white.

Cochlioda miniata.—This is considered as a natural hybrid between C. noetzliana and C. vulcanica both well known in good Orchid collections, the first named, though of recent importation, having sprung into popularity within the last few years. The flowers of C. miniata are about as large as medium-sized forms of C. vulcanica, and the oblong-lanceolate sepals and broader petals also resemble those of the latter. They are of a glowing red shading to scarlet and carmine in the middle. The short, broad and deeply three-lobed lip is of a vermillion red and intermediate in form between those of the supposed parents. The prominent yellow crest resembles that of C. noetzliana, and the carmine-rose wings and upper part of the column recall the colour of the other parent. The form turned up last January in the establishment of L'Horticulture Internationale, Brussels, amongst importations made by that firm. A good coloured illustration, prepared from that plant appears in the *Lindenia, Pl. 562.*

Cattleya schilleriana.—The structure of this Orchid together with the colours and variations amongst imported plants conduces to the belief that it is a natural hybrid between C. Acklandiae and C. guttata. It comes from Bahia in Brazil, whence those two species also come, and retains all the beauty and the habit of C. Acklandiae, coupled with the larger flowers and richer spotting of C. guttata Different importations show a great range of variation, and separate and distinctive names have been given to several of them. A very fine variety turned up in the Victoria and Paradise Nurseries of Messrs. B. S. Williams & Son, in May 1896. The sepals and petals are thickly spotted all over with purple on a yellowish ground suffused with rose. The lateral lobes folded over the column are white, heavily lined with rose and purple; the broad, obreniform front lobe being of a rich dark amethyst-purple, with darker veins and a golden disc. A plant bearing two flowers, close upon 6 in. across, is beautifully illustrated in the *Orchid Album, Pl.. 525.*

PARK PLACE, HENLEY-ON-THAMES.

This fine establishment is noted the country over for the quality and abundance of the fruit produced under Mr. Geo. Stanton's careful and enlightened management. Accordingly, it is most instructive to note how the present trying season has affected the hardy fruit crops. While the trees were in bloom they were subjected night after night to keen frosts and nipping winds, and they have come through the ordeal far better than could have been expected. Luckily, everything was dry during the "Blackthorn winter," and to this must be attributed the minimising of the loss that must otherwise have resulted.

Apples are rather thin, but vary a good deal, some trees having heavy loads, and others scarcely any. Pears are quite a fair crop, whilst many of the wall trees are carrying what will be very heavy loads. Plums are thin. Peaches are good crops, but the leaves of some of the trees are much blistered owing to the long continued cold east winds. Morello Cherries do not seem to have been affected in the slightest degree by the inclemency of the weather, and the trees not only look healthy but are bearing good crops. Small fruits are good, Gooseberries especially being much above the average; indeed, all of the trees that we saw that had not been called upon to furnish green berries for culinary purposes were heavily laden.

Under glass fruitfulness is everywhere apparent. In the earliest vinery Black Hamburgh and Foster's Seedling are in the last stages of maturation. The bunches are of a useful size, and the berries larger than the average. The colour, too, will be excellent when ripening is completed judging by appearances. The later Vineries are all in excellent condition. The Muscat house, since the renovation of the border, has done exceptionally well, and some of the bunches of Mrs. Pince will be heavy samples by the time they are ready for the table.

The earliest Peach house is just a trifle later than usual. The fruits are well on with their second swelling, and the trees are bearing their load well. A tree each of Early Louise and Dr. Hogg Peaches, and Lord Napier Nectarine fill this house. In the succession houses there is a good deal more thinning yet to be done, and there is plenty of fruit to pick and choose from. Cherries are not so good as in former years, and the trees, which are trained on the cordon system, are getting past work and are being gradually weeded out.

Melons are well done, and a house with the fruit just ripening was a pleasant sight. Sutton's A1 was specially noticeable and fully sustained the high reputation of which it is possessed. Green fleshed varieties are likewise held in great favour. The two Fig houses have for some years past been annually great successes, and this year is no exception.

The houses devoted entirely to decorative plants are comparatively few in number, for in the majority of cases plants and fruits are growing in the same house and both doing well. One of the chief features at the present time is a "Pelargonium wall." Ivy-leaved Pelargoniums have been planted on the back wall of two of the later Vineries and have been allowed to grow right to the top and cover the whole wall. It would be difficult indeed to overpraise the effect thus obtained, for the plants are a mass of bloom from top to bottom. In one house particularly was the success of this system strikingly apparent. The plants are only two years old. Each winter they are gone over and pruned pretty severely. Then they are tied in, starting from the base and working upwards, in order to insure the whole of the lower part of the wall being equally covered. This also allows of a little room at the top of the wall for growth in that direction. In the house in question three varieties were planted. First came Souvenir de Charles Turner with its huge trusses of bright cerise blooms; next a blush white seedling that was picked up by accident a few years ago, but withal a pretty and floriferous variety. The old Madame Crousse occupies the other end, and although a form of a good many years standing, it is evidently still able to render a good account of itself.

In the large tropical house the Bougainvilleas are in magnificent condition. Certainly one of the finest plants in the kingdom is here to be found, and right royally does it acquit itself each year with regard to blooming, Just now the long sprays of bright rosy purple bracts are hanging from the roof in superb profusion, thanks to careful attention with regard to the winter pruning and spring thinning of the growths. B. speciosa has also been doing well, but it is rather earlier than B. glabra which takes up the tale when B. speciosa is getting past its best. Stephanotis floribunda is also growing and flowering here with a freedom that is closely akin to prodigality, and the curious forms of several Aristolochias are much in evidence. A. gigas Sturtevantii is not the least noteworthy of these, and several of the huge, uncanny, foetid, and yet richly hued flowers were expanded to entice the unwary visitor within range of the vitiated atmosphere that surrounds them.

In the smaller stove a considerable portion of the available space is occupied by a row of plants of Musa Cavendishii. The suckers are strong and the leaves which are of good size have a most imposing appearance. One of the suckers is flowering now, the remainder will flower some time during September next. There are several beautifully coloured plants of the variegated Pineapple (Ananassa sativa variegata) one of which is fruiting. This handsome foliage plant is well worthy of a place in every stove. Alocasia macrorhiza is another old-fashioned foliaged plant that is not often seen in private establishments. When well variegated the leaves are very handsome and ornamental.

In the Orchid houses a number of Cattleyas and Odontoglossums are in flower. In the cool house which shelters the Odontoglossums in winter, and is just now filled with Cypripediums, the Lapagerias are just commencing to flower. The whole of the roof in this house is covered by the plants, and as the latter flower freely each year, the scene they present during the latter part of June and July is really splendid.

Chrysanthemums are well done, and the earliest batch of plants received their final shift into their flowering pots at the beginning of the month, whilst hundreds of others are waiting their turn. A large number of bush plants is grown and as the quantity of cut flowers required at all seasons is very great, many of them are not disbudded at all, but simply allowed to produce as many flowers as they please. Throughout, the plants are giving abundant promise, and will doubtless justify this promise in the autumn.

PLANTS RECENTLY CERTIFICATED.

The following plants received Floricultural Certificates at the Royal Botanic Society's Show at Regent's Park, on June 9th.

Paeony Viscount Cross.—A charming single variety of a bright cherry hue.

Paeony Limosel.—A large double flower of rosy-carmine hue, very sweet scented.

Paeony Mrs. J. F. Lipton.—A huge double bright rosy-carmine flower of great merit.

Paeony Joan Seaton.—This is another very pretty double variety, light pink in hue, the petals prettily margined with silver.

Delphinium Athos.—This variety throws a huge compact spike with large semi-double flowers. These are gentian-blue in colour shading to plum on the upper segments. The pure white eye is a still further attraction.

Delphinium True Blue.—A fine single form, of a charming bright blue shade, with a black eye.

Delphinium Primrose is the latest addition to the lighter sorts. The flowers are single, pure white, and have a yellow eye.

Delphinium Imperial Majesty.—This is a semi-double form of great beauty and refinement. The colour is cobalt-blue shaded with light plum, and the black eye is very conspicuous.

THE PLANT HOUSES.

Pits and Frames.

For the next few months the burden of the work will be in watering, for there are so many subjects that are crowded into the pits and frames, and the spaces between them, that the watering pot will have to be kept continually on the go.

Tree Carnations.—Nothing suits these plants better for the next three months than an open position out of doors. Both the old plants which have

been trimmed and topdressed, and the younger plants which received their final potting at the end of May should be stood evenly in such a position. Some measures will have to be taken against the roughness of the wind, and to this end the plants should be stood in rows and their stakes tied to a stout wire strained along between posts driven firmly in at each end of the row. Clear water will be sufficient for the present, but in about six weeks time liquid manure may be given about twice a week. Meanwhile keep the flowers picked off the older plants in order to induce them to reserve their energies for a later period.

Border Carnations.—Plants that were potted up three in an 8-inch pot in March for early blooming are now in an advanced stage. A little disbudding may be practised with advantage, although where flowers for cutting are chiefly wanted it is not wise to do much of it. If the plants are vigorous they will require heavy supplies of water. Liquid cow manure may be given on alternate days. If chemical manures are applied in the powder form they should only be applied in small doses and a watering with clear water must immediately follow, otherwise the surface roots will be in danger of burning. Keep the plants cool and shaded from the hottest sun.

Plunging Chrysanthemums.—After the plants have been potted for about a fortnight, and have thoroughly got over this, their final shift, they may be plunged in the ash beds prepared for them. Some cultivators do not care for the plunging, but there is no doubt that it minimises somewhat the labour of watering, and surely that is an item. Space should be allowed so that each plant can be properly attended to for pinching, tying, disbudding, etc., as they become necessary.

Later plants which have only just received their final potting should be stood in a portion of the frame yard where they will be shaded from the fiercest rays of the sun. Be rather sparing with the water pot, as too much water combined, with the richness of the soil, especially where chemical manures have been added, soon proves fatal at this juncture. The syringe should be kept at work regularly, however, and this in itself will greatly aid the plants in picking up.

There are many of the subjects that require warm treatment during the other parts of the year that will do very well during the summer in cold frames. There they may be syringed and attended to just as if they were in the larger houses. Acalypha musaica, for instance, colours splendidly under such treatment. Centropogon lucyanus, Scutellaria mociniana, and Plumbago rosea all do well under such conditions, and large batches of them will be found exceedingly useful presently for autumn and winter flowering. Frames containing such plants will need of course to be kept much closer than others with hardier stuff in them.

Herbaceous Calceolarias.—It is not necessary now to launch out into praises of these for conservatory decoration. Not a few cultivators, however, make the mistake of coddling the plants too much, and weak miserable looking specimens are the result. Some make it a practice to sow about the middle of May, but this is rather too early, and the June sowing, made now at once, usually produces the finest and strongest plants. Use shallow, well-drained pans filled with light porous soil that is sufficiently damp to do without watering. Sow thinly and cover the pans with sheets of glass. Place them in a cold frame and shield them very carefully from the sun. Germination will take place in from seven to ten days. As soon as the young plantlets are through the soil pricking off must commence. In the majority of cases it is safe practice to select the stronger seedlings, and discard the weaker ones, but in the case of Calceolarias it is not so, as it not infrequently happens that the plants of weaker habit are very desirable varieties.

Cinerarias.—A further sowing may be made now in order to furnish plants for late blooming, and thus supplement the May sowing. Follow the advice given in a previous calendar. The seedlings from the May sowing will do admirably in a cold frame facing the north. A bottom of ashes seems to suit them better than anything else, as it is clean and holds the moisture fairly well. Be careful not to over-water in these, the earlier stages, or the plants will be crippled from the start.

Tuberoses.—These should still be kept in a cold frame, weeding out those that are throwing up their flower spikes, and transferring them to more roomy houses or putting them into heat to develop their flowers. Clear water will do for the present, as the aim should be to keep some of them back for as long as possible. Side growths should all be removed so as to throw all the strength into the central growth. Red spider is the chief enemy of the Tuberose, and this must be kept down by daily syringing.

Liliums.—Such Liliums as L. speciosum, better known perhaps as L. lancifolium, and L. s. roseum are in great request for conservatory decoration during the latter part of the summer. The problem is how to keep them back. The best plan is to find a place sheltered from the south and west, and looking towards the north and east, such as the angle between two walls. In such a position the plants may be stood, when they will be a long time in developing their flowers, and will come in when flowers are scarcer than they are at present.

Mignonette, for winter blooming, that was sown about a month ago in 48 or 32-sized pots, and was subsequently thinned down to three plants to a pot, may be still further thinned down to a single plant to a pot. Keep the plants growing steadily, but do not give any manure, as if good specimens are required sturdy short-jointed growth is necessary. Such subjects pick up wonderfully when they are given their final shift into 8-in. pots.—*A. S. G.*

VEGETABLE CALENDAR.

Watering and Mulching.—When we consider the large percentage of water well-grown vegetables contain, it becomes an important matter to keep them well supplied during very hot weather with the element that adds so much to their succulence and tenderness. During long spells of dry weather Nature generally tries to balance matters by giving heavier falls of dew, but how far the latter element permeates the soil is not accurately known. That its reviving influence is felt to some depth in well-worked soils is more than probable. However, it generally falls short of fully supplying the wants of gross feeding garden crops, and the deficiency must be made up by artificial application. When the heat of the day is declining, is the proper time for watering at this season, and all the labour possible should be concentrated on the work to get through as much as possible in a limited time. In all cases some readily soluble manurial matter, such as nitrate of soda, should be added to the water; and it should be understood and carried out in practice, that one good watering followed by a heavy mulching is far better than a dozen driblets applied to any crop.

Seakale.—The late rains have given a needed impetus to this vegetable, and no time must be lost in going over the young growths and carefully removing all but the strongest. With the whole force concentrated on one growth, a liberal dressing of salt may, with advantage, be applied; and this followed by a deep hoeing, a rapid development will follow, so necessary if fine crowns for forcing are expected.

Asparagus.—With the variety of choice vegetables increasing, the cutting of this crop should not be prolonged after this date, otherwise there will not be much time left to get a good second growth on the beds, and this is very essential, if they are expected to give a good yield for a succession of years. Where the beds have not been fed during the cutting of the crop, it will be necessary now to give a good dose of sewage or some other strong stimulant in a liquid form, and in sufficient quantity to get well down to the roots. If this is followed up with a dressing of salt and the beds covered with a light mulching of short manure, it will do much to keep the plants in vigorous growth for some time to come.

Broccoli.—The early and mid-season plants should be got into their final positions at an early date. Strong land that has had time to get firm and settled, is best for giving a sturdy solid growth, so necessary to enable the plants to stand the sudden changes of temperature during winter. Overcrowding must also be avoided if firm growth be expected.

Late Peas.—A good sowing of Ne Plus Ultra and other branching kinds should be made in positions not exposed to strong winds. It is very necessary that this crop should have the best land, and the closest attention in watering from the time the crop appears above ground until the end of the season. A liberal dressing of blood manure applied to the rows before sowing, will give an excellent start in the early stages of growth; and again in liquid form, when the pods are swelling (on this or any other crop now in that stage), will give a fine deep colour and also improve the quality of the Peas.

Endive, &c.—A sowing of the curled leaved may be made on a shaded border. Give a good watering after sowing and cover the bed with a few old mats or other material to aid in retaining the moisture in the bed. Succession sowings of Spinach, Lettuce, Radishes, and other small saladings should be made weekly or fortnightly according to the demand.—*J. R.*

The Orchid Growers' Calendar.

Out of Sight out of Mind.—I am afraid there are a great many plants ruined or killed outright annually by being put on one side after flowering, and almost allowed to take care of themselves. When in flower they are well tended, set off to the very best advantage, and admired by everyone that sees them, but as soon as the flowering period is over what happens? Why, they are put on one side, as stated above.

Here it is that the practical gardener comes in; his business is to take them in hand, and carefully look after their requirements, until the season comes round again for them to gladden the hearts of those that can and do appreciate a class of plants whose flowers are incomparable. To keep a collection of Orchids in condition there must not be anything left to chance for it is only by constant attention when out of bloom that any lasting success can be attained.

It has been a good Orchid season, with plenty of flowers everywhere, and of good quality, that is, highly coloured blooms to what they are sometimes.

East India House.—The present weather is most suitable to the heat loving plants making them feel quite at home; roots are freely produced at this time of the year so that every chance should be afforded them to take up as much moisture as they require by keeping the atmosphere well charged by shutting the house up early in the afternoon, and giving a good syringing amongst the pots. This treatment, with a slight dewing overhead on very bright days is what they like.

Cattleya House.—The early forms of C. gigas are just pushing up their flower spikes, and should be encouraged to develop good flowers by being copiously supplied with moisture at the roots without allowing any to lodge in the young growths. C. aurea, too, is making great progress and must receive similar attention.

Shutting up.—On bright days about three o'clock we take all the air off this and the warmer division, and after the necessary damping down the the blinds are pulled up, only shading the tender things from the inside such as cannot stand strong sunshine. In the evening the bottom ventilators are again opened and the air thus given is left on all night.

In the early morning the syringing process is gone over again, and about nine o'clock the blinds are let down if it is bright.

Odontoglossum citrosmum.—This is a good Orchid when well done, but is, I am afraid, not particularly popular on account of its being a bad traveller and without the lasting properties of some other kinds; yet a well grown specimen is a grand object. Grown suspended in pans or baskets from the roof of the Cattleya house it never fails with us to give a good account of itself. Peat and moss in equal parts with good drainage, plenty of water when growing, and a good rest after making the growths up is the proper treatment.—*C.*

"It's an ill wind"—says the old saw, but at least one Jerseyman would look at the matter in another light. This individual, on learning that the Potatos in Lincolnshire, Lancashire, and Cheshire, were all frosted, wrote a letter to a St. Helier paper headed "hurrah for the Jersey Potato-grower," and saying now God has blessed Jersey. God will help those who appreciate His doings.

HINTS FOR AMATEURS.

Ivy-leaved Pelargoniums.—At this season of the year more particularly are we reminded of the beauty and value of the Ivy-leaved Pelargoniums, for we see them in all sorts of places, and under all sorts of conditions, adverse and otherwise, and yet they generally manage to give a pretty good account of themselves. Do we want showy pot plants for the conservatory, then we go to the "Ivy-leaf," pot it up until it is in a good sized pot of about 8 ins. diameter, inside measurement, stake it well, feed it liberally, and there we are, plenty of bloom, and what is more a long and continuous flowering season. Again, the edges of the stages in the conservatory look bare and unsightly, and we cast about for a plant to enliven and beautify them. Our eyes travel over the various subjects available until they fall upon the "Ivy-leaf," and they rest upon it. The plants are taken, potted in rich soil in large 48's and 32's, and allowed to assume the subpendent habit that seems natural to them. Once more we congratulate ourselves upon the effect obtained, and upon the success of our experiment.

In the flower garden too, as well as under glass we find it, happy, contented, and striving its hardest to outvie all its neighbours in its prodigality of blooming. Vases, and window hoxes know it well, and love it hugely; indeed if it were possible to take notes of every window box in London it would be found that there are very few of them that it has not helped to adorn and beautify. As a town plant there are very few things to equal it. The white and yellow Marguerites and the Ivy-leaf Pelargonium could not possibly be done without as matters stand at the present. They are thus employed with such freedom that some people declare that they are tired of their everlasting presence and want something new, something a little different and more varied.

Yet one more method in which the "Ivy-leaf" may he made to render good service, and we will cease to dilate upon its merits, its possibilities, and its many and varied parts. A "Pelargonium wall," *i.e.*, a wall covered with Pelargoniums is a possession that is well within the reach of all those who have a wall covered by a glass case or a greenhouse, no matter what the shape. We recently saw such a wall in a large private establishment, and we were, as our readers would also have been had they seen it, enchanted The house in question was a late vinery, and one would certainly have been justified in thinking that the shade cast by the Vine leaves would have been too great for the welfare of the Pelargoniums on the wall behind. This was not so, however, for from top to bottom the foliage was good, and the flowers of great size and admirable colour. In such a situation the shade of the Vines naturally hecomes rather dense as the summer progresses, and the foliage of the Pelargoniums is apt to turn yellow, but this state of affairs does not last long. The plants soon pick up, and look as well at the end of the year as if they had had no trying experiences to pass through.

The winter training is a most important point, for a great deal more growth is made than can possibly be found room for. A good thinning out is required in order to allow room for the following year's growth. This pruning is analogous to the cutting back that old bush plants receive, but is scarcely so thorough, *i.e.*, the whole of the young wood is not cut away but a little is left to carry on the work of the plants. Weak spindly growths are cut clean out, and others are shortened, whilst others are 'eft in at full length, according to their strength, length, and position. After pruning comes the tying in. A start should be made at the base of the wall and some of the lowest shoots tied down. By thus working upwards from the base, the whole of the space is covered evenly with the growths, and a margin is left at the top of the wall for expansion during the subsequent season. Too close tying should he avoided if possible, since the plants present a much better appearance when their growths are allowed to hang gracefully down than they do when they are stiffly strained to wires.

Bearing in mind then the value of the flowers for cut purposes as well as decorative plants, it is well to have a good selection This it is quite possible to do at a reasonable cost, and if a careful choice is made, it is wonderful to see how many delicate shades of colour can be obtained. The following douhle and semi-double forms are all well worthy of attention, and can all be depended upon. Short descriptions are appended to each for the guidance of those who are not acquainted with the varieties.

Madame Crousse.—This is one of the oldest sorts but still a good one. It is of vigorous habit, a free bloomer, and the blooms are semi-double, and of a beautiful rose hue veined maroon.

Innocence is pure white; a charming form.

Ryecroft Surprise is the result of a cross between Madame Thibaut and Souvenir de Charles Turner. The truss of flower is very large, and the individual pips are of more than ordinary size; indeed, one of the latter neatly made up with Fern is enough for a gentleman's buttonhole. The colour is a bright and attractive shade of salmon pink.

Souvenir de Charles Turner which has been mentioned above is a desirable form. The flowers are deep rose-pink, feathered with maroon.

Isadore Feral is a huge double flower, exhibiting an attractive shade of rose.

Mrs. W. E. Barling a new variety of this year's introduction, is a deep rich magenta, and the very best of its class of colour. For those who like the deeper hued flowers we strongly recommend this.

The Blush appropriately enough, bears blush flowers. It is a sport from Isadore Feral and was introduced to commerce last year.

Galilee may be mentioned as one of the finest of all. For pot culture it has nothing to beat it. It is naturally of dwarf and compact habit, and a marvellously free hloomer. If we were restricted to one variety only this is certainly the one upon which our choice would fall. The colour is bright rose, and both pips and trusses are very fine.

Beauty of Castle Hill is soft pink with very large flowers. This also is good for pot work and has a dwarf and stocky habit, although it is scarcely up to the mark of Galilee.

La France, mauve lilac, of dwarf habit, must complete our list, although there are numbers of other good varieties that would seem to claim attention. Those mentioned, however, if grown well, will give you all that can be desired.

Linum narbonense.—From the middle of May, or even earlier in specially favoured localities up till the end of July the beautiful bright blue flowers of this handsome perennial Flax are expanded, and rival the summer sky in brightness. A bed of it is a great success and is always admired by those who can appreciate telling masses of colour whether caerulean or otherwise. The white eye which each flower has still further enhances its beauty. The plant is erect, with rather glaucous leaves, and grows to a height of about 18 in. under ordinary circumstances. Sometimes it will be taller than this, whilst in dry spring-times, like the present one, it will not exceed a foot. After having exhausted its first flush of bloom it may be induced to start afresh by cutting the old flowering stems off close down to the base. Any ordinary well drained soil will suit it well, and it is by no means out of place in nooks in the rockery. This Linum is a native of Europe, and has been cultivated in this country since the year 1759.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Seedling Carnations.—Three weeks ago I sowed in one box three sorts of Carnations—Uriah Pike, Germania, and mixed. I have taken care that the young plants have not been "drawn," while they have been properly shaded from bright sun. Germania and Uriah Pike have done fairly well so far, but the mixed lot are nearly all dead. The stalks seem to shrivel up and fall over. What is the cause of this. They certainly have the appearance of having been prematurely exposed to bright sunlight, but that is not the case. They have been kept moist, too.—*Jas. Barthewan.*

The circumstances seem peculiar! The fact of the Uriah Pike and Germania (the latter a weak grower too) having escaped, while the "mixed" ones have died, would seem to point to a special disease, probably, fungoid, to the attack of which the "mixed" plants are liable. You do not say whether the seedlings have been potted off yet. If not it would be a good plan to do this at once. Do not over-water. Vigorous Carnations will take a lot of water, but do not like it stagnant about their roots. Perhaps the seed box was not properly drained. If you will forward specimens of the diseased plants it would give us an opportunity of speaking with greater certainty, as the facts you have given are not sufficient to serve as a guide.

Hydrangeas.—Two Hydrangeas 1½ ft. high, and in 6-in. pots have become infested with green fly, and the leaves are coated over with a gummy substance, and are beginning to fall off. One of the plants is in bloom. Both of the plants appear to have been "fed" before they came into my possession, but since I have had them I have given them nothing but pure water. How should they be treated now? would it do any good to shift them into larger pots? 6-in. pots seem too small for plants of the size.—*Jas. Barthewan.*

The first thing to do is to clean the plants of the green fly, and of the gummy excretions of the insects. Sponge with a weak solution of Tobacco water, Fir Tree Oil, or any other good insecticide. The turning yellow and falling off of the leaves are due to two causes; first, the gummy coating which stops up the pores and prevents the leaves from properly discharging their functions; secondly, the lack of nutriment. Some first-class heads of flower can be obtained from plants in 6-in. pots, hnt feeding must be liberal. Such Hydrangeas will take large quantities of manure water. Try liquid cow manure with a little soot mixed. An occasional sprinkling with Clay's Fertilizer, or a dose of Guano is also good. As the plants are coming into flower it is too late to think of potting them on now. The old plants may be shifted on after flowering is over if desired, but we prefer the plan of striking cuttings annually in August.

Vines.—I have a young Vine, the young growth of which is very much infested with small transparent globe-like things. Will you kindly tell me what they are and how to get rid of them?—*Amateur.*

The globules are excretions made by the Vines themselves, and are thus perfectly harmless. You will notice them more particularly on old Vines. The sample shoot enclosed also hore traces of green fly. You must keep a bright look out for this, and dust with Tobacco powder as soon as the slightest traces are discovered. If the fly is very prevalent a light fumigation with XLAll may be necessary, but great care must then be taken not to make the application too heavy.

Grapes Scalding.—I enclose some berries of Muscat of Alexandria Grape, which are disfigured by spots. The greater part of the bunches have a few of these spotted berries. What is the cause? and will these berries ripen?—*J. G. B.*

The berries are badly scalded, and may as well be cut away at once as they will not ripen. Scalding is cause by imperfect ventilation in the mornings when the berries and leaves are covered with moisture, which has been deposited on them during the night owing to the fall in the temperature. Scalding of the berries is thus caused in the same way as scorching of the leaves and the preventive measures, for there is no cure, are the same, viz., to keep the night temperature from falling too low, and to give air freely and early in the morning. Muscat of Alexandria is one of the varieties most liable to scalding.

Tree Carnations.—*McD.*—The Carnations will do very well out-of-doors during the summer months and up to the end of September; indeed, they do better out-of-doors now than they do under glass.

Tomatos.—Will Tomatos do in the open without the support of a wall? I have a plot of ground which gets the full benefit of the sun, but there is no wall.—*T. Winton.*

You may plant the Tomatos pretty closely, giving a stout stake to each. Take the plants up with a single stem, and pinch out all laterals. The top may be taken out when the plants have reached a height of four or five feet. Four feet will be quite high enough if they are bearing a decent crop of fruit. If the season proves a fairly bright and sunny one you ought to secure a good lot of Tomatos, but

it all depends upon the size of the plants now as to the time that the fruit is fit to gather.

Figs.—*M. R.*—The Fig leaves you sent us are badly attacked with red spider. If the whole of the tree is as bad as the sample it is in a bad way. Make up a solution of nicotine soap and syringe, afterwards giving repeated washings with clear water. Keep this up until the tree is clean again. Some of the leaves will be likely to drop.

Retarding Lilies.—I have a number of bulbs of Lilium lancifolium, and L. l. roseum in eight inch pots. I should like to keep some of them back from flowering for as long as possible. The plants are now about eighteen inches high. Please tell me how I am to do this.—*C., Tonbridge.*

Find a corner where two walls, respectively looking north and east, meet. Stand the plants there, and as they will be shaded from all the sun, except that of very early morning they will move very slowly, and may be had in bloom fairly late in the autumn. By the way we may mention that the specific name of "lancifolium" is incorrect; it should be "speciosum."

ROYAL SEED FIRM'S DIAMOND JUBILEE.

As a supplement to our remarks on p. 645, we are pleased to be in the position to present our readers with a portrait of three of the members of the firm of Messrs. Sutton & Sons, the Royal Seed Establishment, Reading. By reference to our notice in last week's issue, it will be seen that the firm celebrated the entering of Mr. Martin Hubert Foquett Sutton into partnership with Messrs. Sutton & Sons, on the 1st inst., and at the same time its own Diamond Jubilee, by giving a dinner to the whole of the employees with their wives, numbering in all about 500.

Mr. Martin Hope Sutton (see accompanying photograph), the founder of the firm, was born in 1815, and commenced business in a garden on the very spot where their extensive premises of shops, seed rooms, and warehouses now stand. He took possession of the garden in question sixty years ago, and to-day the firm has the most extensive retail seed business in the world. This includes both agricultural and horticultural seeds.

Mr. Martin John Sutton, F.L.S., F.R.H.S., born in 1850, and the son of Mr. Martin Hope Sutton, is now the senior partner of the firm, and devotes attention chiefly to the agricultural department. He joined the firm thirty-one years ago, but was only taken into partnership about twenty-six years ago. Ever since he joined the firm he has consistently worked hard in its interests and has been instrumental in making the business more and more widely known all over the world.

Mr. Martin Hubert Foquett Sutton, the eldest son of Mr. Martin John Sutton, was born in 1875. He graduated some years ago at Christ's Church, Oxford, and since then has been travelling in foreign lands, returning to Reading only quite recently. During the evening of the dinner his health was proposed in fitting terms by his grandfather now in his eighty-third year. A glance at the portrait will show three generations of the family—a rare occurrence in the annals of a firm.

Mr. Martin Hope Sutton.
Mr. Martin John Sutton. Mr. Martin Hubert Foquett Sutton.

MAJOR JOICEY'S ORCHIDS.

In order to follow up our last week's notes, we come now to speak of the glasshouses and kitchen garden, but more particularly the Orchids which we went to see in the establishment of Major Joicey, Sunningdale Park, Sunningdale, Berks, pleasantly situated amongst its tall ancestral trees. The exhibits made at the Drill Hall and the Temple Show of the Royal Horticultural Society are usually moderate in size, but as often contain something that is rare, uncommon, or particularly difficult to grow. Mr. F. J. Thorne, the gardener, takes much delight in surmounting these difficulties, yet seems to regard them as easy of accomplishment.

Mexican House.

This structure has been exceedingly gay for some weeks past, and at the time of our visit contained a rich and varied assortment of Orchids, amongst which the Miltonias, chiefly M. vexillaria, were most conspicuous on account of the number of plants, the quantity of flowers, and their simple, though charmingly effective arrangement. Some of the larger specimens in 8 in. pots carried thirty to thirty-nine spikes, and each pseudobulb supported from one to five. The flowers were very variable in colour. Recently imported pieces have made vigorous growth in 60-size pots or small pans, and are also flowering freely. One variety had very dark petals. Old and young were mixed together, but with sufficient space between them to show off the gracefully arching spikes to advantage. They were stood on the benches to the right of the entrance. Suspended from the roof right in front of the door was a magnificent piece of the rare Pescatorea Lehmanni, carrying three pendent spikes of its orange flowers, one of which carried 45 blooms. A plant of the same species was shown at the Drill Hall recently, bearing 75 flowers on a spike. The blossoms of some Orchids are fugitive, but those of this Pescatorea last for 21 to 28 days. We could not help noticing a grand variety of Cypripedium lawrenceanum, with a richly coloured dorsal sepal and a very dark lip. The huge flowers were born on seven scapes, each 2 ft. high or over.

Here again we noted the two splendidly grown pieces of Anguloa Clowesii, which made their appearance at the Temple Show. One of the pieces carried 22 flowers, and three of the scapes carried twin flowers each. The pretty, white and pink-spotted A. Watsoni was also flowering. The panicles of brown and yellow flowers of Oncidium sphacelatum were 4 ft. long. The contrast between this and O. uniflorum was great, the latter being only a few inches high and bearing one or two flowers on a scape. The Laelias were in season, including the rich scarlet L. cinnabarina. A fine variety of L. purpurata had white flowers, with a broad blue-purple band across the lip. The rare Epidendrum atropurpureum Randii had buff sepals and petals with a rose blotch upon it. Seasonable Dendrobiums in bloom included B. chrysotoxum, D. c.suavissimum, D. tortile, a fine form of D. Hillebrandii, and D. ochraceum (cambridgeanum).

In the next division of the same building numerous subjects requiring a higher temperature were flowering. Cattleyas were conspicuous on the sunny side of the house, and included C. Mossiae, C. Mendelii, and the pretty C. walkeriaua. Others were Laelia purpurata, the floriferous Epidendrum phymatochilum and Thunia marshalliana, a large piece of the latter showing nine flower spikes in various stages of development, while several younger stems will probably show for flower presently. On the shady side of this same division, Cypripediums were the dominant feature. The collection is pretty extensive, but amongst those in bloom we noted C. lawrenceanum, C. niveum, C. Exul, C. hirsutissimum, C. harrisianum, C. superciliare, C. Hookerae, and C. Curtisii with large and massive flowers on very dwarf stems. C. rothschildianum carried three fine flowers on a scape. Very fine also was C. caudatum Wallisii, and the type when in bloom produces petals over 2 ft. in length.

A third division of this well-built, span-roofed structure contained Orchids requiring the temperature of the East Indian houses. There was a good sized batch of Vanda teres and V. hookeriana, some of which were in bloom. Some well-grown and tall plants of Dendrobium moschatum, with their curious pouch-like lip, were flowering freely. Cypripedium Lowii, C. Parishi and C. Stonei, each represented their kind, the latter carrying three to four blooms on a scape.

Cool Odontoglossum House.

Here we noted a number of useful things including many fine varieties of the useful O. crispum, with heavily blotched round flowers. Very fine also were O. polyxanthum, and O. cordatum, carrying unusually large spikes. O. ramosissimum supported three branching scapes from one pseudobulb. Mr. Thorne also does Epidendrum vitellinum majus very well,

the plants carrying large flowers on scapes 15 in. to 18 in. high. The beautiful summer-flowering Oncidium wentworthianum was rapidly developing six long panicles of bloom. A good form of the showy O. gardnerianum was also in the collection. Here also were the pretty Epidendrum Wallisii, Masdevallia harryana, M. ignea and M. bella. Other divisions contained many subjects grown by themselves or located in company with other subjects which they have been ousting for some years past. Oncidium decorum carries long panicles of bloom. Laelia tenebrosa has almost outsed the original L. grandis from collections, but both are grown here. Mr. Thorne is unusually successful in cultivating the difficult Dendrobium atroviolaceum, which he has several times brought before the public. In another house close by is a grand piece of Cyrtopodium punctatum in a No. 1 size-pot. Suspended from the roof of the Caladium house, are fine pieces of the difficult Epidendrum (Diacrium) bicornutum in baskets. These were recently brought before the public in grand condition. Broughtonia sanguinea also from the West Indies was flowering well, carrying from 5 to 13 spikes of bloom on a piece.

Other Plant Houses.

The centre of one stove is filled with Gardenias, planted out, and though they are less than two years old, they are of great size, affording a long-continued succession of bloom. When at their best they afford about six to seven dozen blooms of a morning. Ixoras are represented by such grand types as I. macrothyrsa (Duffii), I. Williamsii, I. Westii, &c. Seedlings of Anthurium scherzerianum are flowering in considerable quantity and are of great decorative value. In another house we noted Carex brunnea variegata, Asparagus, Pandanus Veitchi and Saintpaulia ionantha, that pretty Gesnerad, in batches.

A fine collection of Caladiums, including the best and finest of last year's and other recent introductions, occupies a low span-roofed house. This will be recognised by the mention of such names as Lord Derby, Duke of York, Duchess of York, Her Majesty, Reine de Danemark, Princess Royal, Leonard Bause, and the useful old C. argyrites. The plants are yet small but beautifully coloured. Another bench was filled with Crotons in great variety and of a useful decorative size. The creamy and red-edged Ananassa sativa variegata was beautifully and highly coloured.

A large part of the Strawberry staging is now occupied with Gloxinias, Streptocarpus and Celosia cristata in bloom. Numerous heated pits are occupied with 300 to 400 Amaryllis, Acalyphas and Cyclamens. The latter were sown in October last, and have been put into 48 and 32-sized pots, for autumn flowering. A cool lean-to house contains Amaryllis, Cannas, Hydrangea Dr. Hogg, Malmaison, and other Carnations. Very beautiful are Mrs. Joicey, large bright scarlet, and M. Robinson Suisse, pink. Old Clove and Uriah Pike in pots are also favourites.

Fruit Houses.

Fruit is well represented as well as Orchids and other flowers. Cutting was commenced in the early vinery on May 26th. The Vines are Black Hamburgh, about eleven years old, and the house was closed for forcing on December 1st. Though fruited every year, many of the bunches are of handsome size. We next passed through a house of Royal George Peaches and Elruge Nectarines; after which we noted that the early Peach house contained Early Dagmar, about ripe, and Early Alfred, bearing an enormous crop. The Grapes of Mrs. Pince, Black Hamburgh, and Muscat of Alexandria were about half grown in another house. A vinery with a curvilinear front contains Lady Downes, and Gros Colman for late work. The Vines were only planted last year. A span-roofed vinery contains Muscats and Lady Downes, the berries of which were recently thinned. Here is a fine batch of Celosia pyramidalis in bloom. A Peach house in which the fruits will be ripe next month contains Grosse Mignonne, Royal George and Early Rivers Peaches, and Humblot, Elruge and Early Hâtive Nectarines. A curiosity in its way yet useful is a large old Vine of Black Hamburgh, which covers the whole of the roof of a low span-roofed vinery, recently rebuilt. The Strawberries forced here are La Grosse Sucré, Royal Sovereign, Sir Joseph Paxton and President, named in the order of ripening. Mr. Thorne intends to grow 1,000 plants of Royal Sovereign for forcing next year. A fine lot of Sir Joseph Paxton was ripening in another house. Melons are grown in batches in numerous frames. A Peach case 104 ft. long has recently been built and though the trees are trained to galvanised wires no injury results after the first year.

The kitchen garden contains an abundance of bush fruit. Gooseberries on north aspect walls will give a late supply. Plums and Cherries dropped their fruits owing to frost. Apricots on walls as well as Morello and May Duke Cherries are bearing abundantly. Pears are good; but the Apple crop is doubtful owing to the severe late frosts. Spring Cabbages were abundant and good, cutting having begun early. The borders were gay with bearded Irises, Spanish Irises, in a most vigorous condition, and Aquilegias. In the frame ground 500 to 600 Chrysanthemums, cut down to make them dwarf for conservatory work, are making satisfactory progress. Altogether this is a many-sided garden, but everything is kept clean and in good order, reflecting great credit upon Mr. Thorne.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

The interesting statistics as showing the progress made by this deserving charity since 1851, when Her Majesty the Queen became the patroness, and the late Prince Consort the patron of the institution, given by Mr. Harry J. Veitch, the treasurer, in his cheery speech at the Anniversary Festival on the 26th ult., illustrated in a remarkable manner not only how horticulture, but some of the various organisations it has incidentally called into existence have progressed during the past forty-six years. In 1851, the Anniversary Festival took place at the London Coffee House, Joseph Paxton, Esq. presiding; and among those present were such literary luminaries of the time as Charles Dickens, Douglas Jerrold, and Mark Lemon. The subscription list at the dinner amounted to nearly £300. This fact afforded Mr. Veitch material upon which to found an address dealing with certain statistics which were eloquent as demonstrating the progress made during the past half century, although it does appear to those who look closely into such matters that the gardening profession as a body do not support the Gardeners' Royal Benevolent Institution to an extent which is desired.

The necessarily brief report of the Festival given in our issue of the 5th inst., owing to the exigencies of space caused by the great demand made by the report of the Temple Show, scarcely sufficed to bring out in their fullest significance the figures given by Mr. Veitch. From them we learned that in 1851 when the charity had been in existence thirteen years, there were thirty-five pensioners; in 1897 there are 161. In the former year there were fifteen candidates for two vacancies; and the comparative paucity of subscribers at that period is shown from the fact that the candidate highest on the poll secured only 480 votes. In 1897 there were forty-nine candidates to fill twenty vacancies and the successful one highest on the poll secured 3,759 votes—about eight times as many as in 1851.

The comparison in the amount paid for pensions is also suggestive; as, in 1851, the sum of £512 was so expended; in 1897, about £3,000, exclusive of gratuities granted by the committee under special circumstances. In 1851, there was an income of £748 from annual subscriptions and donations; in 1897, it is very nearly five times as much, viz., £3,835. In 1851, the invested funds amounted to £2,250; in 1897, the sum is £26,700, and being, as Mr. Veitch observed, well invested, is actually worth nearly £30,000. Since the formation of the Institution there has been distributed in pensions and gratuities the sum of £71,000, employed be it remembered in cheering the closing days of many an old, deserving, worn-out gardener and his wife or widow, who might otherwise have been dependent upon parochial relief. In 1885 the pensions given to men were raised from £16 to £20 per annum, and in the case of women from £12 to £16. What such an increase means is best known to those who have had to struggle under the disadvantages of a limited income, and can comprehend the full value of every additional shilling made to it.

All this is good, very good, it speaks volumes for the liberality of those connected with and interested in gardening; but is it enough? There are now twenty-nine candidates waiting for election, and to these additions will certainly be made previous to the next ballot. It is probable that of these twenty-nine candidates there are many in urgent need of the assistance rendered by the Institution, hoping that the helping hand may be held out to them in the hour of their great need. One hundred additional subscribers of one guinea annually would provide pensions for five of these expectant ones, and give to their latter days blessed freedom from fear of want. It would be gratifying to know that at a time when a multitude of applications are being made for means to fittingly celebrate an event unique in English history, the claims of old and indigent gardeners are not overlooked. There are numbers in the ranks of the gardening profession who have not yet written themselves as lovers of their needy brethren by subscribing to this Institution. The thought that the time may come when accident or unforseen misfortune may make an application for relief necessary, should animate every gardener, and lead him to consider whether, on the lowest ground of all—that of self-interest—it is expedient he should become a subscriber. When this mental condition is reached, active support becomes highly probable.

THE FLOWER GARDENS OF VICTORIA (AUSTRALIA).

(*Concluded from p. 651.*)

About the shrubs and trees I cannot say much, but some are such well-known ones that I can remember them. Laurustinus is very common, and grows and blossoms splendidly. Rhododendrons and Pittosporums, the latter bearing blooms of two shades of colour, a cream and a purple, grow into huge trees and hedges, and in springtime the night air is really heavy with their perfume. They are the commonest shrubs found in our gardens. Abutilons behave splendidly in our climate, especially in the cooler districts. Solanums grow to immense size, and their brilliant fruit makes a lovely contrast to their bright green leaves. The Indian Shot or Canna is a strong and good grower, as are Hakeas, Grevilleas, Flowering Gums, one specially fine being Eucalyptus ficifolia, bearing crowds of blooms. Magnolias bloom in great profusion, while no garden is deemed complete without its Daphne plant. Habrothamnus and Salvia grow into large trees, and are splendid flower bearers. The Bottlebrush or Callistemon has beautiful singular flowers of scarlet, crimson, and purple. The Sterculia acerifolia bears rich masses of vermillion blossoms, like bunches of coral. Melaleucas or Tea Tree, Lophostemons, and Currijongs are all splendid showy shrubs, and bloom splendidly.

In a country necessitating shade, verandahs are to be found on every house, and naturally everyone grows some sort of a creeper on the posts or on wire stretched between them, or on lattices or porches, getting thereby ornament and usefulness in the shape of shade and privacy. Thus one finds Masdevallias, Bignonias, Convolvuli, Jasmine, Honeysuckle, Clematis, Periwinkle, Hoyea, Wistaria, Tecomas, Grevilleas, Banksia, and all sorts of climbing Roses. Passion Flowers of the ordinary crimson and edible varities, the latter a prolific fruit bearer if planted in the right aspect, are common. Virginia Creeper of two sorts is a favourite on every brick-walled or cement-covered house.

I must now mention one or two plants which are indigenous to Australia. One is Sturt's lovely Desert Pea, with its brilliant crimson and black flowers. In a hot dry soil this plant grows to perfection, and one can well imagine the surprise and delight felt by the explorer whose name it bears on his first coming on to a vast plain covered for acres with this glory. Another plant is the Boronia. It has the most subtle perfume, and is a native of West Australia, where there are plains covered with it. When in bloom the perfume-laden breezes blowing from over these plains are said to be simply intoxicating.

Now I must stop. My object has been to try and give you an idea what we can grow in and around Melbourne and throughout the colonies of Victoria, and in much of N.S.W., the two S.-Eastern colonies, almost a home for any of the flowers to be found in England, as well as numerous others from other parts of the world, with of course those which are indigenous to the colonies of Australasia. There are

many with whose names I am not familiar, and which would take an abler pen than mine to treat of in decent order.—*Read by* Dr. Ernest D'Ombrain, *of Melbourne, at a recent meeting of the Horticultural Club.*

THE "LODDON LILY."

What is the Loddon Lily? Doubtless the question has been often asked locally; so, with intent to solve the mystery, I made a special visit to the Loddon, the other day, at the invitation of Mr. Geo. Kingcombe, a friend of mine, whose love for Nature generally, and for boating and camping out particularly, has several times redounded to my advantage. Well, then, after a short search among the osier beds and eyots on the river, just below Shiplake Lock, where the Loddon comes down to the Thames, we soon succeeded in discovering the object of our quest—the so-called "Loddon Lily," which turned out to be none other than the Summer Snowflake (Leucoium aestivum).

Local names, however interesting they may be, are rarely accurate, as in this case; for the plant is not confined to the Loddon or the Thames; neither does it accord with the technical view of what a Lily is. But notwithstanding all this "a local habitation and a name" are not to be despised, for the plant is much sought after in the district for the sake of its pure white, bell-shaped flowers, which are produced in drooping umbels of from four to eight in number. On examination it will be found that the tip of each segment of the perianth is spotted with green both inside and out, and that the flowers themselves very much resemble the Snowdrop (Galanthus) to which it is allied. The plant, therefore, is not a Lily, but an Amaryllis. The flowers, moreover, have a faint perfume of Violets, hence its generic name which is derived from *leukos* white, and *ion*, a Violet, so that it might be called the "White-water Violet" with as much propriety as the Loddon Lily, although it will, seemingly, grow as well out of the water as in it. Still, I think, notwithstanding its inaccuracy, I prefer its local name, for it is certainly an elegant plant, and the term "Lily" conveys to the mind a sense of stately beauty, which the suggested one does not. Moreover, on second thoughts, the suggested name will not do, as it is already appropriated by Hottonia palustris—also a local plant—which, in common parlance, is known as the "Water Violet"; and although its flowers are lilac-coloured when young and fresh, they pale off ultimately a "silvery-white." Anyhow, the Summer Snowflake is a fine subject and grows from 1 ft. to 2 ft. high, according to soil and situation.

Its leaves are long and linear, and in botanical as well as in the language of boatmen, are said to be "keeled." The Summer Snowflake is comparatively rare in a wild state, although in its local habitats it may abound, as I know it does in some parts of the Loddon, at Shiplake Lock, at Wargrave, and on the river-front of Park Place, Henley-on-Thames; but whether it is native to the latter place, or a floral acquisition, I am unaware.—*C. B. G., Acton, W.*

CLEMATIS MONTANA.

In a short note upon this Clematis, appearing on p. 650 of a recent issue, *C.B.G.* calls attention to the way in which it adds to the natural attractions of the pretty village of Wargrave. Truth to tell the plant thrives amazingly in the locality, and has been utilised with admirable taste at Park Place, the grounds of which slope down to the river, and in close proximity to the village in question.

I have seen Clematis montana growing in a number of localities, but never with the utter abandon that it seems to display at Park Place. In the garden the men's bothies and the gardener's office are literally wreathed with it, and the glint of its myriad flowers arrest and fascinate the eye at that period of the year when the joyous springtime is fast merging into the glory of summer-tide. In the large square sunk tank immediately in front of Mr. Stanton's house and flanked on either side by ranges of glass houses another glorious picture presents itself. The environs of the tank are clasped in a loving embrace by the long sprays of the Clematis, which droop over until they nearly touch the cool water below where gold fish disport themselves amongst water Lilies and Horse-tails. Not content even with this the growths have twined over and amongst huge clumps of the Evergreen Thorn (Crataegus Pyracantha) as if the latter were only placed there to give them the support they need. Although accidental the effect is striking, for the lively green of the young leaves of the Crataegus which has now thrown off its sombre winter hue is starred as with many stars, and the bright sun of early June smiles lovingly over all.

C. B. G. makes the statement that it is not quite hardy, although I fail to see from whence he draws his conclusions. Certainly with regard to Wargrave, Park Place, and district there can be no question of its absolute hardiness. The winters of 1890-91 and 1894-5 were severe enough to cut down many things that are ordinarily regarded as being hardy, but Clematis montana suffered very little indeed, if at all. Possibly in the north of England the winters may be too long for it, but perhaps *C. B. G.* can tell us more about that.—*Viator.*

NOTICES OF BOOKS.

How to grow Begonias; By G. A. Farini, F.R.H.S., Author of "Through the Kalahari Desert," &c., Illustrated. Price 2s. London: Sampson Low, Marston & Company, Limited, St. Dunstan's House, Fetter Lane, Fleet Street, E.C.

This is meant as a hand-book for amateurs, and succeeds best when dealing with cultivation alone. It runs to 135 pages, but the latter part of the book from p. 80 is occupied with lists of tuberous Begonias raised by the author and various well-known trade growers. There is no general index to the book, though a short list of contents gives the headings of the chapters. One article deals with the "Origin of the present Begonia," but it furnishes nothing new, and the author has been rather careless in the spelling of names. Three out of six of the original species from which the modern tuberous race has descended, have been mis-spelt. For instance we find such a statement as "In the same year Rosa Flora was brought from Brazil." We take it that the author means Begonia rosaeflora. In speaking of the diseases to which the Begonia is subject, the author says, "The worst is the fungus cladespora—the same that causes the potato rot." All this is new to us including the fungus.

The amateur will find the practical cultural directions most suited to his requirements, especially when he is undertaking the culture of this showy class of plants for the first time. The seeds are very minute and the seedlings equally so when they first make their appearance, and require careful nursing into life and vigour. The author gives details of the various methods and contrivances he employs in bringing the plants from their tender early stages, till fit to plant in the open ground, and how the latter operation should be performed. We felt most interest in the author's numerous experiments to obtain a race of scented Begonias by hybridising B. Baumanii with varieties of the tuberous race. He has obtained numerous single varieties more or less after the type of B. Baumanii itself that are scented; but he has been less successful with doubles possessing this quality. He is confident, however, that he will yet succeed in getting scented varieties of all colours with double flowers from the doubles now in his possession crossed with the typical B. Baumanii. We hope he will.

Queensland Past and Present. An Epitome of its Resources and Development. By Thornhill Weedon, Fellow of the Royal Statistical Society, London; Compiler of General Statistics. First issue. Brisbane: By Authority: Edmund Gregory, Government Printer, William Street. 1896.

Hitherto the Statistical Register, a voluminous work has done duty in setting forth the resources of this important colony of the British Empire; but it fails to satisfy the growing need of an epitome or abridgement of the larger work so as to furnish the desired information in a concise form, and handy for reference by all interested in the same.

The book runs to 240 pages, including a good index, and deals with such matters as geography, history, constitution and government, population and vital statistics, social and intellectual, law and defence, intercommunication, production, trade and commerce, crown lands, finance, accumulation, &c. Though but a small portion of the island-continent, Queensland extends for 1,300 miles north and south, and 900 miles east and west, and includes within this vast territory great variations of soil and climate, and supporting a vegetation characteristic of both temperate and torrid zones.

The agricultural products of Queensland are wheat, maize, oats, barley, rye, rice, potatos, sugar, cotton, arrowroot, tobacco, coffee, &c. All tropical fruits can be grown in the colony as well as most European fruits. Grapes are extensively cultivated for wine-making as well as for table use. The acreage under vines has increased slightly during the years from 1891 to 1895. The total weight of produce fluctuates somewhat from year to year, and the largest acreage of vineyards does not always give the heaviest return. This would be determined by the character of the season, as in this country. Thus 1,667 acres in 1894 gave 4,572,556 lbs. of grapes; but in the following year 1,782 acres of bearing Vines only gave 4,254,795 lbs. of grapes. Bananas and Pineapples are also grown, the former being next in importance to the Grape. They are largely cultivated in the Northern seaboard districts, from whence they are shipped to the southern colonies. These arrangements are the reverse of what would prevail in Europe. In Queensland the Bananas are grown in the tropical North and shipped to the relatively cooler South.

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

Oncidiums.—This is a numerous family, many of them of surpassing beauty and usefulness as cut flowers. I have a great partiality for O.macranthum and O. tigrinum and would much rather someone else decided which of the two are the best. There is one thing in favour of O. tigrinum that should not be lost sight of, and that is it comes into flower during the autumn months, when there are not too many flowers about; and for this reason I shall give it the preference over its great rival O. macranthum.

Being a cool house Orchid, it should be accommodated with a position at the warmest end and near the glass of the Odontoglossum house. The fact of its being a native of Mexico points to a course of rather warmer treatment as being the most correct; but we have been so successful in growing and flowering this species under cool treatment now for several years without their in the least losing vigour, that we can with confidence recommend its adoption.

The variety O. t. unguiculatum is not to be compared to the true O. tigrinum as it is altogether an inferior variety. It is easily recognisable in an imported state by its tall, large, flat pseudobulbs, as compared with those of the best form, which are short and round in form and generally darker in colour. The treatment is very simple, so that amateurs may have no fear of doing it well if the following mode of procedure is adopted:

The present time is the season to do the repotting—as a matter of fact ours will be potted next week. The compost best suited to their requirements consists of peat and moss in equal parts, added to which some finely powdered crocks are useful. Pot rather firmly, and avoid over-large pots, as too much compost about the roots is a mistake, and for that reason, too, the drainage must be ample.

Watering.—This must be done carefully until the growths are well up, and the spikes—which come up early—are in sight. Then they must have liberal treatment, as regards moisture, right up to the time that the flowers begin to expand, when the plants should be gradually allowed to become dry. This will enable the bulbs to ripen up well, and to pass through the winter months successfully. There is no Oncidium that takes such a long season of rest—from December to May ours get—with just enough water to keep them from shrivelling. We attribute our success more to this systematic resting than to any other cause.

Insects.—Grown cool the plants are singularly free at all times from white scale which sometimes attacks this species when grown in a higher temperature; and the only trouble with us is to keep the slugs from eating the spikes, which to them no doubt is like Asparagus to us.—*C.*

Phlox is taken direct from Greek *phlox*, a flame, many of the species of the genus having red, purple or crimson flowers.

GARDENING MISCELLANY.

DIANTHUS CALIZONUS.

THIS charming dwarf Pink has much the same habit as D. alpinus, than which it is larger in most of its parts. The stems bear a single flower and seldom, if ever, rise above 5 in. in height, though 3 in. is more nearly the average. The blade of the petal is almost triangular in outline, but rounded and dentate at the outer end, so that the five of them meet and form a circle or flat disc of a beautiful rose colour. Around the centre is a zone of deeper rosy-purple spots, giving rise in fact to the specific name which means beautiful zone. Young plants may be obtained by rooting cuttings under a handlight or bell glass during the summer months. It has been flowering for some time past on the rockery at Kew and is well adapted for this purpose.

PETUNIA MRS. JOHN E. JEFFERIES.

A CARNATION-FLOWERED double white Petunia is a very suitable epithet to apply to this variety which appeared in fine form in the collection of new plants shown by Messrs. F. Sander & Co, St. Albans, at the recent Temple Show. The variety originated in the Botanic Gardens, Oxford, some years ago and is named after the wife of Mr. John E. Jefferies of that city. It is a new departure from the stereotyped forms of double Petunia with which we have for long been familiar. Its neat compact habit of growth, multitude of branching stems and profusion of symmetrically formed white flowers, make it a welcome acquisition to those who can admire beautiful flowers, even if they are only moderate in size. Big blooms are too much boomed at the present day both by judges at shows, and the general public who ought by this time to know better. When the public comes to know it, however, it will cause no surprise should it speedily become popular, for if used for conservatory decoration it furnishes a profusion of useful white flowers right away into the winter months, when the large flowers would be more liable to succumb to the damp atmosphere of that season. Anyhow, it is one of the easiest to grow and bloom profusely.

BROCCOLI CHAMPION.

THIS is an old established favourite, but still one of the best for early summer use. It carries a large white solid head and is altogether a superior variety. I have cut heads this year measuring 18 in. across. It is one of the finest Broccoli grown for flavour, and a good companion for Carters' Universal, turning in a short time before it.—*T. Cockerill, Wirksworth.*

ORCHIS LATIFOLIA.

IN its widest and most comprehensive or extreme forms this species extends over Britain, part of continental Europe, and Africa to the Island of Madeira. The form found on the latter island has the largest spikes and flowers, but the latter are relatively fewer than in British forms of the species. The flowers of the Madeira form are rosy-purple, and either self-coloured or spotted. The British form when grown strong produces long, dense spikes of richly-spotted flowers of moderate size. The leaves are usually green, but may be beautifully blotched with bronzy-purple in various fashions as in O. maculata. Some exotic forms with broad leaves often assume very rich patterns, and the blotches are arranged in closely-placed bands across the leaves. Those who have not been very successful in cultivating hardy terrestrial Orchids should certainly give this one a trial, whether in the ordinary British or the exotic forms, which can be obtained. A great number of different forms varying both in flower and leaf may be seen in different positions in the rockery at Kew, where they have been very stately for some time past.

THE CHEDDAR PINK.

WHILE one of the prettiest of our native Pinks, Dianthus caesius is at the same time one of the rarest. If we exclude D. Caryophyllus and D. plumarius from the list of truly British species, then D. caesius would take front rank The form from the Cheddar cliffs in Somerset is very handsome, but seedlings raised from Continental seeds often prove vastly inferior to the native plant. The foliage is of a deep glaucous or gray hue, and is surmounted by the short stems which bear one to three flowers of a charming rosy-pink hue, and about the size of a shilling. A good patch of it is one of the most charming objects on a rockery at the present time. Propagation may be effected by cuttings or seeds.

TWO ALLIED SAXIFRAGES.

THERE are two Saxifrages in gardens, namely, Saxifraga Andrewsii and S. guthriana, though the latter is rare. Nevertheless, botanical books say they are identical, and adopting the name S. Andrewsii, say that it was once found at the head of Glen Caragh, Kerry, though no wild specimens now exist. The leaves are linear-spathulate, serrate, narrowed to a blunt point at the apex, and light green. The narrow panicle bears an abundance of white flowers thickly spotted with red for the greater part of the length of the petals. S. guthriana as seen in a few gardens about London has spathulate, crenate, dark green leaves that are broadest at the rounded apex. The flowers, which are borne in narrow panicles, are smaller than those of S. Andrewsii, and white with few very small and faint red spots near the base of the petals. As seen growing, whether in summer or winter, the plants are abundantly distinct, and when compared together need not be confused at all.

DAHLIAS.

IN many low lying districts in northern parts, Dahlias are apt to make gross growth of foliage *minus* flowers. We have found that by potting the roots into good soil, which in due time will fill all the pot space, are thus forced into flowering. A few scores we have in good condition (June 12) ready to put into ground, *not* favourable to flowering, are nicely set with bloom. The plants are 3 ft. high, or more. The pots, now well filled with roots, will be plunged to the rims, and may be supplied with liquid manure. It is pleasing to see the increase of Dahlia culture in the north. The amount of space in florists' establishments for Dahlias is very wonderful. One would almost suppose when looking over the fields of inflorescence at Messrs. Dobbies' at Rothesay there would be enough of Dahlias to supply all wants. —*M. T., Carron, N.B.*

SPIRAEA ARIAEFOLIA.

THIS stands in the first rank of a group comprising many of our most beautiful decorative plants, and from my own observation not at all particular as to soil or situation. I have had it thrive under the shade of a large Horse Chestnut tree, and in a dry sunny spot in the open. It forms a bush, when fully grown, some 12 ft. in height, and flowers during the last weeks of June and beginning of July, and when in full flower is one of the most beautiful things we have, with its pannicles of creamy white flowers. An isolated specimen might be compared to a fountain of blossom. I may add that it will flower in a comparatively small state.—*W.B.G.*

EPILOBIUM LUTEUM.

YELLOW flowers are quite common and familiar amongst the species of Oenothera, but pink, rose and purple are the prevailing colours amongst the Epilobiums, at least, as far as cultivated species are concerned. The plant under notice is a hardy herbaceous subject, a native of the United States. The stems usually grow about 6 in. high, and bear their expanded flowers at the top. Yellow would be a high compliment to pay them, but they might be described as pale primrose, and of large size for such a dwarf plant. It may be seen on the rockery at Kew.

SOCIETIES.

ROYAL BOTANIC.—*June 9.*

MOST unfortunately, bad weather marred the success of the Floral Fête of the Royal Botanic Society, which was held in the gardens at Regent's Park on the above date. H.H. the Duke of Teck attended the Floral Parade held in the afternoon, and gave away the prizes. The show in the large tent was a very small one, although all of the exhibits were of a high class character. The attendance was fair, but the incessant rain undoubtedly kept a good many visitors away.

Messrs. Kelway & Son, Langport, Somerset, occupied a considerable amount of space with hardy cut flowers. These were arranged in long curving lines on one of the higher mounds at the side of the large tent, on the left-hand side of the entrance from the long corridor, and made a most brilliant display. They included single and double Pyrethrums, single and double Chinese Paeonies, Delphiniums, and Amaryllis. Amongst the double Pyrethrums Aphrodite, Ernest, Wega, and Leonard Kelway were first-class varieties. The Paeonies were simply superb in their varied and delicate shades of colour. Of the doubles Lady Newnes, Lady Sybil Smith, Gemalli, Dora Russell, Halesus, Fortalice, Galtee More, and Princess Christian were magnificent samples of florists' Paeonies. In the background some grand spikes of Delphiniums in a great variety of hue reared their stately presences, but these had not yet come to their full excellence, many of the upper buds being yet unopened (Gold Medal).

Mr. R. Scott, gardener to Campbell Newington, Esq., The Holme, Regent's Park, set up an excellent group of show and regal Pelargoniums. A Silver Medal was awarded.

Messrs. Geo. Jackman & Son, Woking, Surrey, contributed a very showy group of choice hardy cut flowers, comprising Lychnis Viscaria splendens plena, Poppies, Pyrethrums, Aster alpinus superbus, Aquilegias, and Lupines (Silver Medal). Several balloon-trained, well-flowered specimens of the new hardy hybrid Clematis were also on view. C. coccinea is one of the parents of this race of plants which bids fair to be very useful (Large Bronze Medal).

Mr. R. Scott exhibited a great deal of taste in his arrangement of a most comprehensive group of flowering and foliage plants. The quality of the material here was very praiseworthy, Lilium Harrisii and two splendidly flowered and trained specimens of Clerodendron Balfourii being notable. Clumps of Spanish Iris were also used with good, effect in the front ranks. This exhibit well merited the Gold Medal which it received.

Messrs. Barr & Sons, King Street, Covent Garden were, as usual, well to the fore with hardy cut flowers. A collection of Irises was a conspicuous feature, and the quaint forms and brilliant colours and markings of the flowers were much admired. Aquilegias, Heuchera sanguinea, Violas, Geums, Agrostemma hybrida, and Hemerocallis flava were, amongst others things, exceeding bright and gay (Silver Medal).

Messrs. John Laing & Sons, Forest Hill, S.E., exhibited an imposing group of miscellaneous plants, in which Caladiums figured very largely. Palms, Dracaenas, tuberous Begonias, both single and double, Ericas, Gloxinias, and Ficus elastica variegata were all represented by well grown and richly-coloured plants. It is seldom, indeed, that the Messrs. Laing have made a more effective display than on this occasion (Gold Medal).

Mr. W. Rumsey, Joyning's Nurseries, Waltham Cross, had a group of Cannas and Roses. Cut blooms of the latter included some beautiful samples of Perle de Jardin, Niphetos, and Catherine Mermet. Crimson Rambler in pots was also very effective (Large Silver Medal).

N. N. Sherwood, Esq., Dunedin, Streatham Hill, exhibited Sweet Pea Pink Cupid, a pink form of the well known dwarf.

THE FLORAL PARADE.

This took place at three o'clock in the afternoon, and, owing to the rain, had to be held in the tent. The wet day was a most unfortunate occurrence, although the bright faces of the children amongst the bright flowers showed no trace of disappointment. The wee exhibitors in all the glory of their transient floral finery filed round the tent and past the red-covered dais on which the Duke of Teck sat. The various floral devices were well executed and effective. The coveted "red banner," signifying the best of all exhibits, fell to the lot of Miss Garfield, for a group of gaily bedecked children representing "Royal June." The numbers 1837 and 1897 were brought into great prominence. "Mother's Queen," by Mrs. Kirk, showed a child of some four or five summers, apparently seated in a small cart beneath a screen of yellow Spanish Irises, Marie Van Houtte Roses and Fern. The "May Day Group" of Mrs. Chamberlain showed a tasteful employment of Roses, Smilax, and White Marguerites. Mr. A. F. Youens, as in previous years, sent a pretty sedan chair, and Mrs. Thomas a pony cart. Both of these received first prizes. Similar awards also

fell to the lot of Mrs. Carnegie for a double mail cart, Mrs. Garford for a single mail cart, and Miss Brightman for a child's bicycle.

ROYAL HORTICULTURAL.—*June 15.*

HARDY herbaceous plants constituted the strongest feature of the meeting on Tuesday last, including great banks of Paeonies, Delphiniums, Pyrethrums, and other showy subjects. Orchids were well represented, but the exhibits were fewer than on several previous occasions. Cannas, Roses, and Pelargoniums were also noticeable in groups here and there.

Messrs. J. Veitch & Sons, Ltd., Chelsea, had the largest collection of Orchids, which deservedly received a Silver Flora Medal. Cattleya Warneri, C. Mossiae, C. Mendelii, C. walkeriana, Laelia purpurata, L. tenebrosa, Laeliocattleya Hippolyta, L. canhamiana, L. c. langleyensis, L. Eximia, and various other useful and showy subjects of that class were well represented. Interesting and valuable subjects also were Sobralia Wilsoni, Dendrobium Phalaenopsis, Oncidium pumilum (exceedingly well grown), Epiphronits Veitchi, Cymbidium eburneo-lowianum, and many other hybrids. The group was set up with Palms and Maidenhair Ferns.

Messrs. Hugh Low & Co., Clapton, exhibited a small but valuable group of Cattleyas, including a very large flowered variety named C. Mossiae In Memoriam Richard Curnow, one of their collectors recently deceased. Other fine things were C. Mossiae E. Ashworth, C. M. Wagnerii, C. M. arnoldiana, Laelia grandis tenebrosa, Bulbophyllum claptonense and others.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited the bigeneric hybrid, Laeliocattleya Aphrodite, Vanda Agnes Joachim (V. teres x V. hookeriana), Phalaenopis grandiflora, Cirrhopetalum nutans, and other interesting subjects, receiving a cultural commendation for the last named.

Sir Frederick Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen, exhibited a group of Cattleyas, Laeliocattleya Orphanum, Epidendrum Medusae, Cymbidium tigrinum, and some Miltonias, all in good form.

Messrs. F. Sander & Co., St. Alban's, exhibited Laeliocattleya Our Queen, Cattleya Mossiae Empress of India, and Laeliocattleya dominiana var. Empress of India, all very showy and distinct types, especially the first named.

R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell, exhibited Laelia purpurata Ernestii, L. tenebrosa superba, and Miltonia vexillaria Cambridge Lodge var., with markings on all the segments like those on the lip—being a case of peloria, most marked in the case of the petals.

A grand Odontoglossum was shown by De B. Crawshay, Esq. (gardener, Mr. S. Cooke), Rosefield, Sevenoaks. This was named O. crispum crawshayanum. Cattleya Warneri was shown by P. B. Tubbs, Esq. (gardener, Mr. C. Rolfe), Annandale, Woodside Park. Laeliocattleya Sappho was shown by Mr. James Douglas, Edenside, Great Bookham, Surrey. Orchis latifolia Glasnevin var. was brought up from the Royal Botanic Gardens, Glasnevin. H. J. Elwes, Esq., Colesborne Park, Andoversford, staged Disa kewensis Colesborne var. A. F. Calvert, Esq. (gardener, Mr. B. Bowyer), 1a, Hartly Road, showed two varieties of Cattleya Mossiae. Pantia Ralli, Esq. (gardener, Mr. Barks), Alderbrook, Cranleigh, showed a well-flowered piece of Meiracyllum Gemma.

Messrs. Frank Cant & Co., Braiswick Nursery, Colchester, showed a quantity of cut flowers of single and old fashioned garden Roses. The quaint Moss Rose, the common China Rose, the Austrian Copper Briar, and the Austrian Yellow Briar were very noteworthy. Paul's Single White is a very large white flowered form of great merit, and the Dundee Rambler is a very free flowering blush-white semi-double form (Silver Banksian Medal).

Messrs. H. Cannell & Sons, Swanley, Kent, staged a grand group of Cannas. Although the plants were in small pots the trusses of flower were huge, and the individual blooms of more than ordinary size and substance. Paul Bruant Compte de Bouchard, Ami Jules Chrêtien, Quasimodo, Madame Montifiore, Italia, and Austria were some of the best and most notable of the four dozen varieties shown. The Messrs. Cannell also submitted specimens of their new Gloxinias Sherlock Holmes, and Amiable, both superb forms (Silver Flora Medal).

Rose Enchantress, which has established such a name for itself as a pot variety, was exhibited by Messrs. Wm. Paul & Son, Waltham Cross.

Messrs. Jas. Veitch & Sons, Limited, Chelsea, made an interesting, exhibit of miscellaneous plants. The various subjects were arranged in masses in baskets of about 2 ft. diameter. Olearia Gunnii, O. stellulata, Raphiolepis japonica, Viburnum Mariesii, Teucrium fruticans, Hydrangea quercifolia, and Veronica prostrata were some of the most noteworthy samples. In the foreground were three baskets of cut Water Lilies, arranged on beds of moss with their own foliage. Nymphaea Marliacea Chromatella, N. M. albida, and N. M. carnea were grand.

A comprehensive collection of hardy cut flowers came from Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. Irises, and Campanulas in variety, Dictamnus Fraxinella, Inula glandulosa, Arum Dracunculus, Lilium colchicum, and Helenium Bolanderi were all very showy (Silver Banksian Medal).

Near the doorway Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., had a charming group of Carnations in pots. Souvenir de la Malmaison, Mr. R. H. Measures, and Mr. J. W. Christmas, two new perpetual forms, and the rich crimson Perpetual Cheer were all splendidly represented (Silver Flora Medal).

Messrs. Barr & Sons, King Street, Covent Garden, were as usual well to the fore with hardy cut flowers. A collection of Paeonies comprised many fine single and double sorts. The Irises again were a host in themselves. I. spuria A. W. Tait, I. pallida Albert Victor, I. p. Madame Paquette, I. variegata aurea, and I. amoena Calypso were in excellent condition. The Spanish Irises also were exceedingly bright, and such forms as Columbus, Vasco di Gama, Cantab, Princess Ida, and Thunderbolt could scarcely be too highly praised (Silver Banksian Medal).

Mr. Ladhams, The Shirley Nurseries, Southampton, sent a group of cut Pinks, and Campanulas. They made a great show (Silver Banksian Medal).

Messrs. Cheal & Sons, Crawley, Sussex, had hardy cut flowers in variety including Irises, double Pyrethrums, Lychnis Viscaria splendens plena, and Bedding Violas in first-class order (Silver Banksian Medal).

Messrs. A. W. Young & Co., Stevenage Nurseries, Herts, staged hardy cut flowers in considerable quantity. Some tall Foxgloves in the back gave height to the group and the edging was composed of narrow sheets of rough cork and dwarf succulent plants (Bronze Banksian Medal).

Mr. Gifford, Tottenham, showed large bunches of cut blooms of Delphinium Belladonna, a lovely caerulean-hued form.

Messrs. Paul & Son, The Old Nurseries, Cheshunt, sent cut flowers and Alpine plants. The former included single Roses in variety, and a collection of double Chinese Paeonies. Of the Paeonies, La Volupteuse, Noemie, and Testiva Maxima were some of the finest varieties (Silver Banksian Medal).

A very gay spot was that where Messrs Jas. Veitch & Sons, Ltd., had deposited their herbaceous Paeonies. The flowers were large, of good form generally, and ranged from pure white to deep crimson. Not a few of the varieties were very sweetly scented. Lady Dartmouth, Insignis, Bellona, Leonie, and Rubens were varieties well deserving honourable mention. A Silver Flora Medal was awarded for the Paeonies and the miscellaneous exhibit before referred to.

Messrs. Dobbie & Co., Rothesay, exhibited a large collection of single and double Pyrethrums. These were arranged in pyramidal bunches varying from a foot to 18 in. in height, and were backed with sprays of Asparagus. The same firm exhibited cut blooms of double and single Cactus Dahlias, the colours of which were surprisingly good for the early season, also cut blooms of show and regal Pelargoniums (Silver Banksian Medal).

Messrs. Geo. Cooling & Sons, Bath, sent cut garden Roses, including samples of the Yellow Austrian and Copper Austrian Briar, Sweet Briars, and Moss Roses. This was a very interesting exhibit, and received a Silver Banksian Medal.

Mr. C. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent, sent a group of pot Carnations. All the flowers were of superb form and substance. Barras, Helensman, Wanderer, Comedy, Cygnet, and Mrs. Tremayne represented the highest form of the border Carnation yet evolved by our florists.

Mr. Charles Turner, Slough, had a dozen Carnations in pots that were likewise of high quality.

Paeonies and Delphiniums were magnificently shown by Messrs. Kelway & Son, Langport, Somerset. The Messrs. Kelway are celebrated the country over for the way they treat these subjects, and their exhibit was up to their best standard. The range in both cases was immense and the size of the Paeonies was specially remarkable (Silver Flora Medal).

G. Yeld, Esq., Clifton Cottage, York, sent a few bunches of fine Irises, and the new Hemerocallis Apricot.

Mr. M. Pritchard, Christchurch, Hants., had a choice collection of cut hardy flowers for which he received a Silver Flora Medal. Amongst them were Liliums, Calochortus, Brodiaeas, and Irises in great profusion. Varieties of I. Xiphion predominated amongst the last-named. Lilium tenuifolium, L. thunbergianum marmoratum aureum, and L. umbellatum Incomparable were very noteworthy (Silver Flora Medal).

Mr. C. Dymott, Southampton, had a grand batch of the new seedling show Pelargonium Harry Dymott.

At a meeting of the fruit and vegetable Committee were samples of Cabbages grown for trial at Chiswick. The variety Earliest of All from Messrs. R. Veitch & Son, Exeter, is a first sort and well deserved the Award of Merit it received. Messrs. Sutton & Sons, Hurst & Son, J. Veitch & Sons, Ltd., Barr & Sons, E. Benary, Nutting & Son, and Kent & Brydon also had sample heads. The first named received an Award of Merit.

Mr. Miller, gardener to Lord Foley, Ruxley Lodge, Esher, was awarded a Bronze Banksian Medal for a collection of fruit. A number of Melons were submitted but they were mostly of inferior flavour.

Mr. C. Herrin, Dropmore, obtained the first prize for the best flavoured Apple, showing French Crab. Mr. J. C. Tallack, Livermere Park Gardens, Bury St. Edmund's was placed second with Sturmer Pippin. Five dishes of Apples in all were forthcoming.

THE YORK GALA.—*June 16th.*

SEVERE GALE, TENTS BLOWN DOWN.

As we go to press we are informed by press wire that the 39th York Gala ought to be remembered as a black letter day in its history. Early this morning a heavy rain fell, accompanied by a gale of wind, which increased in violence towards forenoon.

It was evident the tents would not stand the strain. The first containing the cut flowers, fruit, and bouquet exhibits, collapsed with a crash, leaving several people in its folds, and was soon followed by the Rose tents, where several persons were injured. The scene was one of the wildest confusion, valuable exhibits being broken and destroyed, and the Committee had to concentrate their efforts to keeping up the main tent, which up to the present they have happily succeeded in doing. Should it fall the damage will be enormous; most of the exhibitors were trying to get their exhibits into places of safety. The wind is still blowing, and full particulars will follow later. As a result of this unforeseen and unfortunate mishap, the show could not be opened to the public the first day.

FOLIAGE AND FLOWERS.

HOWEVER beautiful a few cut flowers in a vase may be, the effect produced is always much enhanced by a liberal use of foliage or other greenery of light and elegant appearance, which should be of such a nature as will keep its freshness as long as the flowers will last. During the summer months there is quite a wealth of material to draw upon for this purpose among the grasses growing by the wayside, and those cultivated in our gardens, such as the different forms of Oat grass and others of plume-like habit. Just now I have before me a vase containing some panicles of this, with a few leaves of the old Gardener's Garters arranged among them. The effect is really good without a single flower among them. Myrtle and scented-leaved Pelargoniums will always be favourites for these purposes with many on

account of their perfume. I found a florist, in a small way of business, last season selling the common Fennel to his customers for cut flowers, certainly a very elegant subject. The peculiar perfume would be an objection with some; but that is scarcely noticeable, and only when it is being handled. He found a ready sale for it, and those who once bought it, in most cases asked for it during the remainder of the season. The common Asparagus, both in its green shape and when ripening off, as it oftentimes does into a beautiful golden yellow, with its red berries, is one of the best things available. Smilax, some of the smaller leaved Ivies, the variegated Japanese Honeysuckle, Asparagus plumosus, and A. tenuissimus, are capital for twining round the handles of baskets and vases, or drooping down from them.—*W. B. G.*

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower, Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Peach leaves scolloped and cut.—*M. M'L.*: The leaves you sent may have been scorched by the sun, as you say owing to the lack of ventilation during the recent stormy weather; but we think it more likely judging from a close examination of the specimens that some caterpillar has been at work. The cut pieces were brown and had fallen out by the time they reached us, while the rest were of a healthy green colour. The cut edges were regularly sawed as if by the mandibles of some leaf-cutting insect and presented the most fantastic piece of fretwork we remember having seen. In some cases the fibres of the veins were left extending beyond the cut edges. Inspect your trees during the day for caterpillars, and if unsuccessful visit the house at night with a lantern. Before turning the light upon the trees you might spread a white sheet beneath the trees and then turn the light upon the trees and give them some sharp shakes. If weevils are doing the mischief they will fall upon the sheet where you can catch and kill them before they get away.

Particulars about Hardy Plants.—*J. T. Thurston*: The plant No. 1 is Saxifraga trifurcata, a native of Spain, from whence it was introduced in 1804. It belongs, as a matter of course to the Saxifragaceae, so that you will be able to muster its structure from any book on the British flora, and by dissecting specimens at the same time. The shrub is Lycium europaeum, which is a member of the order Solanaceae, and closely allied to Solanum. The curiously-coloured flowers will be followed by red berries in the autumn. The species is a native of South Europe, and was introduced in 1730. It is often used in hedges around cottage gardens, and does well on the sea coast in various parts of the country. The spurless Columbine is not new, but has existed in various colours since 1881 at least. The fact of its having turned up spontaneously in your neighbour's garden is very interesting, and should indicate that it occurs pretty frequently. Of course the other plants in the garden might have sprung from spurless varieties years ago; and if so the specimens of the seedling you send would be a reversion.

Olearia Haastii not flowering—*J. B. L.*: It depends very much upon the situation in which it is planted and its exposure to light as to its capability to flower. We have seen it blooming in profusion when only 18 in. to 2 ft. high. It is a native of sunny lands, and must be planted in full exposure to sunshine, though it may be sheltered by proximity to walls, trees or shrubs. Nevertheless, it must not be heavily shaded, otherwise it is almost certain to fail, or to flower but poorly. The wood must be well ripened and the foliage rendered leathery by all the sunshine our climate can afford. We believe that if it is well ripened in this way it will resist frost quite as well as a plant that is much overhung and shaded by trees.

Adlumia cirrhosa.—*T. Jones*: Properly speaking this is a biennial and cannot be expected to flower the first year from seed. When the plants are fairly well established they should be planted, where they are to bloom, in light, friable soil, either in the open ground or against a wall. Furnish the plants with supports when they begin to throw up their stems.

The Welsh Poppy.—*J. Davies*: We suppose you mean Meconopsis cambrica; if so, there is no special difficulty in growing it at all provided you plant it in a suitable situation. To sow or plant it in dry soil in full exposure to heat and drought in the open garden, nearly always means failure as far as the dry and warm southern counties are concerned. We have seen it establish itself and spread like a weed in more than one place on the banks of streams. The plant likes a cool, moist situation, and such should always be selected for it. In the absence of a stream or pond, on the banks of which you can plant it, you may select a cool and slightly shaded spot, it may be, behind a north aspect wall.

Black fly on Beans.—*R. W.*: As the insect commences its attack on the more tender portions towards the top of the plant you may get rid of it by cutting off the tops and burning or burying them deeply in the soil. This would generally settle the matter if done in time; but if not you could syringe with a solution of soft soap in water to which some tobacco juice has been added.

Names of Plants.—*P. McArthur*: The Feather Hyacinth Muscari comosum monstrosum.—*A. Dinnie*: The Rock Alyssum, the botanical name being Alyssum saxatile.—*G. K.*: 1, Campanula glomerata; 2, Corydalis lutea; 3, Saxifraga Aizoon rosularis; 4, Lupinus polyphyllus; 5, Saxifraga rotundifolia; 6, Saxifraga Geum.—*Omega*: The blue flower is the Feather Hyacinth (Muscari comosum monstrosum); the trailing plant is the Ivy-leaved Toadflax (Linaria Cymbalaria).—*M. R. C.*: 1, Deutzia scabra fl. pl.. 2, Philadelphus gordonianus; 3, Cotoneaster microphylla; 4, Cotoneaster thymifolia; 5, Tilia cordata.—*H. W.*: 1, Oncidium sphacelatum; 2, Odontoglossom luteo-purpureum sceptrum; 3, Oncidium pumilum; 4, Odontoglossom laeve; 5, Cypripedium Hookerae; 6, Dendrobium chrysotoxis suavissimum.—*A. E. C.*: 1, Alyssum maritimum; 2, Astrantia Biebersteinii; 3, Asphodeline lutea: 4, Bocconia cordata.

Communications received.—W. Napper.—J. R. Stirling.—W. Greenaway.—F. Davids.—W. and D. Downey.—Meisenbach Company.—Geo. Nobbs.—John M. Troup.—Charlbury.—G. Heaton.—Mexico.—Y. Y.—T. B. Burton.—R. May.—W. Teg.—C. L.—A. Linford.

COVENT GARDEN MARKET.

June 10th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bnsbel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries balf sieve...		
Nova Scotia Apples per barrel		
Cob Nnts per 100lbs.		
Grapes, per lb	2 0	3 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	1 6	2 6
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
ArticbokesGlobe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, Frencb, per pound	1 0	1 3
Beet..... per dozen		2 0
Brussel Sprouts, per balf sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bnncb	0 3	
Canliflowers.....doz.	2 0	3 0
Celery.....per bnndle	1 0	1 6
Cncnmbers per doz.	2 6	3 0
Endive, Frencb, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bnndle	2 0	4 0
Lettnces ...per dozen	1 3	
Mnsbrooms, p. basket	1 0	
Onions.....per bnncb	0 4	0 6
Parsley ... per bnncb	0 3	
Radisbes... per dozen	1 c	1 3
Seakale...per basket	1 0	1 3
Small salad, pnnnet	0 4	
Spinacb per busbel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Tnrnips .....per bnn.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d
Arnm Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 0	3 0
Bouvardias, per bnn.	0 4	0 6
Carnations doz.blms.	1 0	3 0
Enoharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	2 6
Geranium, scarlet, doz. buncbes	3 0	6 0
Iris, various doz. bun.	4 0	12 0
Lilac, Wbite (Frencb) per bncb.	3 6	4 6
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	1 0	2 0
Mrrguerites, 12 bnn.	2 0	4 0
MaidenhairFern, 12bs.	4 0	8 0
Narciss, varions, doz. buncbes	1 6	4 0
Orobids, doz. blooms	1 6	12 0
Paeonies, Frencb doz. bun.	5 0	9 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoninms, 12 bun.	4 0	6 0
Pyrethrum doz. bnn.	1 6	3 0
Roses (Indoor], doz.	6	1 0
" Tea, wbite, doz.	1 0	2 6
" Niels	1 6	4 0
" Safrano	1 0	2 0
" (Englisb], Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms ...	1 0	1 6

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae per doz.	12 0	36 0
Aspidistra, doz.....	18 0	36 0
" specimen	5 0	10 0
Arum Lilies, per doz.	8 0	12 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.....	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope...per doz.	4 0	6 0
Hydrangeas per doz.	9 0	12 0
Ivy-leaved Geranium, per doz.	4 0	8 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia .....per doz.	3 0	5 0
Marguerite Daisy doz.	6 0	10 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ...doz.	8 0	12 0
Spiraea ...per doz. ...	8 0	10 0
Scarlets .....per doz.	2 6	5 0
Roots and bedding out plants plentiful and great variety.		

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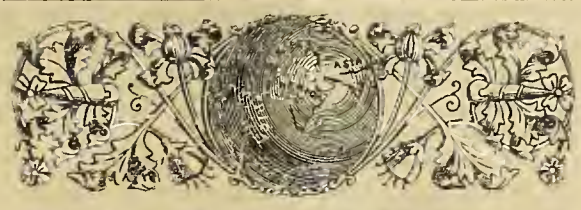

"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JUNE 26th, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, June 29th.—Royal Horticultural Society; meeting of committees at 12 o'clock.
Royal Oxfordshire Horticultural Society's Commemoration Show.
Hereford Rose Show.
Canterbury Rose Show.
Sutton Rose Show.
Westminster Rose Show.

WEDNESDAY, June 30th.—Farnham Rose Show.
Croydon Rose Show.
Ealing Rose Show.
Reading Rose Show.

THURSDAY, July 1st.—R.H.S. of Ireland Summer Show.

FRIDAY, July 2nd.—National Rose Society's Show at the Crystal Palace.

SATURDAY, July 3rd.—National Amateur Gardeners' Exhibition at Regent's Park.

VICTORIA, OUR QUEEN AND EMPRESS, 1837-1897 (See portrait p. 681).—Horticulture prospers in proportion to the prosperity, peace, and happiness of a nation, and at no time in the history of the world has the upward progress of gardening been so constant, so widely diffused, nor carried to such a state of perfection, since the birth of Queen Victoria, but particularly since her Accession to the Imperial Throne. Our Sovereign Lady the Queen was born at Kensington Palace on the 24th May, 1819, but was not informed of her true position—the head of the race—till she was twelve years old, when she lifted the forefinger of her right hand and used that remarkable expression "I will be good," as related by *The Graphic*. She has more than fulfilled her good intention.

When His Majesty the late King William the Fourth died at Windsor Castle at twelve minutes past two o'clock on the morning of Tuesday, the 20th June, 1837, the Archbishop of Canterbury and the then Lord Chamberlain soon afterwards proceeded to Kensington, arriving about 7 a.m., and, having aroused her from her girlish slumbers, they announced to Queen Victoria and the Duchess of Kent, her mother, the demise of the Crown. Her Majesty was duly proclaimed Queen the same day at Kensington Palace. She was crowned on the 28th June, 1838; and on the 10th February, 1840, married Prince Albert of Saxe-Coburg-Gotha, the late lamented Prince Consort, who did so much for the commercial prosperity of the realm. The Queen's Golden Jubilee was celebrated on the 21st. June, 1887, when she attended a Thanksgiving Service at Westminster Abbey. Her Diamond Jubilee was celebrated in London on Tuesday, the 22nd inst., when she attended a Thanksgiving Service at St. Pauls; and it was celebrated by millions of her loyal and faithful subjects in all parts of the realm and empire. At the moment we can but help to voice the general rejoicing at the accomplishment of the record reign in the nation's history—a glorious sixty years' sovereignty, during which the progress of mankind towards a higher social status, and a more humanising civilisation, is without a parallel on our planet. Long may it continue.

Apart altogether from the splendours of state, and the influence wielded by virtue of the most exalted position the world has ever conferred on a Sovereign, Her Majesty has claims upon her subjects as a Woman, Mother, Wife and Queen. What Tennyson said in March 1851, he could repeat with more emphasis to-day, were he alive:—

"May children of our children say,
'She wrought her people lasting good;
Her court was pure; her life serene;
God gave her peace; her land reposed;
A thousand claims to reverence closed
In her as Mother, Wife and Queen.'"

According to the genealogical table published by *The Times*, the Queen has had nine children; forty grandchildren; and thirty great-grandchildren; seventy-nine in all, of whom seventy are still alive, the most recent additions being Princess Victoria Alexandra of Great Britain, and Princess Tatiana of Russia.

The Queen's womanly heart is best shown when in residence at her private seats most distant from the splendours of state and the cares of the Crown, namely at Osborne and Balmoral Castle. Nevertheless, she is most attentive to the cares of state, and methodical to a degree in the performance of her work. Her numerous acts of kindness, her charity, and womanly sympathy with her subjects from the richest to the poorest in their hour of misfortune or bereavement, have touched the hearts of her people. These little acts, together with her long experience as a successful monarch, have made her "loved at home and revered abroad."

The mention of Osborne and Balmoral Castle, recalls to mind the two Royal residences of Windsor Castle and Buckingham Palace, both directly concerned with the festivities and other methods of celebrating the Diamond Jubilee. All the four places have Royal gardens and parks or pleasure grounds, all beautiful in their respective ways, and show the direct connection between the Queen and horticulture, which she has never ceased to encourage both by example and precept. Each of these gardens is superintended by a head gardener, having the necessary number of subordinates under his charge. We have pleasure in presenting our readers with a portrait of three of the Royal gardeners (see p. 683).

Both in this and previous issues we have recorded and described numerous plants which have been named in honour of the Queen. Many gardeners and raisers of new plants, and cultivators throughout the country, have delighted to do homage to Her Majesty in this way, and hundreds more would like to do so provided they had anything worthy of the occasion. Many of the names are of long standing, while some of the more recent as well as old ones are recorded in this issue. The Rose is often termed the queen of flowers, and was much worn on the occasion of the Jubilee in honour of the Queen of queens. That named Her Majesty is one of the finest in cultivation. The Apple named The Queen is relatively a recent acquisition; and Laeliocattleya Our Queen and Dendrobium Victoriae Reginae are decidedly recent. We think, however, that the most important honour has been bestowed upon the queen of Water Lilies (Victoria regia), inasmuch as both the generic and specific names have been given in compliment to Queen Victoria, and are certain to be handed down to posterity, as we hope many of the others will.

Gardeners would do well to remember that slavery was not completely abolished in the British Empire till two years after

the Queen's Accession; that light and air were taxed in the shape of glass and windows when she ascended the throne; that the Queen is patroness of the Gardeners' Royal Benevolent Institution; and patroness of the Royal Horticultural, and many other societies. Darwin's great life-work was not then begun, and the great English naturalist had not then taught mankind and gardeners in particular how to read the past history of the world in the lowly herbs that clothe its surface, or lie buried, as a permanent record, at greater or less depths in its upper crust. In strange contrast to the alterations in customs that have taken place "down the ringing changes of time," were the 2,500 or more bonfires kindled as a form of rejoicing on Jubilee night. In ancient times bonfires were signals in times of war, and symbols in times of peace. The quaint old custom has come down from the times of the druids and sun-worship, if indeed, it is not older. *Bailtein* or Fire of Bel exists in our language as Beltane to-day, and applies to the beginning of May. The *Sanhainn* was the Fire of Peace, and this we have just celebrated, but with a different meaning. Long live the Queen.

The Queen returned to Windsor Castle on Wednesday last when there was a semi-state procession from Slough to Windsor. Next day there was a big carnival procession through Windsor, Eton and Eton College with a battle of flowers and confetti on Windsor bridge.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, June 29th, in the Drill Hall, James' Street, Westminster, 1 to 5 p.m. Special prizes will be offered for Roses. At 3 o'clock a lecture will be given by Mr. Joseph Cheal on "Storing and Preserving Fruit."

Black and yellow eyes.—I see by your account on the 19th June, that one Delphinium had got a black eye and another a conspicuous black eye. It is strange that such peacefully inclined subjects cannot refrain from fighting. A white one got a yellow eye. How did that happen? Well I suppose in Jubilee times, they might be excused.—*Snaggs.*

Ayrshire Gardeners' Mutual Improvement Association.—At the last monthly meeting of this society various subjects were brought up and discussed by the members. Mr. Thos. Gordon, Ewenfield, presided. A paper on the "Beauty and Order of Garden Scenery" by Mr. James Good, late of Auchendrane Gardens, was announced for July 1st. Mr. J. Thomson, of Airlie, showed the new Primula Forbesii.

Royal Horticultural Society of Ireland.—Amongst the prizes offered at the Rose show of this society to be held in Merrion Square, Dublin, on July 1st., will be a challenge plate, value £24, presented by the Horticultural Seed Trade of Ireland for thirty-six Roses; a challenge cup, value £6, presented by Messrs. Richard Hartland & Sons, Lough Nurseries, Cork, for twenty-four tuberous Begonias; a challenge plate, value £10, for Carnations; as well as other challenge cups and pieces of plate from various donors. The society gives silver and bronze medals, and about £100 in money prizes,

A Demonstration in Horticulture was given on May 12th at the Furlong Street Gardens, Arnold, Notts, by Mr. J. Ettle of the Notts County Council. There was a large attendance of allotment holders and cottage gardeners. Mr. Ettle dealt with the "Summer Pruning and Disbudding Fruit Trees," and the proceedings lasted over three hours. Attention was first directed to the larger trees, and careful pruning and training in the early stages to insure correctness of form were insisted on, examples of failure to do this being pointed out. The trimming of the smaller and bush fruits was then taken into consideration, Mr. Ettle's remarks being practical throughout. Questions were asked and replied to at the close, and Mr. Ettle was warmly requested to come to them again.

Lycaste Skinneri is considered one of the most easy of Orchids to cultivate, and is one of those occasionally recommended for window culture.

Fruit for Covent Garden.—It is estimated that on Monday last 200 tons of Strawberries, 500 tons of Cherries, 10 tons of Apricots, 10 tons of Plums, between 10 and 20 tons each of red and black Currants, and 200 tons of green Gooseberries arrived at Covent Garden. In addition to these 31,000 cases of Oranges, about 10,000 cases of Lemons, and 3,000 bunches of Bananas came to hand.

Newcastle Summer Flower Show.—This show will be held in the Recreation Ground on Thursday, Friday, and Saturday, 8th, 9th, and 10th July. Very valuable prizes are offered for Roses, (including a Special Victorian Prize); and for table decorations and bouquets. To Nurserymen and the Trade, who care to put up stands not for competition, the society offer their Gold, Silver, and Bronze Medals. Besides bands, the society have been fortunate in obtaining the Army Gymnastic Staff to give displays each afternoon and evening; and also each afternoon there will be four-in-hand, tandem, pairs, and other driving competitions.

The Queen's Diamond Jubilee has undoubtedly given an impetus to many trades and manufactures, and at the present time we hear little about slack times. Her Majesty is taking very great interest in all details connected with the Jubilee, and has been graciously pleased to approve of a likeness taken by Messrs. W. & D. Downey, which shall be known as the Authorized Jubilee Portrait of Her Majesty. This likeness has been specially engraved by the well-known Photo-engravers, The Meisenbach Company, Limited, West Norwood, who have done the work well and in their usual artistic manner. The engraving is full of gradations of light and shade from the highest lights to the full colour in the darkest shadows, and is a notable example of the high quality maintained by the pioneers of photo-engraving.

Past and Present Kewites.—A very pleasant reunion of past and present Kewites took place on Saturday, June 19th, at Kew. A cricket match was played in the afternoon on the Green of historic memory between sides chosen from those of yesterday and those of to-day, in which the latter defeated their opponents by 137 runs to 52. Mr. W. Watson and Mr. W. N. Sands played well for the victors. In the evening a tea, and jolly party generally followed. It is a great pity that a longer notice of the event had not been given, for it would have given more of the past members an opportunity to be present. In the future we hope to see this gathering an annual fixture as much as is the issue of the Guild Journal, or the general meeting, since all three movements work for the same end, viz., the strengthening of the bonds between the sons of Kew.

New Potatos.—Just now the Potato season at Jersey is in full swing, and the quay presents a bustling scene. The export of Potatos to the English markets during the months of May and June represents a most important industry, so much so indeed that it is estimated that the difference between a good week, and a bad one, means from £30,000 to £40,000 to the local farmers. For the last ten years Jersey has sent us annually on an average, 60,000 tons of new Potatos—last year the exact weight was 64,583 tons, and its monetary value £435,192. The scene amongst the fields is a most interesting and busy one. As the value of the crop depends in a great measure upon its being marketed at a favourable time it is a case of all hands to the pumps, be they those of husband, wife, child, grandchild, grandparent, or even the stranger that is within the gate. Last year the season commenced on the 3rd April, and from that date until April 18th the price obtained averaged no less than £32 per ton; by the 25th of the same month the price had fallen to £22 per ton; by May 2nd £16 18s.; by May 9th £11 11s. 10d.; by May 16th £8 13s. 4d.; and so on week by week until on July 11th, when the season ended £2 14s. 2d. per ton was realised. The owners of the earliest tubers are remunerated at the rate of from £120 to £130 per acre for their land. Naturally a lot of small Potatos are dug at first, so that the crop yields at the rate of 6 tons per acre, which yield gradually increases to 9 tons.

A Rose Fete was held at Newbeir Honse, New Swindon, the residence of Major Dean, the chief superintendent and engineer of the Great Western Railway Works, on Wednesday, June 16th. The event was well attended and proved a great success in every way.

Loyal Demonstration on the London Corn Exchange.—An extraordinary scene was witnessed on the Corn Exchange on Monday, the 21st. inst. At 2.30 the Fife and Drum Band of the "Coldstream Guards" marched on to the Exchange. The President, J. Aste, Esq., proposed the health of the Queen, when on the band leading off, the whole of the members, some 3,000, sang the National Anthem amidst a scene of great excitement and enthusiasm.

Dendrobium Victoriae Reginae.—Though not in good condition the whole consignment of this new and blue-flowered Dendrobe was sold by Messrs. Protheroe & Morris, Cheapside, on the 18th inst. What was looked upon as a dead piece was eagerly bought for 11s., and the auctioneer asked what the live ones would fetch. Prices varied from 1 guinea up to 35s. but many fetched 2 gs., £3 5s. and £3 7s. 6d. Three plants were knocked down at £4 15s. In its native country it flowers in April and May, at an elevation of over 2,000 yards, in the highlands of the Philippine Islands. It should grow in a temperate Orchid house. D. V. R. album, D. V. R. coeleste and D. V. R. Papilio were varieties and sold at prices varying from 30s. to £3 5s. the latter being for three plants. On the same occasion Cattleya Mossiae Wageneri fetched 21 gs.; C. M. reineckiana, 19 gs.; C. M. delicata 7½ gs.; C. M. alba 11 gs.; C. gigas, 5 gs., and Cypripedium lawrenceanum, 6 gs., the latter being brought by E. Ashworth, Esqr.

Broughty Ferry Horticultural Association.—On Satnrday afternoon of the 19th inst. the members of this Association visited the nurseries of Messrs. Laird & Sinclair at Monifieth. The party were conducted through the grounds by Messrs. J. W. Laird and W. P. Laird. The stock in general was much admired, the Coniferae, for which the firm has a reputation, especially arresting attention. At the conclusion of the inspection the party assembled on the lawn in front of Fountainbrae House, where luncheon was provided by the Messrs. Laird. Mr. W. Grant, president of the association, complimented the firm on the splendid appearance of the nursery stock, and wished the firm all success. Mr. J. W. Laird, in reply, expressed the pleasure it had given his brother and himself to have a visit from the association, esteeming it an honour that they had selected the Monifieth Nursery for their first outing. Appropriate remarks were also made by Mr. Stark, Invergowrie, and Mr. J. Slater. Mr. W. P. Laird's health was pledged, and the proceedings terminated.

Messrs. Sutton and Sons' Annual Excursion.—The great Reading seed firm on the 12th inst gave their *employees* and the wives of the married men in their service the annual treat to the seaside which has long been looked forward to, and is keenly enjoyed, by those in their employ. Following the good custom, as many members of the firm as could possibly do so joined in the excursion, among them being Mr. Martin John Sutton (the head of the firm). Mr. Arthur W. Sutton, Mr. Leonard G. Sutton, and Mr. M. H. F. Sutton and Mrs. Sutton, also took part. The company numbered about 700, being the largest party that has ever been out with Messrs. Sutton's excursion; and for the first time the trip took the direction of Canterbury, Ramsgate, and Margate. Mr. J. W. Trowbridge, the S.E.R. stationmaster at Reading, arranged a splendid special train, which, considering its great length, kept admirable time both going and returning. Not only was the train provided by the firm, but as is the custom on these happy occasions, every *employé* received a sum of money amply sufficient to cover his expenses during the day. A good many of the party broke the journey at Canterbury, and some hnndreds stopped at Ramsgate, but the bulk finished the journey. The weather throughout the day was brilliantly fine, and the party returned thoroughly pleased with a highly successful trip, which was not marred by any unpleasant incident of any sort; and expressing their thanks in no half-hearted manner for the care and forethought with which the firm had provided a most charming holiday.

Water in Plants.—Experiments have proved that a plant uses 300 lbs. of water for every lb. of solid matter it contains. It is estimated that a corn crop will require about 10 in. of water during its whole season of growth, and that this quantity actually passes through the plants. Naturally we are chiefly dependent upon the clouds for the water supply, but a great deal can be done by good cultivation to assist the clouds. By keeping the soil in an open porous condition, by the addition of good manure, and thorough turning, the effects of drought may be to a very large extent minimised. This holds good in the garden as in the field.

ROYAL DIAMOND JUBILEE ORCHID TROPHY.

By Command, for Her Majesty The Queen. Messrs. F. Sander & Co., St. Albans, employed Messrs. Wills & Segar, Onslow Crescent, South Kensington, Florists to Her Majesty, to design and artistically arrange the trophy for them, which consisted of a basket made of wicker work, heavily gilt, standing on a polished mahogany base; in shape trifoliate, beautifully fluted and plaited. From the three corners arose the handle, its three branches forming a dome, surmounting the top of which was a Royal crown, the letters "V. R. I.," 12 in. in length, being arranged beneath the crown, which consisted of several hundreds of flowers of Odontoglossum citrosmum, the letters being composed entirely of the orange-coloured Epidendrum vitellinum, Millais' favourite Orchid. It is impossible to attempt the description in detail of the many thousands of Orchids used in this the most superb bouquet ever seen, endless spikes of all that is best and rarest from Her Majesty's dominions being used, together with almost priceless blossoms of the hybridist's art raised in this country since our Queen's accession, many of them unique and of great value. Among the choicest varieties were Cattleya Empress of India, Cattleya Our Queen, and Cattleya Victoria Regina, which received awards at the meeting of the Royal Horticuitural Society on Tuesday, the 15th inst. The Princess of Wales' Odontoglossums were prominent in magnificent, pure white spikes, as also was Lord Dalhousie's Dendrobe, with its nankeen-yellow and maroon blossoms. The sprays of the Disa from Table Mountain ("Flower of the Gods"); Stenoglottis from the South African Veldt; the Moth-flowered Dendrobe from Australasia and British New Guinea; Burmese Vandas from the British East Indies; Cattleyas and richly coloured Oncidiums from British Guiana; and the lovely scarlet Epidendrum and Laelia from the West Indies served to illustrate the vast floral wealth in Orchids indigenous to the many lands over which our Queen reigns.

The handles of this magnificently arranged basket of Orchids were fitted with flutes or sockets, and the flowers placed in them, with the spikes entire, and—in very many instances—the whole bulb and leaf also. The interior of the basket, which had to be specially designed and constructed for the occasion, was one central dome, forming a solid foundation, supporting the whole heavy mass of blossoms, which, perfectly finished and arranged, had a maximum height of 8 ft., with a diameter of 6 ft. The number of flowers in the monster Jubilee Orchid bouquet prepared and presented to the Queen by Messrs. F. Sander & Co., in 1887 was 50,000, but this huge trophy contained a larger number, while the quality and rarity were far greater. By command it was delivered at Buckingham Palace on Monday afternoon, the day before the Diamond Jubilee Celebration.

When this gigantic and absolutely unique Orchid Trophy was in full dress it had a most gorgeous appearance. Notwithstanding its enormous bulk, two men could carry it about. The Jubilee Bouquet of 1887 was nowhere by comparison with the Diamond Jubilee Bouquet, for we have seen them both. Its massiveness was relieved by long drooping sprays of the Princess of Wales' Odontoglossums, Oncidium crispum, Cymbidium lowianum, Dendrobium Phalaenopsis schroderianum, Phaius, Sobralias, Thunias, &c., the two latter being cut with long leafy stems. The V. R. I. in brilliant orange-scarlet was particularly effective and prominent, overarched by long sprays. A gorgeous effect was imparted by Cattleya reineckiana from the Temple Show plants, by Vanda teres, V. suavis, Maxillaria sanderiana Laelia purpurata, L. tenebrosa, and the hybrids named after the Queen. The rarest things were Cypripedium callosum sanderianum, and C. Godefroyae godseffianum, the latter a particularly handsome and absolutely unique variety said to be worth 1,000 gs. On Monday afternoon the Trophy was placed close to the Queen's table, where she sat at the banquet, at Buckingham Palace. A separate table was at her service as for her guests present.

ROYAL WINDSOR.

It is on record that Windsor has been used as a Royal palace for 786 years; indeed, there are those who trace the date back to the time of the Conquest, which would be 831 years ago. On this occasion, however, it is of gardens, gardening, trees, and the Queen's favourite walks that we intend to speak. Gardening, even within the precints of the Palace grounds, is of very ancient date. In 1405, James I. of Scotland was detained a prisoner in Windsor Castle by Henry IV., and while looking out of the window of his apartment, he saw walking in the garden, and fell in love with, the daughter of the Duke of Somerset, who afterwards became his queen. The circumstances are related by James I. himself in "The "King's Quhair" or Book, and the following quotation relates to the garden:—

"Now, was there made, fast by the touris wall,
A garden fair, and in the corners set
Ane herbere green, with wandis long and small,
Railed about, and so with treis set
Was all the place, and hawthorn hedges knet,
That life was non walking there forby,
That might within scarce any wight espy.

Windsor Castle from the Home Park, showing the Tree-clad Slopes.

"And on the smalle greene twistis sate
The little sweet nightingale, and sung
So loud and clear, the hymnis consecrate
Of lufis use, now soft now loud among,
That all the gardens and the wallis rung
Right of their song, and on the copill next
Of their sweet harmony, and lo the text."

These two stanzas show that the cultured language of England and Scotland, even at that early date, was identical or closely akin.

On the steep slopes of the Round Tower Garden, to-day, is some beautiful scroll bedding of modern pattern. The private secretary's apartments are situated here, and the garden is spoken of as his. A little further to the western side of the tower is a bit of gardening which is considered to be some hundreds of years old, and seemingly of Elizabethan pattern. The hollow is planted with fruit trees and herbaceous plants, while the slopes are occupied with flowering trees and shrubs, including Lilacs, which are very gay in their season.

THE NORTH TERRACE.

A grand prospect opens before the eye of the visitor who arrives on the North Terrace. Windsor Castle is situated on the eastern edge of Berkshire, on a chalk cliff or hill at an elevation of about 100 ft.

above the Thames, which forms the boundary between this county and Buckinghamshire. The chalk here comes to the surface owing to an elevation of the beds, and has been cut through by the denuding agency of the Thames in ancient times, so that the northern and eastern aspect of the hill form a good example of a sharply-sloping river-cliff, on which the Castle is built. Chalk rock is to be seen in the ice-house of the Castle, as well as at other points, although at Datchet about a mile off, it is 117 ft. below the surface.

Looking northward, the eye extends over a river-flat and a wide gravel plain, geologically speaking. In the near distance, the eye looks down upon the Home Park, and a little more to the right, Eton with its conspicuous Chapel, behind which is Eton College. The Home Park is public property, having been granted by the Crown, together with a road made through it for the purpose of shutting up a road and securing the privacy of the Royal policies on the western side of the hill. These alterations were sanctioned and ratified by an act of Parliament. On the occasion of our visit on the 12th inst., preparations were being made in the Home Park, by the 1,400 to 2,000 soldiers at present stationed at Windsor, and by others, for the entertainment of some 6,000 children after Jubilee Day. A glance at the accompanying illustration (p. 677) will show a view of Windsor Castle from the Home Park, and the thickly-wooded slopes extending from the North Terrace down to the banks of the Thames.

THE TERRACE GARDEN.

On the eastern side of the Castle, and in keeping with the architecture, is a formal garden of a mixed English and Italian type. The garden itself is nearly rectangular in outline, and about 6 ft. or more below the level of the terrace surrounding it. By Her Majesty's gracious permission the public gets access to promenade the terrace walks surrounding the garden on Saturdays, when a band plays for the entertainment of the same. Bedding-out was in active progress on the occasion of our visit. Zonal Pelargoniums are largely used in the beds, including bronze varieties, also Iresines, Mesembryan hemum cordifolium variegatum, and other useful subjects. Mr. Owen Thomas, the Queen's gardener, finds that Pelargoniums produce the best and most continuous colour effects, owing to the warm and sheltered condition of the garden, together with full exposure to sunshine. For these reasons Begonias are less satisfactory. The monotony of flatness is everywhere broken up by numerous trimly kept, columnar, pyramidal or cone-shaped, and dome-shaped Hollies, green and golden Yews, Thuyas, Cupressus, and other Conifers as well as Box. Another Italian feature is presented by several massively elaborate and valuable vases and statues, or figures. On an eastern slope are beds of Rock Roses, flowering profusely, and masses of purple Heather (Calluna).

Outside the terrace wall on the east, and almost overhanging the garden is the largest tree of Paulowia imperialis we have seen, and still carrying some of its violet-purple flowers. At one corner is a broad-headed tree of Koelreuteria paniculata which flowered well last year, and is preparing to do so again. To the west the eye wanders over one of the loveliest prospects of woodland to be seen in the United Kingdom. It is Windsor Great Park or Forest; and the eye is only arrested by the hills forming the sky-line. Standing on the southern side of the Terrace Garden, scarcely a house is to be seen, except on the extreme left where one gets a glimpse of Windsor. The trees too are in their richest and freshest summer garb. It is truly a fitting place for a Royal residence.

THE QUEEN'S FAVOURITE WALKS.

The Thames winds about in many a graceful sweep, flowing almost close under the North Terrace, hidden by the trees, seen in the accompanying illustration; and from thence strikes away in a devious direction, but, on the whole, trending in a south-easterly direction, at a little greater distance from the ancient river-cliff. The intervening space between the river and the high ground is thickly-wooded and traversed, in various directions and at different levels, by miles of secluded and cool, shady walks. Here the Queen delights to walk in her leisure moments, while holding court at Windsor.

Immediately under the Castle on the north side is a stone wall of great height, which drops down perpendicularly. The visitor looks into the tops of trees and shrubs growing on the slopes, such as Beeches, Horse Chestnuts, Acacias (Robina), Cherries, Mountain Ash, Thorns, Yews, Philadelphus, Holly Oaks, Lilacs, Laburnums, Birches, Walnut, Hickory, Paulownia, Koelreuteria, and others of a most interesting character, especially when in bloom. Here also we noted fine masses of Mistleto growing upon the Robinia.

Descending from the Terrace Garden, where we passed through a doorway in the wall, we passed along one of the principal walks on the slopes where the Queen is wont to take exercise and relaxation. Away down at the bottom of the slopes is a stream fed by the Thames in which it finally loses itself again. The surroundings make this ornamental stream appear quite natural. On the high bank upon the right, are some healthy specimens of Cedrus Deodara, 40 ft. to 50 ft. in height, and appearing quite at home notwithstanding the dryness of the situation. Pursuing this path we passed some rustic summer houses and round seats situated in secluded spots or on some bold headland or promontory, from whence beautiful glimpses of woodland scenery can be obtained. Here the trees are of great size and age, yet luxuriant and vigorous. At length passing through a long, narrow archway or grotto, built of rough, black, chalk flints we suddenly emerged on the face of the cliff where there is a most interesting bit of rock garden. While passing through this grotto we noted that the floor of it consisted of live chalk rock, denuded in places.

ROCK GARDEN ON THE SLOPES.

The beauty of this bit of gardening is its simplicity, wild and precipitous character, and natural appearance. Those emerging from the mouth of the flint-lined grotto above mentioned must turn abruptly to the right or left along the face of the cliff, for the straight path from the Castle here ends abruptly. The face of the cliff from top to bottom is covered with shrubs, flowers, grass, and other vegetation. Linaria Cymbalaria trails down the steep slopes with great freedom; and Sedums, Saxifragas, and other rock plants grow at their own sweet will. In the bottom of the hollow is a pool of clear water fed by a tiny stream, trickling down the face of the rocks. Vegetation around it is in full vigour, with a cool and inviting aspect. Hardy Ferns and Cotoneasters add to the effect. Wild flowers are allowed full sway, and Campanula glomerata, native to the soil, forms interesting tufts amongst the grass. Just beyond the rockery is a rustic summer house; and on the banks by the wayside we noted Primroses in great abundance, which constituted the glory of the woodland banks in spring.

Immediately beyond is an open glade with a beautiful cottage and garden on one side, where the Queen sometimes takes tea. The walls and pillars of the cottage are covered with climbing Roses and Wistaria sinensis. On the left is a piece of green sward surrounded by tall old trees, including giant specimens of Hickory (Carya amara), Sophora japonica and the Douglas Fir. Right ahead is a large tree known as Luther's Beech, supposed to have been brought, as a cutting or layer, from the original on the Continent where the eminent preacher was apprehended. A Hickory bears a huge bunch of Mistleto, springing from the bare trunk. Altogether this interesting parasite grows naturally upon nine species of trees in the policies of Windsor Castle.

Just here is a frame ground completely hidden by a trim hedge. Two rows of the pits are heated with hot-water pipes and prove very serviceable during the crush of bedding stuff. From here we proceeded to the Royal Gardens at Frogmore, crossing a very old avenue on each side of which are giant specimens of the English Elm, which have existed since the time of Charles II., or such of them as have resisted the ravages of time. They are very effective in the landscape. The avenue extends from the Thames on the east towards Windsor on the west. Before reaching the gardens we passed along an avenue of healthy trees of Wellingtonia gigantea 40 ft. to 50 ft. in height, and well furnished to the ground.

THE ROYAL GARDENS, FROGMORE.

These gardens are very extensive and utilised to furnish the Royal household with fruits, flowers, and vegetables. There are two miles of brick walls 12 ft. high, which will serve to give some idea of their extent as well as their well furnished character. Both sides of these walls are covered with fruit trees, or glasshouses are erected against some portions. There are, moreover, large areas outside of the walls, planted with vegetables or fruit trees. The gardens are situated about three quarters of a mile as the crow flies from Windsor Castle.

THE PLANT HOUSES.—Of these we shall give but a brief survey, noting the nature of their contents generally. So great are the requirements for plants, flowers, and fruits, that there is practically a village of glasshouses, independently of pits for all sorts of subjects, including vegetables. The first house we entered was occupied with a collection of show and decorative Pelargoniums of a suitable size for decorative work, and in full bloom. The chief drawback to these highly ornamental subjects is their bad carrying qualities. That defect cannot be attributed to Hydrangea hortensis of which there was more than half a houseful in full bloom. Amongst the plants was a batch of the useful white variety Dr. Hogg. Both forms were furnished with huge trusses as they always are here. They were intended largely for the Jubilee festivities at Buckingham Palace. On the opposite bench from the Hydrangeas was a splendid lot of the double white Pelargonium La Volonté Nationale alba. The first batch of Gloxinias was in full bloom, and amongst them some splendid named and other varieties could be picked out. Her Majesty is admitted to be the finest white variety in cultivation on account of the purity of the flowers, their great size and fine form. Some varieties were crimson, shading off to a rose margin, and others crimson, with a white border to the segments. Self and spotted sorts were well represented.

Outside one of the houses in a cool, shady position was the finest batch of Schizanthus Grahami we have seen in pots. The plants were of good average height, though not nearly so tall as they are sometimes grown here, sturdy and profusely flowered. The flowers are of a rich carmine, with a large orange blotch on each of the upper segments. Equally handsome was a white variety, having the two customary orange blotches. The pots used were 24-size. Could gardeners, generally, see such a sight, they could hardly help becoming imitators in cultivating this showy annual. A fine plantation of East Lothian Stocks, hard by, was just commencing to bloom. The flowers are intended for cutting.

The new Palm House is a tall structure, handsomely fitted with all modern appliances, and filled with large, well-grown Palms of the most approved kinds for furnishing and general decorative purposes for which they are held in great requisition while the Court is at Windsor. Kentias, Arecas and Cocos flexuosa are prominent occupants of the house. On either side of the central pathway is a row of tall, broad-leaved Bananas which give a tropical effect to the whole. They are planted out in the beds. Scarcely less prominent is Cobaea scandens, trained to the roof, from which long, rampant and flowering shoots are suspended everywhere, like lianes in a tropical forest. These Cobaeas have been planted temporarily to cover the roof until choicer things, including Allamandas shall have grown sufficiently to take their place.

The conservatory stands at right angles to the Palm house, and is kept at a much lower temperature. Tall Camellias are a prominent feature of the permanent occupiers of the house. Palms also find a place; and flowering plants of all kinds that may be in season and keeping with the heating of the house occupy the side stages. Dasylirion acrotrichum finds a place here. In a short corridor leading off from the conservatory is a fine collection of the newest and best of the large-flowering type of Cannas; and very showy they are. Some are scarlet, crimson or yellow; others yellow, richly spotted with scarlet, or yellow with one or two red petals in the centre, making them very distinct and handsome. A large, climbing Niphetos Rose covers the roof.

A stove we passed through contained many useful flowering subjects, such as Anthurium scherzerianum, Tuberoses, Gardenias, Stephanotis, Laelia purpurata, and the profusely flowering Oncidium sphacelatum. In another compartment of the same house was a very fine variety of Stephanotis floribunda, flowering profusely along the roof, and filling the house with a rich and fragrant aroma. Various Begonias, including fine hybrid forms of B. incarnata atropurpurea, and Vanda teres in bloom, together with other useful decorative subjects find a place here. Caladiums, however, in quantity and variety, constitute the leading feature of the house. Crotons of many sorts and in all sizes fill another house and are much used for decorative purposes. Interesting

was a piece of Nelumbium speciosum nuciferum in a small tank. It has white flowers, with more petals than the type, and requires more heat to make it happy. Even in this confined area, Mr. Owen Thomas succeeds in flowering it.

Another large stove contains a great variety of useful and valuable decorative plants, valued chiefly for their foliage. Very conspicuous are numerous well-grown pitcher plants (Nepenthes). M. mastersiana may be seen with pitchers of various colours, including dark crimson ones. One plant is notable for the great size of its pitchers, which are bulged out or inflated in the middle, in a way that we have never seen before. N. Curtisii is another favourite. One plant of moderate size carries ten fine pitchers, that are richly blotched with crimson; another bears pitchers of enormous size; while a third is quite distinct in form, the pitchers having long and much curved necks at their union with the stalk supporting them. A fine plant of Cyanophyllum magnificum shows that it is well cared for. A huge piece of the Dove Plant (Peristeria elata) is remarkable for the size of its pseudobulbs, and the strength of the scapes which it is throwing up, and which will attain a height of 4 ft. before the flowers expand. It behaved in this desirable way last year.

The Rose house is largely occupied with large plants of Climbing Niphetos, planted outside and taken in through the bottom of the wall. They are trained over the roof, except at one end, which supports a profusely flowered mass of Bougainvillea glabra. The stages beneath the Roses are occupied with a fine batch of Lilium speciosum, which will bloom in July. Cassia corymbosa is flowering finely on the back wall.

Roses and Hardy Flowers in the open.—The gardener's residence, situated in the garden and close to the frame ground, is a model of neatness, and quite in the southern English style. Being covered with climbers such as Wistaria and Honeysuckle, the latter in full bloom, it has a cool and inviting appearance. The bothies opposite the frame ground are also clad with climbers, amongst which Rose Scarlet Malmaison is flowering profusely.

Along the side of a flower border runs a young hedge of Rose William Allan Richardson, full of vigour and flowering freely. The border is bounded with a broad band of the best variety of Thrift (Armeria vulgaris). Pinks are grown in quantity, and are now flowering most profusely. Eremurus has just finished flowering. Irises and Iceland Poppies have been in bloom for some time. Daffodils, of which there is a collection of the best, are not yet lifted. A feature of the gardens close by, consists of climbing Roses such as Crimson Rambler, King of Wurtemburg, William Allan Richardson, and others trained to frames of wire. They blossom abundantly. We noted also a broad border of Marie Louise and Princess of Wales Violets. Mr. Thomas introduced the latter, which is now recognised as the best form of Violet in cultivation.

FRUIT HOUSES.

The first vinery we passed through was the fourth in the order of starting, and a heavy crop of Black Hamburgh and Foster's Seedling is now about ripe. The first named occupies most of the space, three vines of the latter being confined to a narrow space along the roof. We next passed through a succession of Peach-cases, planted along the front with Peaches and Nectarines, and along the back with Black Alicante grapes in the shade of the young Peaches. These cases and the open walls will furnish a supply of Peaches till November. Next in order came a house filled with Brown Turkey Figs, planted last year and scarcely yet established though bearing a heavy crop of fruit. The trees were of considerable size when transplanted, which accounts for their being in full bearing condition.

The Banana house is closely occupied with full-sized plants of Musa Cavendishii, in various stages of development, some bearing huge bunches of fruit. Equally interesting and now getting uncommon in Britain was the Pine pit. The Pineapples are planted out instead of being grown in pots. Large but unrooted suckers were inserted last September, and the plants are now in various stages of fruiting. In thus planting out his Pines, Mr. Thomas makes a bold advance upon the old and slow method of growing them in pots. Nevertheless, he has another pit in which the plants are grown in pots and the fruits about ripe. The variety used is the Queen, the plants being 14 months old.

Most interesting is a large vine of Foster's Seedling almost occupying the whole of a vinery. Some young ones are planted along the front in case the large vine might fail, but the original is still full of vigour and likely to continue. From the main rod along the back of the house, sixteen strong rods are trained downwards to the front of the house, each bearing on an average 14 bunches of grapes, making a grand total of 224. They are now about ripe, and grand bunches they make.

The second early Peach house contains a splendid crop of Elruge Nectarine nearly ripe. A vinery contains Muscat of Alexandria, some of the Vines being planted along the middle of the house and trained both upward and downward, and others planted outside and the rods taken inside. Madresfield Court and Duke of Buccleugh in another vinery are about ripe, and both in fine condition. Very few can manage the Duke as it is done at Windsor. A late house of Alicante bears a heavy crop now about half grown. Lady Downes, Alicante, and Gros Colman fill another vinery; and the latest is planted with Lady Downes and Alicante, now only in bloom. Cherries in pots are over.

Melons fill more than one pit, and may be seen in various stages of progress, a large quantity having been cut and used or still in the fruit room. Some of the favourites here are Royal Favourite, The Lady, with fine fruits 5 lbs. to 6 lbs. in weight, the old Beechwood, Duchess, and others. Mr. Thomas has raised a seedling of which he is waiting the ripening in order to prove the result of a cross between Beechwood and Duchess. The handsome fruits are now 6 lbs. to 8 lbs. in weight. In all probability we shall hear of the variety again. A fine lot of Tomatos, including Frogmore Prolific, is grown in pots and now ripening good crops of fruit. Another triumph of Mr. Thomas is the new Tomato named Golden Jubilee, which recently received a First-class Certificate from the Royal Horticultural Society. The fruits are like those of Perfection in size and shape, but golden, suffused with orange, and of good flavour. The variety is also very fruitful.

In the fruit room were quantities of Melons, Peaches, and Nectarines, being retarded till required for use. Amongst Peaches, Royal Favourite was handsomely coloured. The Downton Nectarine is a soft purple-red variety of excellent flavour.

Close by here are quantities of Strawberries planted out in pits and now ripe. The Musbroom house is finely fitted with slate beds in tiers, one over the other. French Beans and Potatos are forced in pits in large quantities, forming a succession over a long period of time.

The kitchen garden.—Good cultivators know not only how to utilise every space in a garden, but how to make the best of natural conditions that present themselves under any given circumstance. Rows of Peas were sown in front of and close to several of the plant and fruit houses, so that they have been brought along quickly by the shelter of the houses and the natural heat of the sun. The result is that gathering commenced in the last days of May and have been continued ever since, that is, for the past month. The varieties grown here are Chelsea Gem, Sutton's May Queen, Sutton's A 1, Giant Early, and others. They were still carrying fine crops when we saw them on the 12th inst.

The kitchen garden is about 50 acres in extent, and none too large for the crops required of them, as several of the Royal residences are supplied with fruits, flowers, and vegetables from here. Successional crops are grown on an extensive scale, and we noted newly planted Brussels Sprouts covering 3 acres of ground.

Elsewhere we came across Peas, Carrots, and Onions in great quantity, especially the last named which are required at all times. They constitute a fine field for the operations of the Onion Maggot, of which we could see traces. Mr. Thomas finds a dressing of nitrate of soda one of the best antidotes. The soil of the garden consists of brick earth (that is, a heavy clay loam) overlying gravel, and that again overlies the London clay. The nitrate of soda, therefore, supplies the much needed nitrogen in the earlier part of the summer, and enables the Onions to make rapid progress, thus getting beyond the stage at which the maggot proves most destructive. Not far from here is a break of early Cabbages of several varieties, but so healthy and even in growth as would make many a gardener green with envy. Peas and Beans are making excellent progress, and Asparagus is still being cut.

The Strawberry plantations are both extensive and interesting, both on account of the numerous varieties grown and the behaviour of certain varieties as compared with others. Many varieties were bearing ripe fruits previous to the 12th inst. King of the Earlies was one of the first, and had been affording supplies for some time previous to that date. Black Prince and Scarlet Queen are also early though small. Here we came across a new variety named Sir Trevor, a cross between Royal Sovereign and La Grosse Sucré, which should give excellent results, judging from the parents. It is indeed an acquisition and will no doubt take high rank amongst Strawberries when it finds its way into commerce. It ripens five or six days in advance of Laxton's No. 1, and is well-adapted for forcing, as well as outdoor culture. The variety was raised by Mr. Thomas. President and Empress of India are esteemed, the latter producing dark red fruits very freely. Gunton Park is not so satisfactory. The old Bicton Pine finds a place on account of its flavour. John Ruskin ripens early, The crop borne by Leader is simply enormous. Laxton's No. 1 was nearly over by the time we saw it. Monarch is a showy fruit. The fruitful character of Noble, together with the size and rich colour of the fruits justifies the cultivation of it. Any lack of flavour of which it is guilty is remedied artificially by means of sugar and cream.

Late Strawberries are well-represented. Amongst others we noted James Veitch, Commander and Sir Harry; the latter, however, is a weak grower. A. F. Barron and Waterloo are grown, the latter giving most satisfaction. Pauline is a second early. Sharpless and several other American varieties have been tried, but neither of them succeed satisfactorily in this country, the physical conditions of our climate being unsuitable. Countess is the best-flavoured Strawberry grown at Windsor, and is a midseason variety. The Strawberry plantations are renewed every three years, and we noted young ones in fine vigour coming on to take the place of the old.

Orchards and Wall Fruit Trees.—There are two orchards, the older of which was planted before the Queen's Accession in 1837. Some of the varieties of Pears are loaded with fruit while others are very light. The same may be said of the Apples, Plums and Cherries in the open ground. The new orchard was planted in 1892 and is steadily becoming established.

Of all the fruit trees upon the walls we could not but admire the Cherries which are everywhere well fruited, and in many cases very heavily, the red and otherwise brightly coloured fruits showing up well in the sunshine. The trees were securely netted against the depredations of birds. Peaches upon the walls are also bearing heavy crops, and Apricots are quite as good. Most of the trees are trained in the fan-shape, but Pears are also grown as upright cordons. Nowhere did we notice trees of any great age upon the walls, because they are removed whenever they show signs of failing and replaced by young trees. By this means Mr. Owen Thomas is able to keep up a supply of fruit of excellent size and quality. We well remember the grand exhibit of Pears, Apples, Pineapples, Melons, &c., he made at the Crystal Palace on the 30th September, 1894, when the first show of British grown fruit was inaugurated by the Royal Horticultural Society.

Everything about this renowned establishment of the Queen is in excellent keeping and reflects much credit on her gardener, Mr. Thomas, to whose courtesy we are greatly indebted for facilities in making the above notes.

Apples and the complexion.—A school girl, who was in the habit of taking a plate of Apples to her room at night and slowly eating them while she studied her lessons, soon became the envy of all her associates on account of the clearness of her complexion. Some of them learning the secret adopted the same habit and in turn were envied by the rest of the school.

Two Hundred and Fifty Pounds of Potatos are consumed each year by every man, woman, and child in the United Kingdom, and yet we only eat about half as many as the French people, and about a quarter as much as the Germans. We grow 173,000,000 bushels, and import about 500,000 tons from other countries, or about another 20,000,000 bushels.

HINTS FOR AMATEURS.

Hoeing.—If there is one tool more than another that must not he allowed to lie idle during the summer months it is the hoe, although we fear there are comparatlvely few amateur gardeners that fully recognise this. Usually the hoe is looked upon as an instrument for clearing the ground of weeds. This ls the truth certainly, but it is not by any means the whole truth. What is the use of hoeing, the tyro will say when there are no weeds to hoe, it is lahour for no end. If the eye of such a person chances to light upon these notes,we would ask him to let it rest there awhile, as we would like him to understand thoroughly that useful and invaluable tool as the hoe is for getting rid of weeds, it is equally serviceable in other directions.

It may be advisable to remark at the outset that there are two kinds of hoes, the draw hoe, and the push or Dutch hoe. Of the former there is a number of forms which the ideas of various makers have called into existence. The draw hoe, however, is not easy to use, and not so thoroughly useful as the Dutch hoe, the virtues of which we will pass on to consider.

In employing it the workman is not obliged to walk over the ground he has already loosened, but simply walks backward, thus leaving everything in front of him clean level, and shipshape. Generally a handle upwards of 6 ft. in length is affixed to the head and thus beds and horders of a good width can be reached by the operator standing on the path, and without the need of his going on the soil at all.

Throughout the summer months all growing crops be they of vegetahles of flowers benefit greatly from frequent stirring of the surface soil. Thus in hot weather watering is necessary. The sun's rays coming after the operation of water hake the soil into a hard crust and thus hinder the perfect aeration of the soil. This crust should therefore be hroken up hy means of the hoe. Then again the effects of drought are really minimised by keeping the surface soil occasionally stirred.

We may add a word of caution as to the use of the instrument however. The proper way to use it in flower beds and borders is to allow the hlade to lie on its hack, when it will he nearly parallel with the surface of the soil, and will not then have a tendency to plunge away down, and seriously disturb the roots of favourite plants on behalf of which the trouble is being taken. The haft of the hoe may be held so that it reaches to the waist of the workman or workwoman, in which position it can be used with the greatest ease and comfort. In selecting a tool from the store, therefore, hold the haft in this position, and turn the blade on its back, when, if it is a good tool and one that will suit you, the latter will lie flat on the ground or nearly so.

Edging Shears.—If there is anything that is likely to put the amateur out of patience it is the use of the edging shears. More than likely he has let the grass edges in his garden grow far longer than he ought to have done. The grass has rooted into the walk in the meantime, but of that the happy procrastinator knows not nor recks. Finally the time comes when the effort has to be made, he grasps the shears in an ecstacy of energy and goes at the grass fondly imagining that it is not going to take him long to put matters straight. A wild convulsion of the handles follows. The blades twist and wriggle like snakes, dig into the gravel, tear pieces out of the turf, and are generally unmanageahle. Never mind, that was only a beginning! We'll make a fresh start and do better this time, says the sufferer. Accordingly a fresh start is made but the better results are still in the realms of the dim future. What the dickens *were* these things made for is the first question Mr. Amateur asks himself; it is obvious that they will not cut grass. In such an extremity the only thing to do is to abuse the store-keeper who sold them, or the friend who lent them, and the fun goes on again. Possibly, if the man sticks well to his task for a few hours, he may manage to make some show for his labour, but what a show it is! the grass edge looks as if it had been badly bitten or worried to death, and tufts of grass are sticking up here and there defying the scissors to dislodge them. It may be that the wielder of the scissors in high dudgeon then retires to the privacy of his chambers to oil his blistered hands, to return to his aching body an equivalent for some of the moisture that has left his body in the form of perspiration, and to ruminate on the hardness of life in general and the "cussedness" of grass edges and shears in particular. Possibly the last straw comes when Mr. Amateur hears his better half kindly telling visitors that "John worked *so* hard this afternoon to make that grass look nice. It makes him feel like a had mixture of culprit and martyr."

Now all this trouble may be spared if, first of all, the edges of the grass are kept regularly trimmed, not allowing time for roots to be made. Then the shears must be used in a quiet sort of way. The curved point of the lower hlade must be allowed to lie on the ground and the handle attached to that blade grasped firmly and held rigidly in the left hand. The right hand takes the other handle which governs the blade which does the working backwards and forwards. A gentle pressure forward should be given and as soon as a fair quantity of grass is between the blades the latter should be closed evenly and firmly. No twisting or straining of the blades must be allowed, otherwise the cutting will not he satisfactory. It is also had practice to attempt to take too much grass at a time, for a clean cut is almost impossible under such circumstances.

The above are only hints as to the management of edging shears. A practical demonstration of their use would he necessary to complete the lesson, and even then some practice is required before the heginner can handle them easily and efficiently.

Papaver rupifragum.—The gorgeous colours of the Poppies are not admired by all. Many find fault with the plants because of their garishness, and aver that they find no pleasure in beholding the vulgarly bright-hued flowers. Others again grumble at their fugltive character. The form under notice, however, cannot be hrought under either of these indictments. P. pilosum is thought highly of hy not a few, and this is undoubtedly a great deal better than it. It is about 18 in. in height, and a most profuse flowerer. The blooms themselves are ahout 4 in. in diameter when fully expanded, and exhibit a most attractive shade of bright orange-buff. This colour is all the more valuable on account of its comparative rarity in the months of early summer. The flowers will last for several days in water, and in every way the plant is well worthy of the attention of the amateur.—*Rex*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Pelargonium Wall.—*A. Linford* was greatly interested in the mention of a "Pelargonium Wall" made hy *Rex* last week. He has a bit of a wall in his greenhouse that he would like to cover, and wishes to know when to put the plants in, and if the border requires any special preparation.

Planting may be conducted at any time—the present is as good as any. The border should be dug out to the depth of 2 ft., and some broken bricks put in the hottom of the hole for drainage. The soil may consist of two parts of mellow-loam, and one of good leaf soil rubbed through an inch mesh sieve. An addition of sharp river sand will be advisable. The directions given by *Rex* for pruning, etc., should be followed.

Pruning Laurels.—I have a Laurel hedge in my garden which has got too high, and is thin at the hottom. Please tell me when will be the best time to cut it back.—*Jas. Muir.*

You must leave the hedge until early next spring, say the end of February or the beginning of March. Then you may prune it to your heart's content, and the old wood will soon be covered with young shoots, and will not look unsightly for very long. If the hedge is thin at the bottom we should advice a pretty severe pruning.

Mulching Carnations.—*C. L.*: About 2 in. in depth would be a good mulching with manure. If you use Cocoa-nut fibre refuse 1 in. in depth will be sufficient.

Tomatos on a low Wall.—*F. O. B.*: A wall such as yours on which the greenhouse stands may be turned to some account for Tomatos, certainly, but it will be of no use to train the ordinary erect way, for they would not have sufficient room. Train the stems at an angle of about 45° to the ground line, and you will stand a chance of reaping results.

Bad Cineraria Seed.—*W. Teg* writes a most amusing letter, although as it consists chiefly of defamatory adjectives we will not attempt to print it. Of course, the first thing many people do when they have a failure is to abuse the seedsman—that is generally safe. We should advise him to get another packet of seed, and not to cover it so deeply this time, and above all to shade it well and water it carefully. Heat is not the only consideration nor one of the most important either, since the young plants may be seen coming up out-of-doors in shady places where the old plants have been stood.

Pot-bound Tomatos.—I noticed some Tomato plants a few weeks ago that were intended for planting out-of-doors. They were over 2 ft. in height, and were carrying a few small fruits, although they were only in 32-sized pots. On enquiry I was informed that this was exactly what was wanted, as such starved plants gave a better crop of fruit than others which had been allowed to grow as vigorously as they liked. Is it a common custom to treat the plants thus?—*C. C. N.*

The custom is commonly practised, and there is very little doubt that the starving induces the plants to make a greater effort to produce fruit. It is a natural thing for any plant, once its existence becomes threatened, to produce fruit to carry on the succession. The trimming and pinching that Tomatos are accorded is another method of curtailing what is to the gardener undue vigour, since it minimises his chance of a heavy crop of fruit.

Freesias.—*J., Kennington.*—The Freesias may be left as they are until August, when it will be time to repot them. They should be kept under cover out of reach of the rain.

Thinning Onions.—We should advise you to get your Onions thinned at once, *W. Arkwright*, if the ground is soft enough. The best time to thin Onions is after rain, when the plants can be easily pulled out. When the ground is hard and dry they only break off. In the absence of rain the best thing to do is to water the bed well overnight, and rise with the lark next morning to do the thinning before the sun has had time to bake the soil.

Yerbenas—Undoubtedly some little time must elapse before the plants will cover the whole of the ground, *B. L.*, but it is not advisable to plant too thickly at first. Get a number of wooden pegs about 4 in. in length, similar to those commonly used for layering Carnations, and peg the growths down to the soil. By distributing them evenly over the surface of the bed you will soon get the ground covered.

Cockscombs Out-of-Doors.—*Querist* noticed in the "Hints to Amateurs" recently that Celosia pyramidalis plumosa might be used as a bedding plant for the flower garden, and wishes to know if Cockscombs might be utilised for the same purpose.

We see no reason why they should not. Of course they must be raised in heat and potted on until the combs are of a fair size. Once this stage is attained, however, there is nothing to prevent their being consigned to the flower garden. Doubtless the one thing that militates against their employment in this way is that they have reached an attractive stage in their pots before they are fit for outdoors, and it seems too great a sacrifice to part with them when they would look so fine in the conservatory.

Mealy Bug on Stephanotis.—You will find some difficulty in ridding your plant of this pest, *Y. A.*, now that it is so dirty. You must go over it frequently with a small soft brush dipped in a solution of Lemon Oil Insecticide. You will thus be able to cleanse the axils of the leaves and rout the bug from various odd corners that you could not otherwise reach. Chinks and corners in the house itself that afford convenient harbourage for the bug should be touched with neat petroleum. Syringe well with clear water twice a day.

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HER MOST GRACIOUS MAJESTY THE QUEEN AND EMPRESS.

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

THE PRINCESS OF WALES ORCHID.

ODONTOGLOSSUM CRISPUM (ALEXANDRAE).—This is without exception the most popular of all the Odontoglots. Even the starry forms, when made up into sprays, are very much appreciated by the ladies, and find a ready sale on account of their elegance and lasting properties. The forms, however, most sought after by connoisseurs are those with broad sepals and petals, known as the Pacho type. A fine variety of this kind would easily realise ten guineas even now; whilst a fine spotted form would fetch ten times more.

O. CRISPUM APIATUM, one of the best known spotted forms, would, if brought under the hammer, realise an unprecedented sum. Just fancy buying a few hundred imported plants at, say, £25 per 100, and flowering one or two a tenth the value of the above. This lucky chance is possible and even probable; and as an investment there is no better horticulturally.

Coming to the prizes out of recent importations, we have only to instance the beautiful O. crispum Heliotropium and O. c. Starlight as shown by Mr. R. B. White; and O. c. Queen Victoria, shown at the Temple Show by Messrs. Hugh Low & Co., all of which we believe have been passed on at long prices, so that it is easy to see what possibilities there are in imported plants. Small wonder is it, then, that they command a ready sale.

There are, of course, many other very fine varieties not a few of which are on the Continent; but as this is not intended as a cheap advertisement, there is no need to mention them here.

And now for a little straight talk respecting their treatment. Coming as they do from an altitude of 7,000 to 8,000 ft. it will be readily understood that cool treatment will be the most suitable. It has been said, and I believe with some truth, that in their native habitat it is no unusual thing to find them just at daybreak quite white with frost. The temperature, however, does not remain low sufficiently long to do any harm.

To attempt to grow them over here in a temperature lower than 45° would end in failure to a certainty. The house best suited to their requirements, to our mind, is a low span with a path down the middle and 3 ft. stages on either side. The stages we cover with ordinary roofing tiles, which, whilst being clean, are sufficiently porous to hold enough moisture from one damping down to another. This admits of the house drying up (which it should do) once a day.

SHADING.—This should be twice the thickness of that used for Cattleyas, and, where possible, should be elevated a few inches above the glass so as to admit of a free current of air passing between the blinds and the glass. This has a wonderful effect in keeping down the temperature during very hot weather.

The heating of the house in winter is, of course, important; ours is fitted with a 4 in. flow and return on each side, and is worked by a saddle boiler. Assuming that you have the house ready, we should recommend you to commence by buying in imported plants, being, however, careful to get them from a reliable source, as they are not all broad forms that that are being sent over. The pseudobulbs of the best type are short round ones; therefore it is best to avoid the long thin ones which bear, as a rule, starry flowers—O. andersonianum or O. gloriosum.

Having secured your plants, commence to overhaul them, cutting away decayed bulbs, old bracts, &c. This being done select convenient sized pots, which should be three parts filled with crocks. If the plants are in good condition we pot them up straight away, using good fibrous peat, and sphagnum moss in about equal parts. This may be either mixed beforehand or used separately; we always take the latter course.

With plants in poor order, or if received in early spring or late in autumn, it would be safest to put them in crocks alone for a few weeks, allowing them to break away before adding the material. When the potting is finished, give a sprinkling with the syringe, and likewise when damping the house down in the morning and afternoon. This treatment is repeated every day right up to the end of September. Very rarely indeed are they watered direct by the watering pot; but during the autumn and winter months it is not advisable to syringe overhead.

The great thing with Odontoglossums is to keep the moisture, air and shading nicely balanced, too much of either being detrimental to their well-being. Established plants we treat in precisely the same way, always giving them some fresh material once in a season. The bulk of ours (four thousand) is potted during August and September.

INSECTS.—Thrips, if allowed to get a foothold, will soon ruin Odontoglossums, so that every means should be adopted to prevent them making any headway. XL All Vaporiser is the best thing ever introduced, easy, safe, and sure to kill all insect pests.—*C.*

V. R.

SIXTY YEARS A QUEEN.*

London, June 22nd, 1897.

ALL London put by toil to-day—
Old *Sol* came forth with pride;
The rich, the poor, 'neath buntings gay,
Were marshalled side by side.
Refrains of music filled the air,
Caught up by hearts unseen—
The same old Song—the same old Prayer—
That prayer!—God save the Queen!!!

All London put by toil to-day,
When kindred, years apart,
Moved with the throng to homage pay—
To pulsate heart to heart.
Refrains of music filled the air—
Halt, maim'd, and blind were seen,
Though sad their lot, mid silent prayer,
To lisp "God save the Queen"!!!

All London put by toil to-day;
Words, cabled east and west,
Were greetings flashed, from sea to sea,
To reach one Royal breast.
Refrains of music from mid air
Flashed! cabled back between
The voice of Song, the voice of Prayer—
God save—Long live the Queen!!!

All London put by toil to-day;
Earth's Rulers, far and near,
Now ponder o'er Victoria's sway,
Where "Love can cast out fear."
Old Erin—Albion—Scotia—one—
The Thistle, Rose, and Shamrock seen—
One triune blend that fought and won,
Then cheered, and sang, God save the Queen!!!

WILLIAM BAYLOR HARTLAND.

Ard-Cairn, Cork.

PLANTS OF THE QUEEN.

To the list of plants named after Her Most Gracious Majesty Queen Victoria, given in one of your contemporaries, I beg respectfully to add Cineraria The Queen, and Cucumber Empress of India. Both were raised at the Exeter Nursery, and distributed early in the eighties, by the late Dr. Wm. Robt. Woodman, when trading as Lucombe, Pince & Co. The former was a magnificent variety, rich purplish crimson, with white centre, of great substance, the individual flowers as large as crown pieces; and was chosen from our new strain of Cinerarias, known as the Wonder of the West strain, by the late revered Doctor, and named by him. He also selected and named many others, including Prince of Wales, white centre, rich magenta margin; Princess of Wales, white centre, rosy purple margin; Lord Beaconsfield, light purple-mauve, white centre; Earl of Devon, china-blue, passing to mauve; Sir Stafford Northcote, dark purple, and Lady Northcote, white centre, deep edging of rosy purple. This strain of Cinerarias as you will no doubt remember, was a departure from the ordinary types then in cultivation, and created quite a sensation at the exhibitions, during many seasons. At that time, I had the control and management of Lucombe, Pince & Co's seed department, and can well remember that large quantities of Cineraria seeds in sealed packets, at 2s. 6d. each, were sold to growers in all parts, Messrs. Hurst & Son of Houndsditch being the wholesale agents.

Cucumber Empress of India was a splendid white-spined variety for summer cultivation, averaging 20 to 24 in., and was awarded a certificate by the Royal Western Horticultural Society. It was very popular in west country gardens, down to the time of my leaving Devonshire, some ten years agone.—*W. Napper, Royal Ashburnham Park Nursery, Chelsea.*

*This would go to the air of God Bless the Prince of Wales, and comes from a seedsman, sixty years on earth.

THE ICELAND POPPY.

WHEN the sun is at a white heat, so to speak, the ruddy glare of the Oriental Poppy is too much for the eyes to look upon, although it is effective enough in the distance. The Iceland Poppy on the contrary is agreeable to look upon in its various shades of orange, yellow, and white. It also endures for a much longer period than its oriental congener, throwing up numerous flowers in succession over a long period. Old plants flower much earlier in summer than young ones, and for this reason successive sowings constitute a means of lengthening the period during which flowers are obtainable for cutting. They may be used alone or in combination with other flowers; but the more thinly they are arranged the better. If at all crowded, their fragile structure would be crushed, but apart from this all their individual beauty and gracefulness would be entirely lost. Their sharply cut or regularly defined outline, poised like a dainty goblet at the end of slender stalks is very charming. The plant is perennial but relatively short lived, so that it is needless labour to attempt propagating it by cuttings or division like most other perennial Poppies. Seeds are produced in abundance, and by sowing them on the surface in autumn or as soon as they are ripe, the plants will flower about midsummer the following season.

FLOWERING SHRUBS.

LAST autumn being so damp, sunless, and cold in many parts of the north it was feared that flowering shrubs would not be of much interest this season; but it is pleasing to note that the reverse is the case. Seldom have flowering shrubs of the deciduous classes been more beautiful than of late. Thorns, Lilacs of sorts, Laburnums, Cherries, and others have been densely covered with blossoms. Where these are associated with evergreens with fine foliage a beautiful picture is formed. Rhododendrons have not been so much in evidence as last year; perhaps many of the shrubs overtaxed their strength by profuse flowering in the previous season. Reverting to Thorns, it is noticeable that the older trees are not flowering so freely. Many of them some years ago which seemed to be dying were cut hard back. They broke out into free growth and are quite recuperated, with large heads covered with blossoms.

Many proprietors are very tardy in allowing their trees (when failing) to be cut back, but many on which we manipulated during the last dozen years have shown unmistakably the advantages derived from judicious pruning. Coniferae can seldom be improved when they begin to fail; but young growing trees may often be assisted by cutting back growth which is deforming the plant; and we find it is labour well spent to regulate (as may be found necessary) the growth of ornamental plantations. It is regretable to see so many well planted shrubberies left to become mere thickets.—*M. T., Carron, N.B.*

GARDENS OF ATHENS.

THE seaboard of the Mediterranean possesses a vegetation that is in many respects different from ours and from the west coast of Europe generally. The season there is much earlier and the climate warmer. Shade trees are much valued, and if of a fruit bearing character so much the better. The Cypress is much used for the purpose of affording shelter against the cold winds that blow from the north.

The Myrtles and Cherry Laurels are now in bloom, but will disappear before next month. April is the flowering month at Athens and all that neighbourhood. About that time Melias Azedarach hangs out its great panicles of blue or violet flowers. Oranges expand their fragrant flowers, and Almonds are gay. Jasmines and Passion-flowers spread over the walls everywhere, and suspend their long leafy shoots laden with blossom. Climbing Roses in variety adorn the pillars, trellises, and other coigns of vantage. Wild and other Poppies, Fumitories, and various other herbaceous subjects form a blaze of colour that is dazzling to the eyes in the sun-

shine. Vines are also in full growth and bloom. Bee, bird, and butterfly are in full activity, and flit about in their various pursuits. The gardens of Athens are practically at their best in April, and richly fragrant, especially during the morning and evening or cooler parts of the day.

Other seasons, or rather months, in the early part of the year, especially, have their special flowers, whether of herb or tree. Anemones, Asphodels, and other subjects grace the month of March. Daffodils form the glory of February. Lemon trees flower while yet the new year is but a few days old. Opuntias and other Cacti, Mesembryanthemums and others of that type are also characteristic features of the warm south-eastern corner of Europe. The Mesembryanthemums form in many gardens broad green patches, characteristic of vegetation in dry climates. Hedges of Rosemary flower all the winter and are very fragrant.

Common trees in the gardens at Athens are the Mastic-tree, Lemons, Pines, Strawberry-trees, and various others. A large number of these trees are of a resin-bearing character, and have been favourites

Mr. Geo. Nobbs.

for centuries on the south coast of Europe. Pepper-trees resemble weeping Willows, and produce a wealth of long, trailing, leafy branches.

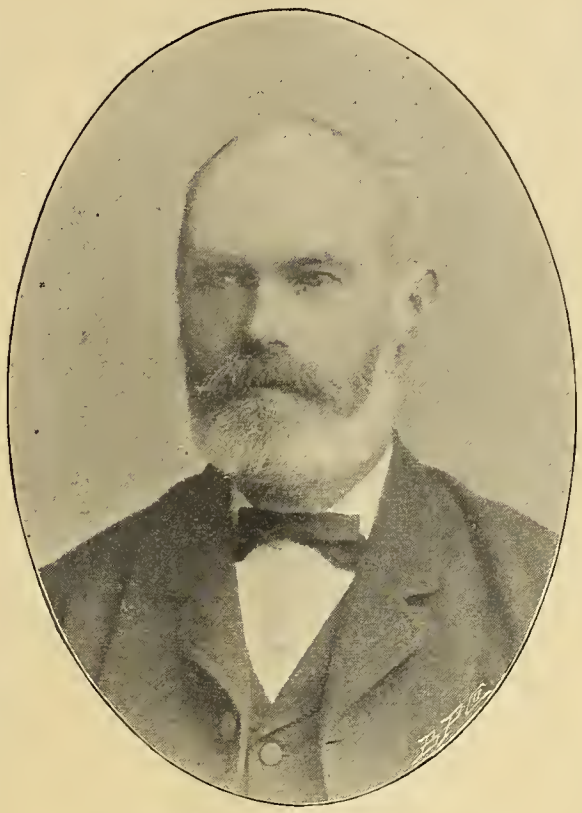
ROYAL GARDENERS.

The present we consider a fitting time to say something of the Queen's gardeners, particularly those who seldom have the opportunity of coming before the horticultural public owing to their respective charges being situated in the more retired parts of the United Kingdom, and distant from horticultural centres.

Mr. Geo. Nobbs.

As will be seen from the accompanying photograph, Mr Geo. Nobbs is relatively a young man. He has charge of the Royal Gardens at Osborne in the Isle of Wight, where his Royal Mistress enjoys the seclusion which it affords and a mild climate where the Myrtle and the Orange blossom against the walls of the terraces, sheltered from the wind, which often blows hard even in this otherwise highly favoured isle.

Mr. Nobbs commenced his gardening career as a lad in the gardens of William Angerstein, Esqr., Weeting Hall, Brandon, Norfolk, under Mr. J. Kendall, who was a thoroughly good gardener, especially with plants. Mr. Nobbs can look back with pleasure to the days of those enormous plants of Adiantum farleyense, grand specimens of Eucharis grandiflora &c. He commenced in 1878, serving in the various departments for about five years. From thence he went to the gardens of Mrs. Lyne Stephens, Lyndford Hall, Mundford, Norfolk, where he was under Mr. Lee. Here was the place to learn the culture of fruit and flowers. Grand Muscat of Alexandria Grapes used to be exhibited at various places during the time at least when Mr. Nobbs served in the gardens. The pleasure grounds were also a picture. Since then, however, sad to say, both the gentleman and the lady owners of the above respective places have passed away.



Mr. John M. Troup.

Leaving Lyndford Hall, Mr. Nobbs went to the nurseries of Messrs. James Veitch & Sons, Chelsea, from whence he was sent to the gardens of the late Lord Ashburton, The Grange, Alresford, Hampshire, where he was under Mr. D. Allan. His next situation was The Grove, Watford, Herts, where he was under Mr. Myers, gardener to the Earl of Clarendon. Mr. Myers was a thoroughly practical man in horticulture. From thence he was appointed on the staff of Hamar Bass, Esqr., Byrkley Lodge, Burton-on-Trent, Staffs., under the present gardener, Mr. James Hamilton, we believe. From this fine place he went to the nurseries of Messrs. J. Veitch & Sons, to await a situation as head gardener. Meantime he served as house decorator to Alfred Rothschild, Esqr., for two years under the supervision of Messrs. J. Veitch & Sons, by whom he was sent to fill his present position on the 2nd October 1894. Mr. Nobbs has, therefore, employed his time well in every branch of horticulture, fitting him for the responsible post he has been called upon to fill; and we hope he will long remain a gardener of his Royal Mistress.

Mr. John M. Troup.

Balmoral Castle is the highland home of Her Majesty the Queen, where she delights to spend several months in the year both in spring and again in the autumn from August till October. From here comes to us many incidents of the Queen's informal and neighbourly visits of kindness even to the poorest of her trusted and faithful servants.

At this beautifully situated and secluded retreat in the highlands of Aberdeenshire, Mr. John M. Troup (see portrait) was appointed gardener to Her Majesty the Queen on the 1st March, 1892. He succeeded the late Mr. William Patterson, who at that time retired through failing health and old age, and whose death we recorded last year. The Queen's motherly kindness and solicitous enquiries when her old gardener was lying ill, will ever be remembered.

Previous to his appointment to the gardens of Balmoral Castle, Mr. Troup had charge of the indoor department in the nurseries of Messrs. Ben Reid & Co., Aberdeen, so that he had experience of plant culture under the trying conditions and rigours of a northern climate. He served Messrs. Reid & Co. for a period of fifteen years. The temperature at Balmoral often falls very low indeed during the winter months—much lower than at Aberdeen as a rule. The Castle is surrounded by mountains at no great distance off, so that plants which can be grown in the open air at Osborne would require the shelter of a greenhouse at Balmoral.

Mr. John R. Stirling.

This gardener of Her Majesty the Queen has served at Buckingham Palace for close upon fourteen years. He served his apprenticeship in the gardens of Lord Leconfield, Petworth House, Petworth, Sussex. He then went to Rose Bank House, Cosham, Earl Poulett's residence in Hampshire. From thence he moved to Leigh Park, Havant, near Portsmouth, the residence of General Sir F. Fitzwilliam. He next got a situation in the garden of Earl Stamford, Enville Hall, Stourbridge, Staffs, popularly known as the black country.

From here he was appointed head gardener to H. H. Vivian, Esq., Park Werne, Swansea, Glamorgan, with whom he remained for eight years. H. H. Vivian, Esq., was made a Baronet when the Prince of Wales opened the new docks; and later on was made a Baron, with the title of Lord Swansea. He has since died.

For two years previous to his appointment to Buckingham Palace, Mr. Stirling had charge of the famous big Vine at Hampton Court, which annually bears 1,200 to 1,500 bunches of Grapes, and which

Mr. John R. Stirling.

thousands of people visit during the course of the year. He has seen a considerable amount of service in the cause of horticulture, and must now see a considerable amount of life at Buckingham Palace, where much decoration has to be done, while the Queen holds her Drawing Room Receptions, and gives garden parties there

PLANTS RECENTLY CERTIFICATED.

The awards mentioned hereunder were made by the Royal Horticultural Society on the 15th inst.

Orchid Committee.

Vanda Agnes Joachim, *Nov. hyb.*—This hybrid was obtained from V. teres crossed with V. hookeriana, the progeny being intermediate. The dorsal sepal and larger petals are suborbicular and soft purple; the lateral sepals on the other hand are white, faintly tinted with lilac. The terminal lobe of the lip is very large, fan-shaped, bifid, with overlapping segments, each of which is bifid. It is rich purple, except the base, which is yellow and spotted. The base of the lateral sepals is yellow, faintly spotted with purple. A plant about 6 ft. high was exhibited by Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking. The flowers are really very handsome without being gaudy. First-class Certificate.

Laeliocattleya Our Queen, *Nov. hyb. bigen.*—The sepals and ovate petals of this handsome bigeneric hybrid are pure white. The lip has a white tube, the interior of which is bright yellow, finely lined with purple along the centre. The lamina is rich crimson-purple, with a wavy and

broad white margin. The great beauty and distinctness of this Laeliocattleya is due to the large blotch just mentioned being completely isolated by the white ground. There is some doubt about the parentage, but none about its beauty. Award of Merit. Messrs. F. Sander & Co., St. Albans.

CATTLEYA MOSSIAE EMPRESS OF INDIA, *Nov. var.*—The flowers of this variety are of huge size, with soft rosy sepals and petals. The large lip is crimson-purple, with a white edge. The lateral lobes are of an orange, edged with white. Altogether it is a very superior variety. Award of Merit. Messrs. F. Sander & Co.

LAELIOCATTLEYA DOMINIANA EMPRESS OF INDIA, *Nov. var. bigen.*—This was obtained from Laelia purpurata brysiana crossed with C. dowiana. The sepals and elliptic petals are rosy-purple. The lip is deeply bifid, and of an intense crimson-purple with a small yellow blotch in the throat. The seed parent has been the more potential in this beautiful variety of a showy hybrid. Award of Merit. Messrs. F. Sander & Co.

ODONTOGLOSSUM CRISPUM CRAWSHAYANUM, *Nov. var.*—The elliptic, acuminate sepals are white, with a large, brownish, lobed blotch in the centre. The petals are rhomboid, with a central brownish-purple blotch, but otherwise similar to the sepals. The lip is oblong and bears several brown blotches about equally distributed all over the white ground. Award of Merit. De B. Crawshay, Esq. (gardener, Mr. Sidney Cooke), Rosefield, Sevenoaks.

CATTLEYA MOSSIAE IN MEMORIAM RICHARD CURNOW, *Nov. var.*—Seldom, if ever, have we seen a larger flowered form of C. Mossiae. The sepals and huge, well expanded petals are of a rich lilac-purple. The lip is crimson-purple, with well defined white edges, and a pale orange blotch in the throat. It has been named in commemoration of the late Mr. Richard Curnow, one of the collectors for Messrs. Hugh Low & Co., Clapton, who were the exhibitors. Award of Merit.

AERANTHES CARPOPHORUM.—A few, curious flowers are borne on a pendent scape of this plant The sepals and petals are ovate, acuminate or shortly tailed and greenish-yellow. The lip has an ovate, recurved, shortly tailed lamina of similar colour and is furnished with a short green spur. Botanical Certificate. Sir Trevor Lawrence, Bart.

GEODORUM AUGUSTI.—The lanceolate, plicate leaves of this species are carried well up, while the large white flowers are produced in a cluster, resting upon the ground. The lip is boat-shaped with a yellow apex. Botanical Certificate.

Floral Committee.

CELMISIA MUNROI.—This uncommon and striking Composite is a native of New Zealand, and regarded as hardy in the southern counties of Britain at least. It is figured in *Hooker's Handbook of the New Zealand Flora*, 133. The oblong-lanceolate leaves are leathery, rigid, silky white beneath, and more or less streaked above. The large flower heads are borne singly at the top of scapes, 12 in. to 18 in. high, and have white rays, with a broad yellow disc. It should be tried on the sheltered parts of the rockery. First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

CEDRUS ATLANTICA AUREA.—When in good form this makes a beautiful tree in the landscape and the vicinity of dwelling houses if not too close. The golden foliage makes a fine contrast with the silvery C. a. glauca. First-class Certificate. Messrs. J. Veitch & Sons, Ltd.

DORYOPTERIS NOBILIS DUVALII.—The leaves of this Fern are bold and massive in appearance, leathery, deep green, glossy, and pinnatifid, with bifid basal segments. The fertile fronds have narrower lobes than the barren ones. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

IRIS GERMANICA MAXIMA.—The flowers of this handsome variety of the common Flag Iris are of enormous size. The falls are of a rich, dark purple. The erect standards are of great width, folded over the top of the flower, and of a soft blue-purple. The stigmas are white with blue centres. Award of Merit. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham.

DELPHINIUM CLARA STUBBS.—The grand spikes of this variety have broad, round flowers of an intense bright blue, with a white centre formed of small petals. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

DELPHINIUM SIR JOHN FORREST.—The flowers of this variety are large and massive, and of a dark purple, more or less tinted with dark blue in places, thus furnishing a much needed colour. The centre is filled with numerous small white petals. Award of Merit. Messrs. Kelway & Son, Langport.

ESCALLONIA LANGLEYENSIS.—In this we have a beautiful hybrid, derived from E. philippiana crossed with the pollen of E. macrantha sanguinea. The small oblanceolate, serrate, dark green and shining leaves take most after the seed parent. The much branched bush produces a profusion of flowers on the short lateral shoots. The open, bell-shaped flowers are rosy and deepening to red in the centre. Award of Merit. Messrs. J. Veitch & Sons.

CALOCHORTUS GUNISONI.—The three small sepals are green, but the large, obovate petals are pure white with the exception of the broad cushion of yellow hairs, tipped with knobs, and situated near the base. The foliage is glaucous. It is a very choice Mariposa Lily. Award of Merit. Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester.

CARNATION HELENSMAN.—This border variety has huge white flowers with broad, rounded petals that are nearly entire, and sufficiently numerous to make the flower quite full without being crowded. It is moderately fragrant. Award of Merit. Martin R. Smith, Esq. (gardener, Mr. C. Blick), The Warren, Hayes, Kent.

CARNATION CECILIA.—The huge yellow flowers of this variety have broad, rounded petals, slightly incurved at the edges. The foliage is good, and the flowers larger and brighter than those of Germania. Award of Merit. Martin R. Smith, Esq.

CARNATION BARRAS.—The large flowers of this sort are of a bright scarlet red, with broad, rounded, almost entire petals. It is a very refined border variety. Award of Merit. Martin R. Smith, Esq.

CARNATION WATERWITCH.—Here we have large and refined flowers of a chaste appearance, and of the faintest blush hue. The numerous petals are more or less incurved at the edges. Award of Merit. Mr. C. Turner, Slough.

PINK ALBINO.—The flowers of this Pink are pure white, handsome, deliciously fragrant, and remind one of a Carnation at first sight. The petals are broad, flat, rounded, and neatly arranged. Award of Merit. Mr. T. Gifford, Montague Nurseries, Tottenham, and Mr. J. Lamb, Burton Joyce, Notts.

ROSA MACROPHYLLA.—The large leaves of this Himalayan Rose have seven to nine elliptic, doubly and sharply serrate leaflets; and the large rosy flowers are produced in terminal clusters. It will make a handsome climbing garden Rose. Award of Merit. Messrs. Paul & Son, Cheshunt.

Fruit and Vegetable Committee.

CABBAGE VEITCH'S EARLIEST OF ALL.—In this we have a compact, conical, and useful table Cabbage. The leaves are of a bright green, and the outer ones are by no means bulky. It has been tried at the Society's gardens at Chiswick, where the committee thought highly of it and the Award of Merit accorded it was confirmed at the Drill Hall on the 15th inst. The seed was sown on the 7th August, 1896, and the plants were ready for use on the 15th May last. Messrs. R. Veitch & Son, Exeter.

CABBAGE SUTTON'S EARLIEST.—Exactly the same soil and treatment was given this variety as the last named, and both were equally early and ready for use on the same date. The leaves of Sutton's Earliest are of a darker green than those of Veitch's Earliest of All, and the heart leaves more wrinkled. Award of Merit. Messrs. Sutton & Sons, Reading.

HALIFAX PARKS.

THE summer bedding designs now to be seen in the public parks of Halifax are alike interesting and effective, and the good people of that busy town doubtless experience a good deal of pleasure in walking among them during their leisure moments, if indeed the people of Halifax have any leisure moments. As may be expected, special Jubilee designs are not wanting.

THE PEOPLE'S PARK.

This park is at all times pleasant to look at and to walk in, but just now in all the glory of its summer dress it is especially so. Mr. W. J. Brook, the gardener, undoubtedley has his work cut out, for from 120,000 to 150,000 bedding plants of various kinds and of all sizes have to be transplanted to the beds and borders from the nursery department. Some of the carpet beds contain as many as 10,000 or 12,000 plants each, which will give an idea both of their size, and of the labour necessary before they are furnished and ship-shape. Many of the carpet beds on the terrace are altered in shape, and the lettering they will display of course, is in keeping with the special excitement of the year. Two Victoria Crosses are well executed and effective here. On the side of the rockery to the south of the central fountain, where "George and May" was figured last year, a large crown stands out in relief. Throughout the park Pelargoniums, Calceolarias, Ageratums, Centaureas, Violas, Lobelias, Stocks, Asters, Dahlias, Tobacco Plants, Marguerites, and French and African Marigolds are used plentifully everywhere. The Wallflowers, which have been magnificent during the past spring, had to be taken up when they were but little past their full bloom in order to make room for the summer plants. They were not wasted, however, but were taken to the workhouse and the infirmary to adorn the sick wards.

AKROYD PARK.

This enjoys many natural advantages which are denied to the others. Its undulating surfaces and rocky banks are free from all appearance of the stiffness of artificiality, whilst the numerous shady nooks are grateful loitering places 'neath the blazing summer sun. The thick shrubberies, too, are a feature of the park. Rhododendrons are present in great numbers, and have made a brilliant show during the past few weeks. The pendent golden racemes of the Laburnum, too, have been much in evidence. Mr. Milbourne has the management here, and under his capable direction things are looking fine. The grotto with its waterfalls and fountains is one of the prettiest of its kind to be found in the country, and is much patronised. About 25,000 bedding plants are required. *The* bedding design of the year consists of a diamond, a crown, and the date June 21st, 1897. There are also numerous hanging baskets suspended from slender trestles scattered about various parts of the grounds.

SKROGG'S PARK.

Skrogg's Park, Lee Mount, is by far the largest open space in the town of Halifax, having an area fully twice that of the People's Park. The natural formation of the ground is charmingly diversified and there are many pleasant walks midst rockeries, shrubberies, arching trees, and flower beds. There are not wanting people who prefer this park to all the rest on account of its distinct character, and for the absence of artificiality. During the last few weeks the Rhododendrons and Ghent Azaleas have bloomed profusely and have been much admired. At the present time, too, the whole of the shrubs are looking well. The golden Arabis does uncommonly well here. Mr. James Craven, the gardener, procured a few pieces of it two or three years ago in the Isle of Man, and it is from these that the present fine stock of plants has been obtained. On the western side of the central pond are some well-planned and executed carpet beds, which of course bear reference to the all absorbing Jubilee. Where last year the huge figure of a crown was to be seen a portrait of the Queen wearing the crown is on view this season. Her Majesty's counterfeit presentment is invested with a series of pretty scrolls.

WEST VIEW PARK.

Here there is not so great an attempt made at bedding as there is in the other parks, and indeed Mr. E. Sutcliffe is so heavily handicapped by the want of glasshouses in which to propagate and rear his bedding plants that it is not possible to make very effective summer displays. It is to be hoped, however, that the managing committee will at no very distant date give the order for the erection of the necessary glass, so that the interests of West View Park shall be as well looked after as those of the others. During the past winter some improvements have been made. Several new mounds have been constructed and planted with suitable shrubs and seeds of hardy annuals have been freely sown this spring. Shrubs have also been planted in the pretty rockery which slopes from the brow of the hill to the basin of the park, Rhododendrons, Elders, Ribes, and white and yellow Brooms having been chiefly employed. Mr. Sutcliffe also proposes, subject to the consent of the committee to sow a quantity of Gorse and Heather on the slopes of some of the steep embankments. This would not only be

a cheap way of making these slopes attractive, but would likely be pleasing to those townspeople who are not able to see the Gorse and Heather blooming in their native wilds. New bye-laws for the government of the park have lately been put in force, although seeing that the grounds are open day and night it is a matter of difficulty to preserve good order.

PHYSIOLOGY OF PLANTS.

Professor Vines of Oxford was announced to give a lecture on the "Physiology of Plants" at the meeting of the Royal Horticultural Society held on June 15th. He confined his remarks, however, to the so-called insectivorous plants, which he has studied so closely and painstakingly. The Rev. Professor Henslow occupied the chair.

In defining the scope of his lecture Professor Vines tabulated the following genera, which he dealt with in order of mention:—Sarracenia, Darlingtonia, Heliamphora, Nepenthes, Utricularia, Gentisia, and Dischidia. The first group Sarraceniaceae include Sarracenia, Darlingtonia, and Heliamphora. All three genera are American. The first two come from the temperate regions of North America, whilst Heliamphora is a native of the mountainous regions of tropical Guiana. Nepenthes is confined to the Old World and is particularly strong in the Malay Archipelago, and in Madagascar. Cephalotus is confined to Australia. Sometimes this is referred to Saxifragaceae, at other times it is placed in a small order of its own. Dischidia was originally discovered in Australia, but is now known to be a native of the Malay Archipelago.

Looking at the whole of these plants, continued the lecturer, one could not fail to notice the difference in the size of their pitchers. Thus those of Utricularia are very small, whilst those of Sarracenia and Darlingtonia often exceed a foot in length. Although the pitcher plants have been studied for nearly 300 years (the first mention of them on record being dated 1,600) we yet know comparatively little about them. They vary considerably, and the position in which the pitchers are borne is specially variable. In Sarracenia and its two allied genera the leaves and pitchers are all radical. In Nepenthes they are elevated on distinct stems. In Cephalotus, again, they are close to the ground. In Utricularia and Gentisia they are borne on the leaves. Some of the Utricularias grow in the water, others on the land, some of the latter having underground pitchers. In Gentisia the pitchers are all radical, and relatively long and narrow. At a certain stage in their development the pitchers of Gentisia bend down and bury their open ends in the ground, thus becoming subterranean. The Dischidias are epiphytes, that is they are to be found growing on other plants, trees usually. The genus Lathraea, although not usually placed among the pitcher plants, ought to be. The plants are parasites, have no green colouring matter or chlorophyll, but have scaly subterranean leaves.

Referring to the views of the earlier botanists with regard to the use and meaning of the pitchers Professor Vines stated that Sarracenia first came into notice in connection, naturally enough, with the intercourse between Europe and America. The idea held by Linnaeus was that the pitchers were reservoirs for collecting water for the use of the plants, and that the hood which guarded the mouth of the pitcher opened and closed to control evaporation. He held that they were closely allied to the Water-lily, the peltate leaves of the latter having become rolled up to form a tube. Sir Jas. Edward Smith at the beginning of the present century quotes the view of Linnaeus, but does not believe in it. He notes that the pitchers are so constituted as to exclude water and not to collect it. He suggests that the air evolved by the dead insects contained in the pitchers may be useful to vegetation, and notes the hairs at the mouth of the pitchers. Mc Bride, an American, states that these hairs are glandular and secrete a fluid to attract the insects. It is now known, however, that the pitchers are really elaborate insect traps. Thus in looking at the structure of the pitcher in Sarracenia we find a ring of glandular hairs at the mouth, then a smooth surface, affording no foothold for the luckless insect, and then towards the bottom a number of stiff spine-like hairs pointing downwards, which effectually prevent escape.

This leads to the question of "what is the good of the insects?" It is generally admitted that they assist in the nourishment of the plants, but the exact manner in which they are utilised is still an object of discussion. The two alternatives are "are the insects digested by the fluid poured on them?" or "are they decomposed naturally," and the products of decomposition absorbed by the plants? The second seems to be the more feasible in the case of Sarracenia, for the pitchers often exhale a most disagreeable odour and maggots have been found. Neither of these facts could occur if the fluid possessed digestive qualities. Therefore in Sarracenia the pitchers are not digestive.

In Nepenthes the pitchers always contain fluid and frequently insects. The structure is different to that of Sarracenia. There are the glandular hairs at the mouth, then the smooth surface next them, but no stiff hairs pointing downwards as in Sarracenia, but the bottoms of the pitchers are covered with glands which secrete a liquid. This liquid has digestive qualities. The old idea was that the fluid in the pitchers was a special arrangement of Providence for providing water for travellers in tropical countries, and further that this liquid was an assuager of grief—hence the name Nepenthes. Sir Joseph Hooker, at a meeting of the Royal British Association in 1874, remarked that the contents of the pitchers did not pass into a state of putrefaction. Since then, a Frenchman and a Russian had come to the conclusion that the liquid was not digestive, but that the bodies of the insects were utilised by the plants after they had become putrified by the action of micro organisms. This had led him (Professor Vines) to make further experiments, and he had come to the conclusion that the fluid is digestive. In the first place a distinct digestive action can be obtained from the fluid taken from unopened pitchers. This will digest scraps of animal matter in the course of one hour. No micro-organism could do this in so short a time, and besides it is not possible that micro-organisms could obtain entrance to a closed sac such as the unopened pitcher. Again by cutting up the pitcher and making an extract from it with glycerine a digestive action is obtained. The pitcher should be soaked in alcohol for twenty-four hours before cutting up in order to kill all micro-organisms that could posssibly be present. Still further, the liquid can be kept for some time, and this would not be if it owed its digestive qualities to micro-organisms; therefore it must owe them to something dissolved, not something suspended in it.

With regard to Cephalotus it is doubtful as to what happens. Mr. Lawson Tait says the fluid secreted is digestive, but the pitchers are small, the fluid secreted small in quantity, the plant is bad to propagate, and there is a difficulty in obtaining sufficient material wherewith to experiment.

Utricularia has bladders with a narrow mouth closed by valves opening inwards, which open to let the insect in and close after it. The old view of the use of the bladders was grotesque, continued the lecturer. De Candolle in 1832 says, "the bladders are floats filled with mucous matter heavier than water in the spring, keeping the plant at the bottom until flowering time, when the bladders emptied themselves of the mucous matter, became filled with air, and floated the plant to the surface. After flowering, the bladders become heavy again and the plant sinks." This, however, cannot be true for there are land forms of Utricularia, and besides air is never found in the bladders in the water forms. Darwin, at the time, proved that the bladders were not floats as the plant would still float when the bladders were cut off. With regard to structure the inside of the bladder is a smooth wall, with here and there a hair with four arms spreading into the cavity. Probably the products of decomposition are absorbed by them. There is no evidence to show that the bladders possess digestive powers.

(*To be continued.*)

SOCIETIES.

YORK GALA.—*June 16th, 17th and 18th.*

"The wind one morning sprang up from sleep,
Saying, now for a frolic, now for a leap"—

sang the poet, and the good people of York will forget neither his frolic nor his leap for many years to come. As we informed our readers last week in a short telegraphic despatch sent us on the morning of Wednesday, June 16th, from the scene of action a hurricane visited the show on the opening day and involved both tents and their contents in inextricable confusion. With the coming to hand of the whole of the details the damage done is even greater than was at first feared. This is all the more regrettable from the fact that the show this year bade fare to be a record one with regard to quantity and quality of the exhibits; but alas the "record" has been established in quite another way, and in a fashion that the people of York will not wish to see broken.

The tents, it is estimated, occupy fully three acres of ground. The main tent was, as usual, in the form of a right angle one arm of which contained the various groups of plants, the other accommodating huge banks of Pelargoniums, whilst at the point of junction of the two arms appeared a lofty and an imposing cone of stove and greenhouse plants. The groups themselves were five in number and are stated to have been finer than any that have previously been seen at the Gala. This year a new feature had been introduced, viz., Orchid groups for which prizes of £20, £15, and £10 were offered. Mr. James Cypher, of Cheltenham, and Mr. John Robson, of Altrincham were the only two competitors, but both had a fine lot of material.

From the arm containing the Pelargoniums branched off three other large tents. The first of these was devoted to fruit, cut hardy flowers, and table decorations. The second contained the Orchids which were present in much greater numbers than at any time before, and occupied fully two-thirds of the space allotted. Many single specimens of great value were staged. The remainder of this tent was occupied by large foliage plants, and flowering greenhouse subjects. The third tent held a grand lot of pot Roses. Cut Roses were not very numerous but the quality was excellent. In this tent were likewise collections of British and exotic Ferns.

Rain fell in the early hours of the Wednesday morning, but ceased about 7 o'clock, and was succeeded by a strong wind, which gradually increased to a perfect gale. The stability of the tents was soon threatened, and men were set to work to strengthen the supports, but the wind raged away with ever increasing violence, and shortly before 9 o'clock the small tent erected near the entrance for the use of the committee collapsed. Then it was seen that the tent sheltering the fruit and table decorations was in imminent jeopardy. Pegs and props started, uprights cracked and gave way, and finally the exhibits beneath were entombed in the folds of the fallen canvas. The second of the branch tents was now exposed to all the fury of the storm, and men were told off to hang on to the stays and ropes, but all to no purpose, the poles darted hither and thither, great rents appeared in the canvas, and the ragged strips thrashed and flogged the air in all directions. The whole tent seemed like some sentient creature chafing under the bonds which held it, but the bonds grew ever weaker and weaker, and the rents ever larger and larger until at last like a runaway balloon it burst all trammels, for the centre upright, a pole of some 6 ins. diameter snapped under the strain, and away went that tent.

Meanwhile the large marquee was not to escape. The shorter poles staying it were lifted from their sockets, and flogged around amongst the plants like flails. In the central dome portion the large mast supporting it cracked, and the various classical figures with which it was ornamented lapsed into the most undignified attitudes. The poles, about 15 ft. in length, which formed the next support, then commenced some wild gyrations on their own account, and in their grotesque antics lifted as many as seven or eight men off the ground at a time, depositing them in various corners with more force than politeness. Presently rents in the canvas made their appearance, and it was seen hat the large tent also was doomed. Scores of men, therefore, set to work with all possible speed to remove the plants from the falling canvas. This was a task of great difficulty, and scarely less danger, for now a scene of the wildest confusion reigned, and ever as the men worked the yawning fissures became greater, and the loose poles more frantically energetic.

The Rose tent, which was nearest to Bootham, was the last to go as it had the most shelter. By 1.30 p.m., however, the whole of the tents had gone down before the destroying breath of the west wind, and the erstwhile spick and span show ground with its complement of swelling canvas was nothing but a heap of wreckage.

Having demolished the canvas structures the destroyer by way of change turned its attention to the bandstand. The roof and other parts of it were found in distant corners of the field.

A meeting of the committee was held in the course of the afternoon, and it was resolved that the exhibits should be removed, but that the gala should proceed, admission to the field being reduced to 1s. before 6 p.m. and 6d. afterwards. Posters were issued announcing that no flower show could be held, so that the committee have done all that they could under the circumstances.

In the entertainments the promoters have always had a dependable second string to their bow, although the flower show is, of course, the chief attraction. They had thus good reason to congratulate themselves upon the pains they have always taken with their entertainments, otherwise there would have been nothing for the public to do but to pack up and go home.

The fireworks commenced soon after 9.30 p m. on Wednesday, but it was still too gusty for the balloon ascents, which were put off for the two following nights.

The music was provided by bands of the First Life Guards, the Black Watch, the Durham Light Infantry, and the 1st V.B. P.W.O. West Yorkshire Regiment.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Climbers for a Wall.—*Enquirer*: If you consider that Roses, Ampelopsis, and Jasminum nudiflorum are too rough for the purpose for which you require them, then it is almost impossible to mention anything except Ivies that would conform to your requirements. Of Ivies there are many fine forms including Hedera Helix raegneriana, H. H. algeriensis, H. H. dentata, and H. H. latifolia, with very large leaves and fast growers, except the first-named which is moderate. H. H. palmata and H. H. madeirensis variegata are smaller leaved types that are beautiful. The last named is rather tender in the neighbourhood of London, but might do with you If not, you could plant H. H. elegantissima which is beautifully variegated and perfectly hardy. We may here say, however, that Ampelopsis Veitchi is almost as neat as any Ivy and in our opinion far more ornamental. If we had had the planting of the climbers we should have included Gloire de Dijon, Fortune's Yellow and Crimson Rambler Roses, than which nothing is more handsome. In favoured parts like Devon, we have seen the first two in flower at Christmas. They also commence to bloom early. Passiflora caerulea is also handsome but requires much attention to keep it close to the wall, and we fear would not suit you. October would be the best time to plant them, but they are perfectly hardy and could be planted when the weather is open. Let us know if this list is unsuitable and we shall endeavour to meet your needs.

Chrysanthemum leaves tunnelled.—*W. H.*: The leaves are being tunnelled and rendered unsightly by the grubs of a small midge named Phytomyza nigricans. Pick off the affected leaves and burn them, otherwise the flies hatching out from the chrysalids will again lay their eggs on the fresh leaves and keep up the evil all the summer. A syringing now and again with tobacco water is said to keep the flies away for a time.

Peaches not swelling.—*A. Thomson*: From what we can see of the specimens you have sent, the leaves and fruits have suffered badly at the instance of some leaf-cutting insects, which we suspect must have been a brown or black weevil belonging to the genus Otiorhynchus. In order to discover whether this is the case or not, you should spread a white sheet under the trees before leaving off work at night. Then come at night with a lantern, and suddenly turn the light upon the trees. This will cause the weevils to drop if any are present, when they may be swept up and destroyed. Some pieces of board might also be used as traps, laying them on the floor of the house, but slightly raised so that the weevils may be induced to take shelter there. All other loose rubbish in the house should be removed, if any is present. Cement all cracks and crevices in the walls to prevent them getting shelter. The fruit you sent had apparently been gnawed in places, causing it to gum. We should be pleased to learn the results of your research and experiments.

Names of Plants.—*Mixture*: 1, Masdevallia Wageneriana; 2, Masdevallia Chestertoni; 3, Odontoglossum constrictum; 4, Begonia rex garden variety; 5, Fagus sylvatica cristata; 6, Skimmia japonica.—*D. Tindal*: 1, Abies nobilis; 2, Abies pectinata; 3, Abies nordmanniana; 4, Pseudotsuga Douglasii.—*W. Calder*: 1, Lychnis fulgens; 2, Lychnis Viscaria splendens; 3, Cerastium tomentosum; 4, Dianthus plumarius fl. pl. var.; 5, Scrophularia aquatica variegata: 6, Funkia subcordata.—*T. M.*: 1, Odontoglossum crispum, a good average variety; 2, Masdevallia harryana; 3, Oncidium pulvinatum; 4, Oncidium flexuosum.—*R. Herdman*: 1, Selaginella Braunii (often but erroneously called S. Willdenovii in gardens); 2, Selaginella uncinata; 3, Pteris tremula; 4, Asplenium fontanum.—*W. R. C.*: 1, Colutea arborescens; 2, Cytisus capitatus; 3, Libertia formosa; 4, Calamintha grandiflora; 5, Anemone dichotoma; 6, Aristolochia Clematitis.—*Charlbury*: 1, An old English garden Tulip, which probably never had a name; 2, Geum montanum.

Communications received—A. L.—T. S.—R. M.—Reading C. C.—C. B. G.—P. Davidson.—Wm. Riden.——J. T.—J. W. Laird—Carl Hansen.—J. E. J.—A. T. De La Mare.—G. Wenloch—R. A.—M. T.—Charles T. Pestridge- B. A.—Amateur—Y—Argo—S. S. M.—Tengart.

LONDON SEED TRADE.

June 21st, 1897.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Seed Market, Mark Lane, report an entire absence of demand for agricultural seeds; prices remain unchanged. Trifolium incarnatum promises to be plentiful.

Artichokes as Fodder.—The value of the Jerusalem Artichoke as a fodder plant has recently been brought to the front. An improved form, rather dwarfer than that grown in gardens is recommended. From three hundred to four hundred bushels per acre is the average yield of tubers, and the tops can also be turned to account. The value of the Artichoke is all the greater because it is not liable to insect attack, and will stand both frost and drought with impunity.

COVENT GARDEN MARKET.

June 23rd, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bnshel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs.		
Grapes, per lb	2 0	3 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	1 6	2 6
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips .....per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 0	3 0
Bouvardias, per bun.	0 4	0 6
Carnations doz. blms.	1 0	3 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	1 6	2 6
Geranium, scarlet, doz. bunches	3 0	6 0
Iris, various doz. bun.	4 0	12 0
Lilac, White (French) per bunch.	3 6	4 6
Lilium longiflorum per doz.	2 6	4 0
Lily of the Valley doz. sprays	1 0	2 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Narciss, various, doz. bunches	1 6	4 0
Orchids, doz. blooms	1 6	12 0
Paeonies, French doz. bun.	5 0	9 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	1 6	3 0
Roses (Indoor), doz.	6	1 0
" Tea, white, doz.	1 0	2 6
" Niels	1 6	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch...	2 0	4 0
Tuberoses, doz. blooms ...	1 0	1 6

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae per doz.	12 0	35 0
Aspidistra, doz.....	18 0	36 0
" specimen	5 0	10 0
Arum Lilies, per doz.	8 0	12 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.....	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope...per doz.	4 0	6 0
Hydrangeas per doz.	9 0	12 0
Ivy-leaved Geranium, per doz.	4 0	8 0
Lilium Harrisii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia .....per doz.	3 0	5 0
Marguerite Daisy doz.	6 0	10 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ...doz.	8 0	12 0
Spiraea ...per doz. ...	8 0	10 0
Scarlets .....per doz.	2 6	5 0
Roots and bedding out plants plentiful and great variety.		

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 3rd, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, July 6th.—Diss Rose Show.
City of Ely Flower Show.
Trade Sale of Imported Orchids by Messrs. Protheroe & Morris at 67 and 68, Cheapside.
WEDNESDAY, July 7th.—Glasgow Rose Show.
Hitchin Rose Show.
Reigate Rose Show.
Tunbridge Wells Rose Show.
County Borough of Hanley Fête.
Blackheath, Lewisham, and West Kent Show (3 days).
Leeds Gala (3 days.)
THURSDAY, July 8th.—Farningham Rose Show.
Bath Rose and Begonia Show.
Bedford Rose Show.
Gloucester Rose Show.
Harrow Rose Show.
Woodbridge Rose Show.
Newcastle Show (3 days).
FRIDAY, July 9th.—Sale of Orchids by Messrs. Protheroe & Morris at 67 and 68, Cheapside, E.C.
SATURDAY, July 10th.—Manchester Rose Show and Cottagers' Exhibition.

GARDENING AT DEVONHURST.—The town residence of E. H. Watts, Esq., Devonhurst, Chiswick, has the reputation of having been once a portion of the gardens of the Royal Horticultural Society at Chiswick; but in the early days of the latter, the situation was practically open country, which it is very far from being now. Houses there were to the north even in early times, but now they have crept round the other three sides, while close up to the wall at the northern end, a paper manufactory consisting of several high buildings are injurious, not only by shutting out the light on that aspect, but by preventing a circulation of air which is of the utmost importance to healthy growth. Nevertheless, under these conditions it is surprising what Mr. James Gibson, the gardener can produce from such a confined, over-sheltered, and over-shaded area, with all the other evils concomitant with the proximity of houses and a dense population.

Within the last few years a great development has taken place in the cultivation of fruits under glass. One long house or Peach-case was recently built for this express purpose, but at present there is an overflow of fruit trees in pots in several of the other houses. There are no old vines here now. One vinery was cleared and replanted with young vines exactly two years ago, and the latter are now practically in full bearing except towards the top of the house, and carrying some splendid bunches. Another vinery planted a year ago now carries a few bunches towards the bottom. The canes in both houses have made wonderful progress in the time. The original Peach house carries a full crop of Peaches and Nectarines now rapidly becoming fit to gather. The fruits of Nectarine Lord Napier are almost as large as those of Peaches usually are, and show unmistakeably that the proper treatment is accorded them. Mr. Gibson has a great belief in the all-sufficiency of water for good results in the cultivation of fruits, and never stints the supply even while the fruits are ripening. The other week Grosse Mignonne Peach bore an excellent crop of large fruits, but they were very pale by comparison with those of Violette Hâtive though said to be earlier, yet the latter were highly coloured The house in which they are grown is a wide one, and the trees are trained only up to a certain height. Some staging towards the back of the house is therefore occupied with pyramidal trees of Peaches and Nectarines in pots. All are in excellent health and bearing a crop of fruit that would have had a telling effect if exhibited at the Temple Show. The fruits are not required here at that early period, and accordingly are only now being gathered. The trees are still very young in the recently built house, and are growing too strongly to produce full crops of fruit, but Mr. Gibson will presently correct them in this respect.

Cordon Apple and Pear trees and pyramidal Plums, all in pots, have ousted the usual collection of plants in one of the largest houses, and now occupy the wide staging on the left side of the pathway. Both Pears and Apples are heavily set with fruit which has been extensively thinned. Seldom have we seen so even and regular a set of fruit upon pot trees. The fruits are now about the size of a pigeon's egg, and some of the earlier varieties of Pears, such as Clapp's Favourite, are even more advanced. A great number of varieties are grown so as to give a succession as well as a chance of fruit every year. The peculiar conditions under which cultivation has to be carried on would also necessitate a sort of experiment in order to prove which sorts give the greatest amount of satisfaction.

The variety of colour, size, and flavour for table purposes cannot be ignored. Tomatos in pots have to be accommodated in several of the houses where they can get the proper amount of light and air. Austin's Eclipse, Sutton's Eclipse, and Chemin are some of the varieties favoured for pot culture, but more are planted outside than usual. All bear medium-sized fruits of rich colour, but the first two named are very fruitful, producing large bunches on short-jointed stems. Sutton's Eclipse is the most shapely fruit, being everywhere smooth and rounded. A large quantity has already been gathered, and the fruits are fitted for exhibition purposes as well as for the table.

A splendid crop of Melons including Blenheim Orange, Countess, and several others, may be seen in one compartment of a span-roofed house. The gardener believes in keeping them watered at all times even when ripening their fruits, and the results testify to the soundness of the practice. Early planted Cucumbers after bearing for some time were cut back to the harder wood, and are fruiting a second time better than ever. A short fruited and smooth-skinned Vegetable Marrow of excellent quality is fruiting freely in various positions.

Fruit trees in the open air are much less satisfactory than those under glass, a fact that may be accounted for in various ways including the injurious effects of late spring frosts. The Apple trees in the open are generally thinly furnished, but Queen Caroline and Lord Suffield are fairly satisfactory. Some of the Pear trees on an east aspect wall are fairly well laden, and by the time the fruits are full grown they will show up effectively. Several of the fan-trained Cherries on walls have afforded a good harvest now mostly gathered.

Mr. Gibson has got together a considerable number of varieties of Strawberries with the object of determining the best varieties that will furnish a supply of fruit over the longest period of time. He is

deeply enamoured of Royal Sovereign which fruits heavily both under glass and in the open air, while the flavour is far superior to other large-fruited sorts that bear with equal freedom. He never uses pots for runners intended for open air plantations, but after they are well rooted in the ground, gives them a heavy watering just previous to lifting them and again after they are planted in their permanent positions. By these proceedings they never receive any check but grow away rampantly producing a splendid crop of large fruits the following season. Two-year-old plantations produce a larger number of fruits, but they are smaller and ripen later owing to the heavy canopy of foliage that shades them. Amongst others we noted La Grosse Sucré, Lord Napier, Monarch, Waterloo, Aberdeen Late, and Countess. The four latter are late varieties, and Countess gives promise of proving useful at Devonhurst. Mr. Gibson, like many other gardeners, has a hankering after Dr. Hogg, on account of its exquisite flavour; but its behaviour is so fickle and fastidious, that if it gives no more satisfaction here than in the Royal Horticultural Society's garden over the wall, it would not repay the labour expended upon its culture.

In spite of the difficulties with which he has to contend here, Mr. Gibson is still an ardent kitchen gardener, and for some time past has been harvesting a heavy crop of Pearl and Magnum Bonum Cauliflowers. The grub of the Cabbage Fly which has been so destructive in former years, is conspicuous this season by its almost complete absence. Satisfaction and other Potatos have done splendidly this year, and though fit for the early exhibitions, have not yet attained anything like full size. We were even better pleased with the Peas being gathered and approaching that stage. Sutton's Early Giant has mostly been gathered; but Duke of Albany and Alderman are now in their prime. The Duke is a well known exhibition Pea, but Alderman seems to have been neglected or overlooked by the majority of gardeners, and this is the more remarkable when one considers its splendid appearance from an exhibitor's point of view. The seeds are also of good quality. The dark glaucous green pods attain an enormous size under good cultivation; and at Devonhurst they are worthy of all praise at the present time.

Potatos.—The cultivation of the noble tuber in France has increased five-fold since 1820.

Carriage of Fruit.—The Government of Victoria has invited that of New South Wales, Tasmania, and South Australia to make joint remonstrance concerning the bad arrangements for the carriage of fruit.

At the Botany Class.—The professor was gravely describing to his class that even the character of food had some effect upon the animals eating it. A student interrupted him by saying in his part of the country a great deal of red wheat was grown, and seriously asked whether that was the reason why so many of the people were red haired.—*Another Student.*

Colchester Rose and Horticultural Show, which was held on June 22nd at Colchester, was one of the most successful ever held in the town. The number of entries, which amounted to over 700, was absolutely unprecedented in the history of the society, and was nearly three times as many as on the occasion of the first show held some four years ago. In the classes for amateurs, small growers, and allotment holders, competition was especially keen, thus denoting the high degree of vitality of which the society is possessed. Colchester is well known as a centre of the art of Rose-growing, and the local cultivators who are only local by virtue of the position of their nurseries, for their fame is world-wide, made a strong entry.

Mr. Kenneth McKenzie, after five and a half years as journeyman and foreman at Whittingham Gardens, has been appointed gardener to Lord Alexander Kennedy, Blackruthven, Perth, Scotland.

Welbeck Abbey.—Mr. J. Roberts, formerly gardener at Gunnersbury Park, to the late Baron L. de Rothschild, has been appointed by the Duke of Portland as head gardener at Welbeck Abbey, in succession to Mr. J. Horton, who is about to retire.

Commemoration Holly at Dundee.—On the Diamond Jubilee day Lord Provost McGrady of Dundee performed the ceremony of planting a fine specimen of Golden Queen Holly in Dudhope Park. There were various other expressions of loyalty at Dundee on the great occasion.

Mr. Robert Douglas, the well-known American nurseryman died at the advanced age of 85 at his home in Wauckegan, Illinois, U.S.A. To his labours we are indebted for the Colorado Blue Spruce, Douglas' Golden Arbor-vitae, Douglas' Pryamidal Arbor-vitae, and the Golden Juniper—all handsome and useful trees. Mr. Douglas' death was a sudden and painless one.

Royal Horticultural Society.—The Council of the society have invited the members of the various committees to a gathering at Chiswick on July 14th, for the purpose of inspecting the gardens, and to hear Dr. Masters, F.R.S., who is to open a discussion on practical suggestions for the better utilisation of Chiswick Gardens. The meeting is to commence at 12 noon and last till 4.30 o'clock.

Flowers for Whitechapel.—A flower show for the poor of this neighbourhood is to be held on Saturday and Sunday, July 3rd and 4th. Sir Trevor Lawrence, Messrs. Jas. Veitch & Sons, Limited, of Chelsea; and Mr. Holmes, of Hackney; with others well known in the horticultural world have promised to help by sending exhibits. Sir Samuel Montagu, M P., Mr. H. Lawson, Mr. Innes, and Mr. Alfred Cohen have contributed the necessary funds.

Syndical Chamber of Belgian Horticulturists.—The monthly meeting of this society was held in the Casino, Ghent, on the 13th ult, when Awards of Merit were accorded to M. Louis de Smet for Anthurium rothschildianum var., and Anthurium andreanum var., by acclamation; to M. A. Rigouts for Stenorhynchus speciosus var. maculatus; to M. L. De Smet-Duvivier for Odontoglossum crispum splendens; to M. Jules Hye for Odontoglossum mulus odoratum, Laelia grandis tenebrosa var., and Cattleya Mossiae alba, the latter by acclamation; and to M. le comte J. de Hemptinne for Cattleya Mossiae var. Certificates for culture and flowering, honourable mentions for culture, and for plants were also accorded at the same meeting.

Sweet Pea Pink Cupid.—This new variety not yet in commerce is certainly distinct from Cupid in the matter of colour, but in no other respect except that the leading stems of Pink Cupid may be an inch longer. Every seed has come true to colour as far as the plants have bloomed. The flowers may be compared to Apple blossom in colour and behaviour. The standard is of a deep salmon red externally before expansion, and after that stage it becomes bright salmon-rose on both surfaces, and for two or three days it is really very pretty, but after that time fades to a soft pink overlying white. The wings are paler from the first, being strongly veined with purplish-pink on a blush ground; but as the standard fades so do they till nearly of a uniform blush-lilac. The keel is nearly white from the first, but that does not affect the appearance of the flower at all, seeing that it is hidden by the wings which form a hood over it. Some seeds were sent us by Messrs. W. Atlee Burpee & Co., Philadelphia, U.S.A., and some of them were sown in pots in a cold frame when March was pretty well advanced. The rest were sown in the open ground, but none of the plants are yet in bloom. Cupid sown alongside and under the same conditions in both cases has not yet bloomed, though on the point of doing so. Every seed of Pink Cupid germinated, which is more than can be said of Cupid either this year or last. The Pink Cupid is as fragrant as the ordinary tall varieties.

A Forest of Rose-trees is now to be seen at the Devon Rosery, Torquay, where there are upwards of 30,000 Roses in bloom.

There is said to be a tree in New Guinea which, when touched, knocks a man down. It must be a species of Boxwood.—*Scraps.*

New York City Gardeners have recently formed a Mutual Improvement Society among themselves. Papers will be read, lectures given, and discussions held at their meetings from time to time.

Knighton Horticultural Society.—Mr. J. Wooley delivered a lecture on Pansies at a meeting of this Society in Clarendon Park School on the evening of Wednesday, June 16th. The development of the show and fancy Pansies was discussed at some length, and the culture and propagation of these showy plants detailed.

Orchids at the Sale Rooms.—A well grown piece of Dendrobium nobile nobilius turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 25th ult., and found a buyer at 7 gs., thus proving the popularity which it still enjoys. The choicer Sobralias also get well looked after. A small piece each of S. Lindeni and S. xantholeuca fetched £4. A much finer piece of the latter was knocked down for 6½ gs. A plant of the natural hybrid Laeliocattleya schilleriana with four leads secured 4½ gs.

A Fearful Storm.—On the afternoon of Thursday, June 24th, a terrific storm burst over the village of Henlow in Bedfordshire. The weather had been sultry until the middle of the day when it began to thunder and continued to do so until four o'clock. Then the fury of the storm could contain itself no longer, and a hurricane of wind swept sheets of large hailstones upon the devoted village. This hailstorm covered an area of only two miles by a quarter of a mile, and lasted for only six minutes, and yet it is estimated that the damage wrought in the village amounted to over £1,000, scarcely a window having been spared. At Henlow Grange ten large trees near the house were either uprooted or broken down; and every flower in the garden from the highest to the lowest was cut to pieces. The river had the appearance of being frozen, the swans being buried in the hail. Thus in a moment the depth of winter seemed to have returned. Out in the hay field the grass was all prostrate beneath the hail, and everywhere desolation reigned. It will be a long day before the inhabitants of the luckless village forget the awful experience of that June afternoon.

Cricket: Hurst & Son *v* Longmans.—On the grounds of the former club on Saturday the 19th ult., the above teams met, the former team winning a well-earned victory by one hundred runs. For the winners Messrs. Portch, Squire, and Cochrane batted well. Main for the same team did well with the ball, taking seven wickets for eighteen runs, and performing the hat trick. The following are the scores:—

HURST & SON.

Sampson, c Brittell, b Kelly	2
Squire, b Kelly	25
Porich, b North	49
Main, c Hubberd, b Mills Jun.	12
Cochrane, c Brittell, b Kelly	20
Bruce, b Tunnery	13
Blyth, not out	10
Laker, Delacourt, A. Cox, Jerry	did not bat.
Extras	15
For 6 wickets	146

LONGMANS.

Hubberd, c Sampson, b Main	19
Tunnery, l b w b Main	6
Lane, l b w b Main	5
Mills, W., b Portch	2
Mills, H., b Portch	0
Calder, b Main	5
Kelly, b Main	0
North, b Main	0
Cuthush, b Main	0
Brittell, b Portch	2
Barnes, not out	3
Extras	4
	46

Precocious Perspicuity.—*He*: Life is so slow here that I lead a merely vegetable existence.

Little Maud (interrupting him): Oh, I guess that's what papa meant when he said you were a dead beat.—*Florists' Exchange.*

Four Elms Gardeners.—At the last monthly meeting of this society the novel queen wasp competition was decided. The wasps were to be stuck on cardboard, the first prize going to the collector of the greatest quantity. The competition was open to all those within a radius of 2 miles. This year all records since the starting of the society four years ago, were beaten. Mr. A. Lock was 1st with no fewer than 1,720 wasps; Mr. A. Aynscombe was second with 707; Mr. H. Oliver third with 492.

Botany at University College, Dundee.—Mr. Robert Smith, B. Sc., has just concluded a series of lectures on the "Field Botany of Dundee District." Mr. Smith spent last winter studying geographical botany at the Institute of Botany, Montpelier, and has made a thorough study of the flora of the Mediterranean. He is thus well qualified to deal with the distribution of plants, for which the facilities for studying are very great in the Dundee district. Within a short radius of Dundee many classes of plants are represented. Mr. Smith's lectures have been a valuable adjunct to the enjoyable Saturday afternoon excursions in the course of which he has taken his students to such places as Duntrune, Tentsmuir, Woody Island, Perth, and the Sidlaws. Mr. Smith is a younger brother to Dr. W. G. Smith, lecturer on plant physiology at the Edinburgh University, and whose translation of Dr. Karl Freiher's work on the "Diseases of plants induced by Cryptogamic Parasites" has been very highly praised.

Thunder and Hailstorms.—On the 24th ult., after an oppressive day of heat, with the temperature standing somewhere between 80° and 90° in the shade, the sky suddenly changed, becoming overcast with great streaks of an inky blackness about 4.30 p.m. over the region of Norwood, Surrey, where we happened to be. We deemed it expedient to get under cover of a railway station, and were not much too soon when a severe thunderstorm broke out, doing damage in various ways not only in that neighbourhood, but over many counties. Gardens around Streatham were much damaged by large hailstones, yet only a deluge of rain fell in the valley of the Thames, both in Surrey, Middlesex, Bucks, and Berks, the chief result in the neighbourhood of Windsor being the flooding of certain low-lying parts of the town and the delay of the floral carnival on Windsor Bridge and other places on both sides of the river. Lightning did damage to house property at Slough. To the north of London, hail as big as walnuts fell at Harrow on-the-Hill, cutting Roses and other garden flowers into shreds. Mr. John Rochford at Enfield and Ponders End had 80,000 sq. ft. of glass smashed to atoms and the plants in the houses cut to pieces with hail and falling glass. The glass was insured, but not the plants. Other market gardeners suffered in the same way to a great extent, the estimated damage being about 200,000 sq. ft. of glass. At Chelmsford in Essex enormous damage to crops was caused by a terrific hailstorm such as has not been experienced for years. The extraordinary heat that prevailed in the Luton and Dunstable district of South Beds was followed in the afternoon by one of the most terrible thunderstorms ever experienced. For twenty minutes hailstones as large as walnuts fell over the district, smashing glass and doing damage to fruit and grain crops. Similar destruction was also effected by the terriffic storm at Marlow, many of the fruit trees being lacerated and cut to shreds by the downfall of hail. Similar reports come from other places in the southern counties.

GARDENING MISCELLANY.

NEW STYLE OF GRAFTING.

"Is there anything new under the sun?" was, I believe, one of Solomon's queries, and has often been asked since, sometimes with a fair show of reason. For instance, the so-called new style of grafting noticed by you in a recent issue is a case in point, and, however, it should pass unchallenged at any meeting of a horticultural society, especially at an R.H.S. meeting seems, at least, strange. This particular mode of grafting has been practised in some of our cider counties for generations. A woodcut representing it is given in the first edition of the *Cottage Gardeners' Dictionary*, 1852, and I believe the like may be found in much older works by anyone having them at hand.—*W. B. G.*

DIPLACUS.

This genus, consisting of only a few species, is closely allied to the Mimulus, only they are more shrubby in habit than those. D. glutinosus was introduced many years ago from California. The plants are beautiful objects when well grown either for greenhouse decoration or for a shady border. Like many other neglected plants they are well cared for in Messrs. Balchin & Sons' Nurseries, Hassocks Gate, Sussex. At the present time they form an interesting feature, from the brightest yellow to the deepest and richest orange-scarlet, in many shades. They are flowering most profusely. I often wonder they are not more generally grown. They are easy to grow, of good habit, and profuse blooming; and as seen here are lively objects for decorative purposes. They are propagated easily by cuttings. —*Rusticus.*

ROSE COOLING'S SINGLE CRIMSON BEDDER.

Amidst all the glory of the hybrid perpetual and Tea Roses so largely grown for exhibition purposes there is still plenty of room for Roses of a purely decorative type in gardens. The small and profusely flowered sorts, as well as single Roses, have a distinct beauty of their own, and which for brilliant colours or effectiveness cannot be ignored, even if they are less durable than certain other kinds. Messrs. Geo. Cooling & Sons, Bath, grow a general collection of all the more popular Roses, including a fine collection of purely garden sorts. One of the most recent additions to this class is Cooling's Single Crimson Bedder, with single flowers, but apparently inclined to be semi-double by the production of a few extra petals. The flowers are large, and the outer petals broad and of a rich, glowing carmine hue that is beautiful either in sun or shade. They are also produced in clusters, terminating the shoots and expanding in succession. The variety has been flowering for three weeks past at least.

PEA CARTERS' LIGHTNING.

Without doubt this is one of the finest early Peas grown. Out of six early varieties this has been the first one to turn in. It is a splendid cropper for an early Pea, and the flavour cannot be beaten. It grows 2 ft. 6 in. in height, and averages seven fine Peas in a pod. A good companion for the above will be found in Re-selected Blue Express. It grows the same height as Lightning, comes in a few days later, with an average of eight Peas in a pod, is a heavy cropper and of fine flavour. Another good Pea sent out by the same firm will be found in Springtide, it is a few days behind Lightning, a splendid cropper, and very hardy.—*Thos. Cockerill, Wirksworth, Derbyshire.*

ORCHID NOTES & GLEANINGS.

By The Editor.

Cattleya Mossiae Lady Pirbright. *Nov. var.* The sepals and petals of this very distinct variety are of a soft rose. The lip constitutes the most distinctive feature of the variety. The exterior of the tube is similar to the petals, but the colouration is even brighter internally on the sides. The throat, base of the lamina, and the side lobes are deep primrose, with a purple blotch on the middle of the lamina, fading to a broad pure white margin, netted with faint purple lines. The primrose shading is carried to the base of the tube, where it is even brighter and lined with purple close to the base. Amongst light varieties it is unusually pretty and distinct. It comes fairly close to Lady Wigan, but is quite distinct even from that. The variety has been named in compliment to Lady Pirbright, the sister of the present Lord Mayor of London. It has been flowering for some time past with Mr. P. McArthur, The London Nursery, 4, Maida Vale, W.

Orchids at Maida Vale.—Some Orchids of special interest, chiefly Cattleyas are flowering with Mr. P. McArthur, 4, Maida Vale, W. Anguloa Ruckeri sanguinea is notable for the dense crimson spotting of the inner face of the sepals and petals. The lip is not white as it is accustomed to be, but lilac and splashed with purple spots. We noted a beautiful variety of Cymbidium lowianum in which the sepals and petals were clear yellow, without any of the usual brown shading or marking. The lip was white, with an orange-red blotch at the tip instead of the usual maroon-crimson one. The plant is of large size and capable of producing a considerable quantity of bloom. The varieties of Cattleya Mossiae have been numerous and many of them fine. One had a huge, rich purple lip marbled with lilac and finely crisped. A very distinct and handsome variety had its lip covered for about half of its extent by a bright orange blotch. The rest was white, with a pale purple margin. Altogether this may be reckoned amongst the most distinct and beautiful. Another variety of C. Mossiae was notable for its rich, clear orange blotch, extending on to the sides. The lip was very long, with a rich, clear orange blotch extending on to the side lobes. The disc was crimson purple, with a band of lilac round about it and a white edge. All of the above Cattleyas came from last year's importation, amongst which one blue, one white, and several very choice varieties turned up. They were collected on an island in one of the rivers of Venezuela, where none had ever been collected before. Special permission had to be obtained for collecting here, and all the plants were brought away except one.

PHYSIOLOGY OF PLANTS.

(*Concluded from p.* 685).

In Gentisia there is no true root. The pitchers are filamentous in shape, and end in two long straggling arms. These arms bore into the soil in the same way as is done in Erodium and Stipa pennata, and bury the pitchers. The pitchers have a dilation at the end of the neck, and within a dense coating of hairs directed from the opening.

Dischidia is a curious production. The position of the aperture in the pitchers varies. Sometimes the latter are erect, sometimes inverted. Their contents thus naturally vary. The inverted ones, of course, hold nothing, the erect ones contain a little water, dust, a few live ants, etc. They are not intended to catch insects. Their function is to catch water and economise it. They are full of stomata and a little root grows from the base of the stalk into the mouth of the pitcher, evidently in order to find the water.

Lathraea has small scaly underground leaves with little cavities at the base of the stalk. Bowman in 1829 thought them to be respiratory organs. They contain small glandular hairs spreading into the cavities. These were said to be threads of living protoplasm which were credited with the ability to move about and catch insects, but they have since been proved to be sessile bacteria. They are probably organs for getting rid of surplus water, and this view is substantiated by the fact that for a short radius round the plant the soil is damp.

Some Liverworts have been known to develop pitchers.

As to the origin of pitchers no satisfactory conclusion has been arrived at. Peccari in his book on the Malay Archipelago suggested that they may be due to the irritation of insects, a gall-like excrescence being the first result of the irritation. He, himself, however, would suggest the probability that the leaves differed from the usual type for simple reasons, viz, with a view to getting rid of the superfluous water but not losing it entirely. Utricularia and Gentisia having no roots, the leaves possess a developed insect taste.

In summing up the lecturer stated that only the Nepenthes could be truly called insectivorous plants, although the pitchers of all the genera mentioned, with the exception of Dischidia and Lathraea, catch insects. In the last two cases the pitchers are closely connected with the water supply, and have nothing to do with the trapping of insects.

At the close of the lecture Professor Henslow asked the lecturer some questions, to which Professor Vines replied in concise and satisfactory fashion.

SEEDSMEN AT CRICKET.

On the 16th ult. a match was played at Bucklebury Place, near Reading, the residence of Mr. Arthur W. Sutton, between representative teams from the clubs of the well-known houses of Messrs. Sutton & Sons and Messrs. Hurst & Son. The game was well contested throughout, and after an exciting finish victory was claimed by the home team with eight wickets to spare. The teams and visitors were entertained to lunch and tea by Mr. Sutton, and altogether a most enjoyable day was spent. Appended is the full score:—

HURST & SON.

FIRST INNINGS.		SECOND INNINGS.	
Sampson, b Bennett	10	c Tovey, b Austin	9
Squire, c Bennett, b Austin	5	c Bartlett, b Austin	24
Portch, b Bennett	0	b Austin	0
Bruce, b Bennett	3	c Sutton, b Bennett	1
Cochrane, c Hawes, b Bennett	0	b Austin	0
Main, b Austin	7	b Bennett	2
Delacourt, b Knight	1	st. Bartlett, b Knight	8
Blyth, c Bowery, b Austin	1	not out	0
Laker, c and b Austin	7	c Curtis, b Knight	5
Jerry, b Austin	0	b Austin	1
Thake, not out	4	c & b Knight	5
Extras	9	Extras	4
Total	47	Total	59

SUTTON'S.

FIRST INNINGS.		SECOND INNINGS.	
Allum, J., b Sampson	1	b Sampson	4
Sutton, M. H. F., c and b Sampson	10	b Sampson	13
Hawes, A. J., b Sampson	0	not out	14
May, T., c Portch, b Main	12	.....	
Bennett, T. J., c and b Sampson	6	.....	
Tovey, F., l b w b Delacourt	17	b Portch	11
Bowery, F. M., c and b Sampson	5	.....	
Knight, W., b Sampson	0	.....	
Bartlett, J., b Sampson	0	.....	
Austin, A. T., c Sampson, b Delacourt	1	.....	
Curtis, A., not out	2	.....	
Extras	2	Extras	10
Total	56	Total	52

CARNATIONS AT MR. CHAS. YOUNG'S FLORAL NURSERY.

No one can dispute the popularity of the Carnation; at the present time it is a general favourite for many purposes. At the Floral Nurseries of Mr. Charles Young, West Derby, Liverpool, they are grown to perfection. Mr. C. Young has made a speciality of these, and grows them by the thousand—and a stronger, healthier lot cannot be found. Plants of all sizes of all the leading and most distinct varieties are grown. He buys all the new ones, tests them thoroughly with the older sorts, and keeps the best new or old. He thoroughly believes in the policy that it takes no more time or trouble to grow the very best than the inferior—and so it is. Here we see five large span-roofed houses, each 100 ft. long, devoted to the culture of Malmaisons, selfs, yellow grounds, Picotees, bizarres, etc.

At the time of my visit about three weeks ago his Malmaisons were a grand sight, consisting of over 2,000 plants in 7 in. pots, clothed with foliage to the pot, clean, strong, and healthy, carrying fully a dozen buds and flowers, and grand ones to the old Malmaison. Princess of Wales, Lady Middleton, and the newer varieties, Princess May, and the Churchwarden, were also in strong evidence. Two other houses, 100 ft. long, and 18 ft. wide, contain 1,200 plants in 6 in. pots, also well-flowered. His two year old plants are wonderful examples of cultivation, 3 ft. high, and nearly as much through. Many had two dozen expanded flowers besides buds. Not a vestige of the disease is to be seen, the foliage being clean and perfect. In addition to those mentioned he grows 6,000 of all the best border varieties, 3,000 yellow grounds, and fully 6,000 out-doors of all the leading kinds. To show the enormous demand for these popular flowers, he has cut ninty-two dozen fully expanded flowers in one day. At the time of my visit dozens of boxes were being dispatched to various people all over the country. The selfs and yellow grounds will be in perfection about now, and the border varieties by the middle of this month. Liliums, Paeonies, and Pyrethrums, likewise receive attention. Many thousands are grown for cut flowers in addition to Carnation growing. Cattleyas and Laelias are exceedingly well done. Several houses are devoted to their culture for cutting purposes alone. Mr. Young is to be congratulated upon possessing a grand stock of the above mentioned; for a cleaner, better-grown lot no one could wish for. He thoroughly believes in doing well what he does.—*Rusticus.*

CLEMATIS MONTANA.

Concerning the query on p. 667 in respect to the half-hardy character of this worthily bepraised plant, I am conscious that I cannot afford "Viator" much information on the point. In fact, in the main, I doubt not that "Viator's" remarks, as to its ability to withstand severe frosts from time to time are quite correct, otherwise we should not come across such fine old-fashioned specimens as the one I noted—not only at Wargrave, but at Sonning, higher up the river.

As to the relative merits of the plants in question, I am unable to judge, as, when I had the pleasure of visiting Park Place three or four years ago, it was at such a time of year that precluded a comparison. But a friend of mine, who has seen both plants, gives the preference to the one which called forth my encomiums. However, as to its constitutional character, I am under the impression that the winter of 1894-5 was responsible for a good deal of damage to Clematis montana, although I cannot recollect a specific instance. But, as showing the vagaries of situation and of plant life, I can record the fact that only last year I lost about a dozen sturdy little seedlings of the variety grandiflora, which I had intended to lift and winter in a frame. Moreover, in Nicholson's "Dictionary of Gardening," under the heading of "Half-hardy deciduous Climbers," this beautiful Clematis finds a place.—*C. B. G. Acton, W.*

NOTICE OF BOOK.

Clay's Successful Gardening. A Handbook of Practical Horticulture. By Journalist, Professional, Amateur, and Market Grower. Price 1s. London: Clay & Son, Stratford; and E. W. Allen, 4, Ave Maria Lane, E.C.

This handbook of practical gardening runs to 124 pages, and deals with horticulture in various phases as practised by the professional, the amateur, and other members of the community generally. Some fourteen or more writers have contributed articles on different subjects with which they are familiar, so that a considerable amount of talent and experience has been brought to bear on the subject, and should prove useful to the readers for whom it is meant, in respect of some phase of gardening or another. All the more popular and useful fruits, flowers and vegetables in general cultivation are brought under notice, briefly it must be admitted in many cases, but that is the result of the limited space at command.

The writers give their own experience in cultural matters, and in many cases hints may be gleaned that cannot but prove advantageous to those readers who put it into practice according to the directions given. Cultural matters rarely, if ever, constitute exciting reading, but those who really love their gardens or some branch of gardening to which they may be inclined by choice, rarely require stimulants, at least of an exciting nature. Some of the chapters are headed a garden under glass, a gay garden, speciality flowers, bulbs and their culture, fruit culture, vegetable culture, growing for market, and floral decorations. This will give some scope of the work, and to those who may desire to know what are speciality flowers, we may say that Begonias, Carnations, Chrysanthemums, Roses, and Violas and Pansies are dealt with, and that by writers who are well-known, and generally admitted to be experts in their several special lines or hobbies. Several of the subjects have been well-worn by virtue of their popularity; but they must be fresh all the same to the rising generation whether professional or lay; and to have omitted those branches of gardening because previously well-handled, would have been prejudical to the general utility of the book.

The chapters devoted to "How to use Clay's Manures" and "The Use and Abuse of Manures," will serve as a guide to those who use or intend to try the specialities in question. The proper use of artificial and other manures is a question of modern gardening which concerns every cultivator and puzzles not a few, judging from the inquiries submitted to us. Some trust to their own judgment, others feel inclined to make experiments, while a third set think they can improve upon the directions that may have been given them, and boldly overstep the defined limit with disastrous effect to their plants. The quantities of Clay's Fertiliser recommended in any given case, seem to he weighted with caution, thus indicating a powerful stimulant not to be trifled with. Enough is, of course, as good as a feast in any case, and to apply more is superfluous, wasteful and dangerous, however good it may be when properly and judiciously applied. The proper quantities to be used are here gauged by weighing scales and measuring rod, and therefore exact and definite.

THE PLANT HOUSES.

The Stove.

We are now well into the height of summer, and the routine work of airing, watering, syringing, etc., becomes of the utmost importance. During the months that have passed the house has been kept comparatively close in order to give the plants those particular conditions of environment which conduce best to rapid growth. Now, however, when the young leaves are daily improving in texture these conditions may be modified to some extent. Throughout the present month, therefore, air may be given in increasing quantities, in order that, by the beginning of August, air may be given with comparative freedom yet with absolute safety. It would not do to rush a lot of air on at once after keeping the house so close, and thus it is necessary to train the plants in in such a way that they will bear easily the ripening and hardening process which is required to make them stand the winter.

The temperature in the warmest stove may be easily kept up to 70° Fahr. by night, with the use of but very little fire-heat. Air may be given in the morning as soon as the temperature of the house rises to 75° Fahr. The house should be shut up not later than 4 p.m., in order to imprison part of the sun's heat. A thoroughly good syringing should be given at the same time, and the blinds drawn up immediately afterwards. There need be no fear of burning entertained if this plan is followed, at least for the ordinary foliage plants. In places where the stove contains a number of Ferns, however, and these are placed in a corner by themselves, it will be well to leave the blinds down over them for a little later than this.

Tropical Tree Ferns.—When these are in health a great number of aerial roots are produced all along the length of the stem. It is necessary to keep these roots moist by syringing, or by watering with a rose-can. Twice or thrice a day will not be too often to do this, and the plants will greatly benefit thereby.

Nymphaeas.—The water tank will now require a considerable amount of attention. Some of the plants are apt to grow strongly and usurp the places of others which may be more valuable than the usurpers themselves. Where the plants are growing in pots or tubs something may be done by a little shifting about. At other times the vigour of the stronger plants may be kept within due bounds by a judicious thinning out of some of the large leaves. These are matters, however, that each cultivator must decide for himself.

Anthuriums.—Bearing in mind the weakening effect that flowering has upon the plants it is advisable to cut off the old flowers as soon as they begin to loose their beauty. Those species, such as A. Veitchii, and A. crystallinum, which are to all intents and purposes foliage plants alone, should not be allowed to open their flowers, thus utilising the whole of the strength of the plants for the development of the foliage alone.

Manures.—With very few exceptions the whole of the plants have filled their pots with roots, even where they were given a pretty good shift last spring. Now is the time, therefore, that manurial stimulant can be applied with the greatest advantage. An occasional pinch of nitrate of soda will work wonders with Palms. A watering with clear water should

immediately follow its application, however, or the surface roots will be in danger of burning. Good liquid farmyard manure is also first class, and a mixture of cow manure and soot, or either given separately, will be found safe and effective.

BOUGAINVILLEA GLABRA.—Much may be done to show off the flowers to better advantage by loosening the ties, and allowing the growths to hang at their full length. It always seems a pity to have to cut out any growths at this stage, but it may be necessary in order to avoid overcrowding, and to give those that are left a chance to obtain the requisite light and air to develop the bright colour of the bracts.

ALLAMANDA SCHOTTII.—As it is usually grown this plant, although a free bloomer, does not get a chance to impress itself upon the mind of the visitor to a large plant stove. It is generally tied rigidly to wires close to the roof, and being naturally of stiff habit the growths carrying the large yellow flowers are pressed closely against the roof glass, and are partly out of sight. A much better effect is obtained when a little freedom is given, and the growths allowed to assume a subpendant position as the result of their own weight. Once let this style of training be given a trial, and the old system of rigid tying-in will not be tried again except in special cases.—*A. S. G.*

The Orchid Growers' Calendar.

EAST INDIA HOUSE.—Miltonia Roezlii finds most agreeable quarters in this division, the extra heat, moisture, and shade, being just what they require. We have tried it side by side with its rival M. vexillaria in the Cattleya House; but it has made but very poor progress. In fact the plants barely exist, but with the extra warmth their culture is comparatively easy.

They make fine specimens when you hit them right; but under the most favourable circumstances they do not do well for long as large plants, and should be broken up when showing any signs of going back. They should be repotted into small pots using good fibrous peat and the points of live Sphagnum moss. Add to this some finely broken up potsherds, which will allow the water to pass freely, away and keep the compost sweet for a good long time. Thrips are the worst enemy to contend with as they get low down in the axils of the long thin leaves and their presence is not noticed until the leaves have made good progress. Dipping in tobacco water and fumigation keeps the plants free from the pest. It is a species that may be said to never rest; so that it requires an abundance of moisture at the roots at all times. The Messrs. Hugh Low, & Co. always do this Orchid well.

CATTLEYA HOUSE.—Miltonia vexillaria, although like M. Roezlii a native of New Grenada, must be found at a much higher elevation, and probably more exposed to the light and air; hence the rosy and stiff bits of foliage sometimes found on newly imported plants. This to our mind suggests that the intermediate house is quite warm enough for them. It is a fact too, for, grown with the Cattleyas during the winter months and placed in a light position in the cool house in the height of summer, they do wonderfully well.

The best time to pot either species is after the flowers have faded. M. Roezlii flowers twice a year if allowed to, that is, in summer and winter. The potting, however, is best done after the summer crop is over. After re-potting, water very sparingly until the roots have begun to work into the new material, or the old ones are liable to rot. A gentle syringing overhead when damping down will generally serve to keep the moss alive and the plants from shrivelling unduly.

CATTLEYA LABIATA WARNERII.—This handsome summer-flowering Cattleya is getting all too scarce in collections, so that when a good variety is met with it rarely fails to realise a good price. Is not an importation of this variety nearly due?

We have a few ten-year-old plants, and whilst healthy they have not grown to an unmanageable size. Their treatment varies very little from that advised in a previous calendar. In each case they must be afforded some fresh material after the flowering season is over, when they generally make fine roots from the newly made up pseudo-bulbs. At the same time they must have but very little water or they will again start into growth without first resting awhile.—*C.*

VEGETABLE CALENDAR.

TOMATOS.—The weather has been favourable for starting these into rapid growth, and where the plants are confined to a single stem they will need regular attention to keep them stopped and tied until three or four good racemes of flowers are set. When this object is attained the plants should be finally stopped and all side growths pinched out as fast as they form, so as to force the entire strength of the plants into the bunches of fruit. Another method—and a natural one with out door plants—is to allow each plant to form from 4 to 6 growths, and these should radiate from the main stem. When they have extended 3 or 4 ft., each shoot must be stopped beyond a good raceme of flowers. A week or so after stopping, the shoots should be raised from the ground and secured to sticks, when it will be found that each shoot will be a mass of young fruit. In this way very heavy crops may be obtained, but the quality will not quite equal the cordon system of training.

VEGETABLE MARROWS.—Now the ground is stored with moisture, the opportunity should not be missed to give the Marrows a heavy mulching of rather long dung to assist in keeping them in a healthy growing state. At the same time all weakly growth should be removed and the strongest regulated; while a few of the latter that are well set with fruit may be stopped to induce the fruits to swell up more rapidly and so hasten them to a size fit for use.

COLEWORTS.—The principal sowing of these should be got in at once. An open position and a piece of good ground should be selected for the seed bed. Sow in rows sufficiently wide apart to allow a Dutch hoe to be worked between the rows of plants. At the same time a sowing of some of the smaller forms of Cabbage, such as Wheeler's Imperial, may be made. These will form nice hearts, and come into use after the Coleworts; and there is no danger of them running to seed unless allowed to remain on the ground until the spring sets in.

CARROTS.—The present is a good time to make a liberal sowing of the best types of Horn Carrots; especially is this the case where the grub is troublesome amongst the spring sown crops. The ground for this sowing should be in a well-worked condition, and liberally dressed with a mixture of soot and burnt refuse. A little less space between the rows may be adopted at this season, but sufficient should be allowed to work a 6-in. Dutch hoe between the rows.

TURNIPS.—The main crop for storing and winter use should be got in while the ground is in condition for giving the young plants a quick start into free growth. There is no better Turnip for sowing at the present time than Veitch's Red Globe. It is first in quality, stands hard weather, and keeps long in good condition when stored.

PEAS.—A selection of the best Early Marrow Peas of medium growth may be made at once, to follow the taller sorts recommended in the last Calendar. With favourable weather in autumn a full crop may be anticipated. A sheltered position open to the south will be best for these.—*J. R.*

Gleanings from the World of Science.

Spermatozoids in Ginkgo and Cycas.—At the meeting of the Linnean Society of London, on June 17th Dr. D. H. Scott, F.R.S., exhibited original preparations by Prof. Ikeno and Dr. Hirase, of Tokio, Japan, illustrating their discovery of spermatozoids in two Gymnospermous Phanerogams, namely Ginkgo biloba and Cycas revoluta (cf. Bot. Centralblatt, Bd. lxix. nos. 1—2, 1897, and Annals of Botany, June, 1897). The slides showed the spermatozoids while still in the pollen-tube, before the commencement of active movement. In the case of Ginkgo one section showed the two male generative cells, closely contiguous and enclosed in the pollen-tube. The general structure resembles that in many other Conifers at the same stage, *e.g.* Juniperus virginiana and Pinus silvestris (Strasburger, Hist. Beiträge, iv. pl. 2). In Ginkgo, however, each generative cell showed a distinct spiral coil, situated in each cell, on the side remo from its neighbour.

Another preparation of Ginkgo showed a series of sections across the micropyle, passing through a pollen-tube and its generative cells, the plane of section being in this case approximately parallel to the surface of contact of these two cells, through which four of the sections passed. In the two terminal sections of this series the spiral coil was clearly shown, consisting of about three windings. The spiral is connected with the nucleus of the cell, but whether it is itself of nuclear or cytoplasmic origin is not certain.

In the preparation from Cycas revoluta, several pairs of generative cells were shown; in some cases the pollen-tube enclosing them was intact. The spiral coils in some of the generative cells were surprisingly clear, consisting of about four windings. A distinct striation was visible in connection with the coil, probably indicating the presence of the numerous cilia described by the Japanese discoverers.

The facts admit of no other interpretation than that given by these authors, namely, that in both Ginkgo and Cycas, each generative cell gives rise to a spiral spermatozoid; the latter by its own movements (actually observed by Dr. Hirase in the case of Ginkgo) no doubt travels from the end of the pollen-tube to the female cell.

In a discussion which followed on this highly important subject, Dr. W. T. Thiselton Dyer, C.M.G., Mr. W. Carruthers, F.R.S., Prof. E. Ray Lankester, F.R.S., Prof. Howes, F.R.S., and the President took part.

The Oxlip in Britain.—At the same meeting as the above, Mr. Miller Christy, F.L.S., read a paper on "Primula elatior Jacq, in Britain." He remarked that this widely-distributed continental plant, though figured accidentally in "English Botany" in 1799, was not really detected in Britain till 1842, to which time the totally distinct hybrid Oxlip (P. acaulis x veris) was, by British botanists, confused with, and mistaken for it, as is still frequently the case. In Britain, P. elatior occupies a sharply defined area, divided by the valley of the Cam, with only two outlying localities, so far as Mr. Christy could ascertain. This area covers the two most elevated and unbroken portions of the Boulder Clay district, the loams and gravels of the river-valleys and the Chalk being entirely avoided. The boundary-lines (some 175 miles in length) which had been traced by Mr. Christy with precision, were in consequence, very sinuous. They enclosed together about 470 square miles, over which area the Oxlip flourishes in immense abundance in all old woods and some meadows; while the Primrose (which grows all around) is entirely absent. Along the dividing line between the two, which is very sharply defined, hybrids are produced in great abundance. On the other hand, the Cowslip (which grows both around and throughout the Oxlip area) very rarely hybridises with it. Mr. Christy believed that the Primrose was, in this country, gradually hybridizing the Oxlip out of existence. He then noticed a rare single-flowered variety of P. elatior, which he proposed to call var. acaulis, and several aberrations, showing upon the screen photographic views of these and of the hybrids, as well as a map of the distribution of the Oxlip in Britain.

In a discussion which followed, Mr. C. B. Clarke, F.R.S., and Sir John Lubbock Bart., M.P., confirmed the accuracy of Mr. Christy's observations.

Observations on Stipules.—Sir John Lubbock, Bart, M.P, F.R.S., also communicated the substance of a paper entitled "Further observations on Stipules," in continuation of a former paper communicated by him to the Society on the 18th March last. The present paper, which was illustrated by diagrams, has reference, inter alia, to the Ash, Hop and two species of Pea (Lathyrus grandiflora and L. pratensis).

Mr. W. Carruthers, F.R.S., in commenting upon this paper, expressed the satisfaction which he was sure would be felt by botanists at the way in which the author was carefully working out details in the life-history of British plants, and in that respect conforming to the spirit of the Charter of the Society which expressly defined the object of its formation to be "the cultivation of the science of natural history in all its branches, and more especially of the Natural History of Great Britain and Ireland.

HINTS FOR AMATEURS.

Greenhouses in Hot Weather.—Now that we are in the midst of the hot weather it may be of service to note the way in which greenhouses should be treated during the summer months. If they are not properly looked after, the plants have a very hard time of it indeed, and would really do better out of doors. Now and again we see houses belonging to amateurs which can be little else than death traps for the poor plants that are expected to live in them, and we are induced to pen these lines in the hope that they may assist in bringing about a better state of affairs. At all times of the year light, air, and water are necessary for the preservation of plant life. These conditions are modified to a considerable extent according to the time of the year, and the treatment varies accordingly. Thus in the winter months a sufficiency of light is difficult to obtain, and every gleam of direct sunlight that can be accorded the plants beneficial. Now we have light and to spare and the difficulty is to shield the plants from the direct sunlight during the greater part of the day. Many amateurs go to the extreme and keep their plants in a state of semi-darkness which is as injurious to the welfare of the plants in one way as exposure to the full blaze of the sun would be in another. This is mistake number one then, and we would caution all against covering glass houses or frames with heavy mats or rugs to the exclusion of so much of the all-important light. Light in abundance is needed for healthy growth but it should be "diffused" like that obtained on a dull day.

Ventilation also deserves to be discussed to some extent. Air, of course, may be put on very freely but it is not advisable to throw open the doors and ventilators of the house as widely as possible. This is often done in a desperate attempt to keep down the temperature of the house. To throw the doors wide open in such a fashion really makes the house hotter and drier, and hence more unkindly for the plants It must be remembered that the atmosphere of the greenhouse is much more heavily charged with moisture than the surrounding air, and to throw the house open so wide is the quickest and surest way of dissipating the moisture.

On very hot days, then, the best plan is to open both top and side ventilators to a fair extent, and to shade pretty closely, meanwhile keeping the door shut. An occasional sprinkling of water on the paths and beneath and on the plant stages will greatly assist. Such a house is much cooler and more kindly for plants than one that has doors and ventilators opened to their widest extent.

Watering.—The summer months severely test the ability of the amateur to water properly, and it is at such times that the practice of giving water in insufficient dribbles is attended with the most fatal results. The best time to water is at the close of the afternoon, when a thorough soaking should be given. Subjects that are very pot-bound may require another dose next morning, but generally speaking most plants that are thoroughly watered overnight will go until the following evening, except in the case of very hot days.

Chrysanthemums are a notable exception to this, and as the season wears along will require to be looked to twice or even thrice a day. Even now healthy plants are fast filling their pots with roots, and this means that the watering-can must not be allowed to remain idle. Those plants which are being grown on for the production of large flowers and thus attain to a great height will need special contrivances to give them support. Stakes, of course, may be used in the earlier stages, but these soon get too short, unless they are like Hop-poles. The safest way to do is to stand the plants in a row and drive into the ground tall stout stakes at intervals of about 9 ft. Between these, pieces of stout twine or small ropes may be stretched and the plants may then be easily secured to them.

Alpine Plants in Pots.—Not a few lovers of Alpine plants are compelled by circumstances to grow the greater part of their favourites in pots, as they have not room to build a rockery for their accommodation. The months of June, July, and August are very trying for these poor pot plants, for they get almost roasted out of existence The best method of getting over the difficulty is to plunge the pots to the rims in ashes and cover them with a cold frame. The glass lights will not be required so they can be taken away and stored out of harm's way. Their places can be taken by a sort of light wooden trellis-work, made of thin spars of wood about ¾ in. in width. These, when nailed upon cross-pieces with spaces of about ½ in. between them are very handy contrivances. They shield the plants beneath from the hot rays of the sun, and thus keep them delightfully cool, but at the same time they admit the light and air in abundance. We should advise all those who have choice Alpine plants to invest in a few of these screens.

Cucumbers that were planted early in the season and commenced to fruit about the middle of March have now become nearly exhausted. The frames are full of stems and shabby leaves, and the plants look as if their best days were past. To root them out, remake the bed and plant young stuff would seem to be the course that naturally recommends itself, but this should not be too hastily followed. Young plants, while they would be sure to do well, would yet take a little time to grow into the fruiting stage. Now if by following another plan we can reduce this period of waiting, and obtain as good or nearly as good results, surely this will be better than the first course. The renovation of the old plants is decidedly the better way, that is to say, if they are fairly healthy and free from disease, in which case by judicious treatment they may be given, as it were, a new lease of life. The first thing to do is to subject the plants to a pretty severe thinning or pruning. Cut out all the weak and spindly growths, together with any that appear cankered or worn out. The greater part of the old dirty leaves will come away at the same time. The growths that remain should be pegged down all over the bed, taking care to distribute them pretty evenly. Then a top dressing of rich soil should be given, working this all over the surface and firming it with the hands alone. The frame will subsequently require to be kept close, and the syringe must be employed regularly morning and afternoon. Shade will likewise be an essential. Within a space of about a couple of weeks fresh leaves will be produced, and fruit will follow in due course. The fruit may possibly not be quite so large and fine as that borne on the young plants, but it will make up in quantity what each indivdual lacks in size.

Syringing.—Indoors and out during the summer months the syringe is of the greatest service. Most amateurs know full well that many plants grown in glasshouses need syringing regularly during the warm weather, but they do not apply the same principle to some other outside plants. Violas and Pansies, for instance, benefit greatly by a nightly shower bath during the warm weather, and many successful growers adopt this practice where practicable. The syringing has the two fold effect of helping to supply the plants with moisture, and of warding off the attacks of red spider which so many lovers of Violas, more especially those growing in proximity to large towns, have to deplore.

Chrysanthemums, again, should always be kept sprinkled morning and evening throughout the summer months. It is astonishing to see how the foliage improves under this treatment. Dry, hot, dusty times are very trying to plants as well as to animals, and the luxury of a bath is always appreciated at such times. Just now the plants are picking up from the check received by them during potting, and while they will not need a great deal of water at the root the sprinklings with the syringe will be doubly grateful.

Roses should be syringed regularly up to the time they open their flowers, and although such heavy shower baths must not be given when the flowers are open a soft dewing over will not come amiss.

Peaches and Nectarines, we may lay especial stress on Any able bodied amateur who has Peach or Nectarine trees on open walls, and who would like an hour's exercise now and again in the evening may take a syringe in hand and fire away at the trees. The foliage will thus receive inestimable good thereby. Cold hard water like that drawn from a well should never be employed. Soft water if it can be obtained is the best, and in addition to being soft it must be fairly clean or the deposit of a sediment upon the leaves that will result will defeat one of the objects for which the syringing was given.

The syringes supplied by most firms are furnished with several movable tops to screw on and off, for use as the owner wills. They generally include a coarse or a fine rose and a jet top. The first two are of very little use whatever, and very few gardeners do anything else than throw them on one side, sticking solely to the jet. This throws a jet of water about ⅜ of an inch in diameter. By sideward pressure with the forefinger upon this stream it may be broken up into a very fine spray if desired, and experience will soon teach the amateur how to regulate and direct this spray with far more nicety than could be obtained by using a rose, and with as little fear of wetting himself or any other person who may be standing near.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Corchorus japonicus is not the correct name of the Jew's Mallow, *A.B.*, but Kerria japonica. The plant was introduced from Japan as far back as the year 1,700, and may be occasionally met with in gardens under the name Corchorus, but the other and correct name is now pretty well established. The genus Corchorus is closely allied to Tilia, that of Kerria belongs to the natural order Rosaceae.

Single Stocks.—*Argo*: It is very seldom indeed that the whole of a batch of seedlings will come double, more or less of them are sure to throw single flowers. These should be weeded out as soon as seen, if double ones only are wanted, and their places filled by others. Some of the better single forms, however, are of great beauty, and produce an abundance of richly hued flowers.

Tree Ivies—*Amateur* asks what these are and how they can be obtained.

When Ivy that is growing against a wall reaches the top and has no support for its topmost shoots the latter put on a bush like form. These shoots if taken off will root pretty easily, and make very pretty dwarf pot plants. Cuttings will root at any time, but the autumn is a good time to insert them.

Richardias.—*Amateur*: The Richardias may be potted up as soon as you like. Each of the suckers at the base will make a plant, but whether they will flower next year or not will depend entirely upon their strength. All the stronger suckers, at any rate, will flower well. Use a compost of two thirds of good loam, and one of old horse droppings, or leaf soil, with sand. Pot fairly firmly. Do not water the plants immediately after potting. The moisture contained in the soil will be sufficient for the time being.

Ericas.—The plants may be put out of doors if the young growth is pretty well advanced, *Tengart*, but as a rule the end of July is sufficiently early to put the plants out. In all cases they should be plunged in ashes so as to check excessive evaporation of water from the soil, as this would be very injurious to the delicate roots. Epacrises may be given the same kind of treatment, but they will stand out-of-doors without the plunging better than the Ericas.

Cutting Asparagus.—Please say how late in the season it is safe to cut Asparagus. My bed is still producing young heads, although many of those that have been missed are in full spread now.—*Charles T. Pestridge.*

The end of June in the south of England is quite late enough to cut Asparagus, that is if it is expected that the beds should last for any length of time in bearing. Accordingly after that date the young growths should be allowed to develop as they please. A dressing of salt will do good. Give enough of it to whiten the ground nicely and apply it if possible before rain.

Turnips.—*F. R*: A border facing east is a good place for summer Turnips. The roots do not get so bitter as they do when exposed to the blaze of the sun. Even then they will not last long in good condition, but will soon commence to get unpleasantly strong in flavour.

Stopping Young Vines.—I am aware that the growths of fruiting Vines are pinched in order to throw the strength into the bunches, but is it needful to thus stop the side-growths of young vines which have been recently planted?—*George Cathcart.*

You will do well not to stop the growths, but just train them into their proper places, and let them grow as they like, for a time at least. If you were to pinch the points out now you would only cause the small lateral growths to grow with vigour. You will get better canes by following this advice than you will by too close pinching.

TETRAMICRA BICOLOR.

In most gardens this is best known as Leptotes bicolor, a name that was given to it by Lindley; yet botanists are so fond of making corrections that it must needs be called Tetramicra. Something like half-a-dozen species of the genus are known in tropical America, and almost as many names have been given them by different botanists. The best known to cultivators and the most beautiful is the subject of this notice. Those gardeners who have made its acquaintance and found how successfully they can manage it are highly delighted with it. The species may be described as both curious and pretty. The short terete pseudobulbs resemble a thick leafstalk, and the solitary leaf is similar, but twice or three times as long. At the junction of the leaf and pseudobulb arises the flowerstalk, bearing some two to four blooms of medium size. The sepals and petals are white, as is the three-lobed lip, with the exception of the lamina, which is purple, with a white margin and tip. In structure it is closely allied to Laelia, Bletia, Schomburgkia, and Laeliopsis.

The plant from which the accompanying illustration was taken was flowered by Mr. Harry Bailey, gardener to Mrs. W. L Barclay, The Briars, Reigate, the photograph being taken on the 9th May last year. It was introduced from the Organ Mountains, Brazil, in 1831, but does not seem to have flowered till February, 1839, in the Woburn collection. The species is well-adapted for cultivation in baskets, where it appears to the best advantage; and the treatment accorded it by Mr. Bailey seems in every way to meet its requirements. It is equally satisfactory in shallow Orchid pans suspended close to the roof of the house, where it can get plenty of sunlight. An intermediate house with plenty of water during the growing season is also necessary for its well-being.

Tetramicra (Leptotes) bicolor.

MORLAND NURSERY, NORWOOD.

Norwood covers a considerable area of ground, and being practically a suburb of London, it serves to house a population which if in the provinces would form a large town. It is situated partly on a hill and partly in the hollow, valley or plain skirting the base of the hill and not far from the Crystal Palace. Close to Norwood Junction on the London Brighton and South Coast Railway, is the Morland Nursery, 125, Portland Road, South Norwood, established by the late Mr. Frederick C. Bause and now carried on by his son, Mr. C. F. Bause.

Palms.

The one prevailing feature of this nursery is fine foliage plants of various kinds. The ground is almost covered with glass, there being only room for one other house. Neatness, cleanness and tidiness prevail everywhere, as they have always done at this nursery, especially in the houses and amongst the plants. The first house we entered was filled with Cocos weddeliana and Geonoma gracilis, Palms having a close resemblance to one another in foliage and well known to all engaged in decorative work. Of the former there is a splendid batch of about 300 in 32-size pots, the plants being about 3 ft. high. There are however, other sizes down to newly germinated seeds. Geonoma gracilis takes about 12 months to germinate, though some of the seed will lie three or four years. The leaves of this Palm are green on both surfaces. There are nicely furnished plants bearing 6 to 10 leaves each, and all sizes may be seen here. Palms are grown in loam mixed with a little peat or leaf mould to lighten it, together with sand. The secret of the cleanness of the plants, says Mr. Bause, is to begin with healthy and clean plants, and to maintain that state throughout by thorough syringing with clean rain water, and proper treatment generally. Pitcher Plants are suspended from the roof over the Palms, and include Nepenthes rafflesiana, N. superba, N. intermedia and N. anerleyensis.

Another house is filled with Kentia belmoreana and K. fosteriana, indispensable for decorative work. The leaf stalks are generally green, but we noted red and yellow stalked varieties. Choicer because less common, and requiring longer time to grow to a useful size, is Phoenix rupicola. It may be seen in various stages from seedlings to plants losing the primary character of the foliage, up to handsome specimens with well developed, pinnate leaves, several feet long. Further on we noted seedlings of Cocos about six months old and Geonoma 2½ years old. Latania borbonica in another house is about 12 in. high and beginning to be fit for decorative work. Alongside of them is Aspidistra lurida variegata. Kentias 6 in. to 8 in. high in thumb pots and smaller ones in thimbles or fingers occupy another span roofed house. Specimens of Phoenix rupicola, 3 ft. high fill the centre of one house while the space underneath and around them is occupied with Kentias of much smaller size. Latania borbonica and Cocos weddeliana monopolise another structure, close to which Cocos turns up again in the form of graceful little plants with four or more leaves. All of the above are scrupulously clean with shining foliage as if polished.

Dracaenas.

The collection here includes something like 100 varieties which should suit the needs and the taste of the most fastidious as far as variety of form and colour is concerned. The plants are grown in grand style and in all sizes. Very handsome is the narrow-leaved Alexander Laing, with red edges. The old Terminalis and T. alba are not neglected. The leaves of Superba are very long with bright red edges. The broad leaves of Ignea are variegated with cream and red. From its earliest stages onwards, Norwoodiensis is always beautifully coloured with olive, red, and bronze. There is a magnificent batch of Lord Wolseley about 18 ins. high and finely coloured, the best view of which is obtained from one end door. The narrow leaves are bronzy-olive with red margins. The young leaves of Gladstonei are almost black, but assume a brilliant red later on. The broad, drooping leaves of Pendula are of a bronzy-metallic hue, while the young ones are red.

Passing into another house, the Dracaenas are represented by D. Lindeni, D. goldieana, D. sanderiana, and Fredericki. Very distinct is D. Coullingi with broad white margins; it is a fairly vigorous type. Louisa is much less vigorous, with narrower leaves than Coullingi and white edges. Both constitute a complement to Terminalis Alba, all three being perfectly distinct. A beautiful variety is Mrs. Bause having olive-green leaves of medium width, with red edges; and sometimes all the top leaves are wholly red. We also noted many unnamed seedlings, for a considerable amount of hybridising and cross-breeding has been carried on here for many years past, this being the birthplace of many things of first-class merit. The late Mr. Bause tried his hand at almost everything except Orchids.

Caladiums.

As far as number and variety are concerned there is an extensive collection of Caladiums. For lack of space and the demand for plants, all the specimens here are very small and of useful selling size. A large number of the very finest varieties, including dwarf and useful decorative Caladiums, has been raised and sent out from this nursery. Silver Cloud, Duchess of Fife, Golden Queen, and Princess of Teck are all first-class sorts. Very beautiful is Lord Derby with its intense green venation in a setting of red. Golden Queen is greenish-yellow with a blackish blotch in the centre. Silver Cloud is creamy with splashes of pink all over it. Prince of Wales is of a soft green with a red centre. There are many seedlings here still waiting for a name. The above are only a very few of the fine things taken at random.

CROTONS.

About 100 of the best varieties of this useful class of plants are kept in stock, including the pick of the old and the newest favourites. Amongst them are such favourites as Aigburthense, Chelsoni, Formosum, and Golden Ring, the latter having curled and twisted, green and yellow leaves. Prince of Wales is also curly and yellow, but ultimately red. Thompsoni has broad, obscurely three-lobed leaves, variegated with yellow. The best of the broad-leaved type is Reidi, with olive-green leaves and red veins. The top leaves are yellow, changing to orange, and then to carmine. Aigburth Gem is one of the Interruptum type, with green, yellow, and crimson leaves in varying proportions. The general aspect of Davisi is yellow. Mr. Blause is a broad-leaved type beautifully variegated with yellow. Prince of Orange is a slow grower, with green and yellow leaves, but often wholly yellow. The narrow leaves of Flambeau are yellow with a red midrib, but ultimately are very red. Princess of Wales is a showy variety with very long leaves of medium width, and creamy-yellow with green edges. Very distinct in its way is Delight, having short, wide eaves of an ivory-white along the centre, though the top leaves are generally wholly of one colour. Countess is also very choice, being about equally marbled with green and yellow, and often distinctly blotched with the latter colour. The above are only a few of the choicer Crotons to be seen in the Morland Nursery; but there are few of any note which Mr. Bause cannot supply.

PITCHER PLANTS.

Besides those already mentioned, there are numerous other species, varieties, or hybrids of Nepenthes accommodated in various houses, and mostly suspended over small Palms. N. mixta is boldly and handsomely blotched with crimson. N. Curtisii is of a dark chocolate-crimson, marbled with light green. Another magnificent hybrid is N. dicksoniana, with long pitchers handsomely blotched with light crimson. Long, narrow, and pale coloured pitchers are produced by N. Courtii. The rare N. northiana and N. Rajah are also cultivated here. Numerous sorts are also to be seen in the propagating pit including the rare N. Veitchii and the still rarer N. sanguinea. The former has green, hairy pitchers with a prominent collar. The latter is a most handsome pitcher of great size, and uniformly of a beautiful bright red; the upper part of the pitcher internally is nearly white variegated with soft purple. Of smaller size but richly coloured are N. Morganiae, N. Curtisii superba, and N. formosa; the latter resembles N. Morganiae in shape, but is heavily blotched with crimson on a white ground. The curiously inflated pitchers of N. Burkei excellens are notable for their broad, ridged, red-brown collar.

BERTOLONIAS, &c.

Some handsomely grown plants of Bertolonia have at one time or other been brought before the public from this nursery. Most if not all of the varieties in cultivation have been tried here, and a selection of all the best made. The lightest variety is argyroneura, having large, light green leaves lined with white veins and marked with white spots. The richest-coloured variety is Souvenir de Gand, the long nerves of which are of a deep carmine-red. It grows rather too slowly to meet the demand for it. Scarcely less handsome is the large-leaved Comte de Kerchove, having bright rosy-red veins and spots. A pleasing light variety is Madame Van Geert, the veins of which, large and small, as well as the spots, are pink. Madame E. Pynaert on the contrary approaches Souvenir de Gand in having rich carmine-rose nerves and spots. The same may be said of Van Houttei, which has carmine-red nerves and numerous small spots. Punctatissima is totally distinct from either of the above in being dark olive green, covered all over with isolated white spots; while Punctatissima rosea is characterised by rosy spots. A pleasing light variety is Madame Alfred Bleu, having broad leaves lined lengthwise and crosswise with silvery-pink, and spotted with the same colour. Triomphe de l'Exposition has leaves of a rosy-red hue, splashed in places with olive-green.

A little group of Anoectochilus represents all the Orchids we noted in the nursery. They are grown solely for their foliage. The golden tracery upon the leaves of A. Petola is remarkably fascinating. A. sanderianus in some respects is not unlike it, but it varies considerably according to treatment. The olive leaves of A. discolor are handsome, but the flowers are also pretty. The velvety-olive leaves of A. lowianus also make it a favourite with growers. The Musa-leaved Heliconia illustris rubricaulis is very handsome in certain stages both on account of its red and green leaves, and polished dark red leaf-stalks.

CHEMICAL COMPOSITION OF CATTLEYA.

DEAR MR. VEITCH,

I have put together a few observations on the chemical composition of the Cattleya, together with some suggestions as to its food requirements, which I trust may be of some interest to yourself and to the members of the Orchid Committee.

In the *Gardeners' Chronicle* of February, 1894, there was an article on the chemical composition of Cattleya labiata, and also giving the analysis of rain-water in temperate and tropic climates, which showed a large increase in the amount of nitric acid in the rainfall of the tropics compared with temperate zones.

Country.	Authority.	Milligrms.
Liebfrauenberg (Alsace), France	Boussingault	0·18
Rothamsted, England..	Lawes and Gilbert	0·42
Java	Homans	2·30
Isle of Réunion ..	Raimbault	2·65

This is as may be expected, for it is well known that thunder rain contains nitric acid, derived from the rapid oxidation of the nitrogen of the atmosphere by the electric discharge, combining immediately with the pure ammonia in the atmosphere, forming ammonia nitrate.

In connection with this subject it is well to take into account the chief constituents of the air. Professor Frankland published in the Journal of the Chemical Society (vol. xiii.) the results of analysis of the composition of airs from various sources, which demonstrated that the composition of the atmosphere exhibits certain fluctuations, confined, however, within very narrow limits. The air near the sea contains about the same proportion of carbonic acid as that resting over land. The sea air was richer both in carbonic acid and oxygen by day than by night.

	Average by Sea.		New Granada	Bogota.	
	Day.	Night.		Dry Season.	Rainy Season.
Nitrogen ..	78·886	79·006	79·946	78·932	78·966
Oxygen ..	21·060	20 961	21·014	21·022	20·996
Carbonic Acid	·054	033	·040	·046	·038
	100·000	100·000	100·000	100 000	100·000

	Chamonix, 3,000 feet.	At the Grand Mulets, 11,000 ft.	Mount Blanc, 15.732 feet.
Nitrogen	79·086	79·087	78·989
Oxygen ..	20 881	20·802	20·950
Carbonic Acid ..	·063	·111	·061
	100·000	100 000	100 000

The carbonic acid in the atmosphere appears to increase with altitude to attain its maximum at 11,000 ft., and then again diminishes in quantities above that height.

In the neighbourhood of our large towns the atmosphere is injuriously affected by the products of the combustion of coal, in the form of sulphurous and sulphuric acid and ammonia, and in some places —for instance, the Tyne and Clyde—by chlorine given off from the chemical works. There is also given off some of the more volatile petroleum oils, which form a greasy slime, which in fogs is deposited on the glass of our planthouses, and falling upon the leaves of the plants, interferes with their power of osmosis and exosmosis so necessary for their well-being.

I have myself noticed that the quantity of ammonia in the atmosphere was subject to considerable variation; the greatest amount was detected on days when the electric currents were feeble or totally absent. I have also observed hat the amount of oxidisable matter present in the atmosphere had nc relation to the quantity of ammonia present.

I think it is probable that the relation of ammonia to carbonic acid has a considerable influence upon the growth of epiphytal Orchids. This is the probable canse that many Orchids—such as Oncidium varicosum on the one hand, and Phalaenopsis on the other—cannot be kept in vigour for any length of time in this country.

The analysis of old and new pseudobulbs shows that there is less mineral matter in old bulbs when compared with the new. Apparently these plants have great difficulty in obtaining the earthy salts, and are, therefore, obliged to withdraw from the old bulbs some portion of their earthy constituents. We know that allowing the flowers to remain on the plants until they have withered is followed by the shrivelling of the psendobulb and with the exhaustion of the plant; the better the variety the more delicate the constitution of the plant and the greater the exhaustion caused by flowering.

	Old Pseudo-bulbs.	New Pseudo-bulbs.
Dry substance, per cent. ..	9·12	8·07
Nitrogen, per cent.. ..	1·21	1·14
Mineral matter (ash), per cent.	0·41	0 63
Constituents of the ash in 100 parts.		
Potash carbonate	29·90	30·69
Lime carbonate	52·02	35·23
Magnesia carbonate ..	12·05	14·47
Lime phosphate	3·42	10·68
Iron oxide	0·16	0·17
Silica	2·42	8·77

It occurred to me that it wonld be desirable to find out which, if any, of the earthy constitnents were removed from the pseudobulb by the flowers. For this purpose I sent up to my friend, Prof. Ogston, a large number of fresh-cut blooms of the largest and best varieties in my collection of Mendelii, Mossiae, and Laelia purpurata.

The analysis of the fresh-cut Cattleya flowers gave:—

Water	84·27
Vegetable substance	13·72
Ash soluble	1·18
Ash insoluble	0·83
	100·00

	The percentage composition of fresh cut flower.	Percentage composition of dried flower.	Percentage composition of the incinerated ash.
Water	84·270	—	—
Organic matter ..	13·720	87·21	—
Phosphoric acid ..	·058	·39	3·10
Potash	·634	3·19	25·00
Lime	·348	1·84	14·40
Magnesia	·120	·60	4·71
Sulphuric acid ..	·034	·17	1·35
Silica	·164	·57	4·50
Carbonic acid, iron soda, alumina ..	·702	6 03	46·94
	100·000	100·000	100·000

The carbonic acid in the ash was originally present in the bloom as organic compounds (nitro-hydro-carbons) combined with the potash, lime and magnesia.

I do not, at present, see in what manner the epiphytal species in their native habitats obtain the alkaline and earthy salts, especially the silica, which is not easily soluble, and does not exist in a soluble condition to any large extent in any soil.

I may mention in passing that chlorophyll (C_9, H_9, NO_4) is the green colouring matter of plants. Ammonia and nitric acid salts appear to promote the combination of nitrogen with the hydrocarbons in the formation of this substance, but the absence of, or the exposure of plants to, an excess of sun-light seems to interfere with its formation. It may be that under these conditions another product, with a formula of C_{19}, H_{20}, NO_5 is formed.

Cyanine and Xantheine, the colouring material of flowers, are closely allied to Chlorophyll. Cyanine is found in red and blue flowers; in the former the

juice is acid, in the latter neutral. Blue flowers may change to red, but never become yellow, and they fade away until their colour disappears. Xanthine, the yellow material of flowers, is insoluble in water. Yellow flowers as they wither never become blue or red. Neither of these substances have at present been obtained in their pure state, but a deduction of their chemical composition may be inferred from blue indigo (C_{16}, H_5, NO_2) compared with white indigo, which has a formula of C_{16}, H_6, NO_2.

Comparing the analysis of the blooms with the composition of old and new pseudo-bulbs, it is evident that a large amount of the mineral constituents of the pseudo-bulb are abstracted by the flower. The question cultivators have to consider is, in what manner can these plants recuperate by the re-absorbtion of these mineral constituents into their organisms; for it is evident, if they are not furnished with a means of obtaining a fresh supply, they will continually withdraw these substances from their old pseudo-bulbs, resulting in impoverished growth, smaller and smaller size, poorer blooms and ultimate death.

I therefore thought that it would be well to experiment upon an old and starved variety of Trianaei. I fed this plant once a week, during the growing season, with two or three ounces of water, which contained nitrate of potash, nitrate of ammonia, phosphate of ammonia, and carbonate of magnesia, of the strength of half an ounce of nitrate of potash and half an ounce of nitrate of ammonia, with a small quantity of the other salts, with the result that the plant made stronger growth and produced a greater number of flowers, which were brighter in colour. In 1895 I tried a larger number of plants, and I was so satisfied with the result, that in 1896 I added nitrate of potash and nitrate of ammonia each week during the summer to the rain water tanks of the Cattleya house. The total quantity used during the summer was 1 lb. of the nitrate of ammonia and 1 lb. of the nitrate of potash. This worked out at the rate of 2·5 grains per gallon. Many of the flowers of the Cattleya which were shown at the Drill Hall on May 9th this year were larger, brighter, and had more substance than in previous years.

This year I intend to increase the amount to five grains per gallon during the summer, that is to say, from May to September. I also propose to treat some of the plants with small quantities of phosphate of ammonia and carbonate of magnesia, in addition to the nitrate of ammonia and potash. I expect that I shall be able to make a favourable report on a future occasion on the results of these experiments.

I suspect further observations will prove that the assimilation of phosphates by plants sets free the phosphorus, which combining with the nitro-hydro-carbons of the tissues will tend to promote inflorescence, and will probably increase the germinating power of the seed of epiphytal Orchids.—*A. H. Smee, The Grange, Carshalton*, 10/6/97.

SOCIETIES.

RICHMOND.—*June 23rd.*

The annual summer show of the above society was held amidst bright but oppressively hot weather in the Old Deer Park at Richmond on the above date. Four large tents accommodated the exhibits, which were scarcely so numerous as last year, probably on account of the Victorian Era Show at the Crystal Palace being opened on the same day. The park had a very holiday-like appearance, for music and other attractions were provided in addition to the show to lure sightseers.

In the large marquee there were some large and splendidly set-up groups, and the show on the whole sustained its character well. Inside the entrance to the large tent Messrs. Fromow & Sons, Sutton Court Nursery, Chiswick, had a charming little group of stove foliage plants. A few of the pretty Japanese Asters were also present, and these with Crotons, Palms, Liliums, Cannas, Caladiums, and Dracaenas were very effective (Silver Medal).

Messrs. John Peed & Sons, Roupell Park Nursery, Norwood Road, S.E., sent a nice little group of Carnations. Cole's Improved Perpetual Cheer, and Souvenir de la Malmaison were both in excellent condition. Messrs. Wm. Cutbush & Sons, Highgate Nurseries, N., also contributed Carnations, chiefly of Malmaison varieties Princess of Wales and the Blush Malmaison bore large, handsome, and grandly-coloured flowers, and the plants throughout were in robust health (Silver Medal).

The special feature of the show was a grand exhibit by Messrs. Jas. Carter & Co., High Holborn. From a scenic point of view as well as from the high quality of the material it contained this group was unique. From a tall central pillar dressed with the green dyed seaweed, Roses, and Delphiniums, and surmounted by a huge floral trophy in the shape of a crown, and composed of yellow and white Gnaphaliums, and Henry Jacoby Pelargonium, four arms radiated to the corners of the group and formed a junction with four pillars about 9 ft. in height. Both pillars and arms were dressed in the same way as the central upright. The plan executed at the late Temple Show was thus again followed with conspicuous success. The Gloxinias, Violas, Petunias, single and double, ornamental grasses in variety, etc., were all very showy, and the group thoroughly deserved the Silver Gilt Medal it received. This, by the way, was the highest award for non-competitive groups given on this occasion.

Mr. H. E. Fordham, Twickenham, won the first prize for a splendid miscellaneous group, in which Cattleyas, Liliums, and Gypsophila paniculata figured conspicuously. Mr. C. Want, gardener to Sir F. Wigan, Clare Lawn, East Sheen, received a similar award for a smaller group.

Mr. Geo. Wythes, gardener to Earl Percy, Syon House, Brentford, obtained a Silver Medal for an imposing group of miscellaneous material. A well-flowered piece of Cymbidium lowianum was conspicuous here, and Cattleyas, Carnations, and Ixoras were all very gay. A Bronze Medal fell to the lot of Mr. W. H. Holah, St. Mary's Grove Nurseries, 143, Sheen Road, Richmond, for a very pretty group of plants. Mr. James Porthury, Ripon House Gardens, Putney Heath, carried off the Mayor's prize for a collection of tuberous Begonias. Mr. Johnson, gardener to D. H. Scott, Esq., The Old Palace, Richmond, followed in the second place. The group of Carnations in pots sent by Mr. Pentney, gardener to A. J. Howard, Esq., Worton Hall, Isleworth, was voted a Silver Medal. The Ichthemic Guano Co., Ipswich, also had an exhibit of their famous specific.

Some huge and superbly-flowered plants of Malmaison Carnations that came from Mr. J. F. McLeod, gardener to J. P. Morgan, Esq., Dover House, Roehampton, were awarded a large Silver Medal, and such magnificent samples of culture well deserved it. Messrs. John Laing & Son, Forest Hill, S.E., set up a very gay collection of miscellaneous plants which yielded a splendid effect (Silver Medal).

Six specimen Caladiums were best shown by Mr. Allsop, gardener to W. Cunard, Esq., Orleans House, Twickenham. Mr. W. Vause, 4, Somers Place, Leamington, won a well merited first for six specimen hard-wooded plants. The same exhibitor was also first for specimen stove foliage plants.

A Silver Medal went to Mr. Wm. Thompson, Sheen Nurseries, Richmond, for a pretty miscellaneous group. Mr. G. Watts, gardener to Henry Little, Esq., Bawnshalt, Twickenham, sent the best specimen plants of Ivy-leaved Pelargoniums. Mr. Charles Turner was again well to the fore for trained show and regal Pelargoniums. The samples submitted by him were truly magnificent, and were credited with the first award. Mr. J. Gibson, gardener to E. H. Watts, Esq, Devonhurst, Chiswick, was first for six Coleuses, with well coloured plants; also for eight exotic Ferns. The latter were first-class samples of Mr. Gibson's skill as a cultivator. Mr. A. Howard was first, and Sir F. Wigan second, for a small group of Orchids. Henry Little, Esq., received a Silver Medal for a larger group of Orchids. Mr. W. Farr, gardener to Andrew Pears, Esq., Spring Grove House, Isleworth, submitted the best collection of exotic Ferns. Henry Little, Esq., led the way for ten specimen zonal Pelargoniums.

Cut Roses were splendidly shown by Mr. B. R. Cant, Colchester, who carried off premier honours in a class for forty-eight blooms. Messrs. D. Prior & Son, Myland Nurseries, Colchester, came in second. In another class for cut Roses Mr. B. R. Cant was again first, and Mr. George Prince, Oxford, contributed some splendid Tea Roses, and was credited with the chief award in their class.

The centre stage of the Rose tent was occupied by table decorations, and very handsome and well executed they were. Miss C. B. Cole, the Vineyard, Feltham, was very successful here.

In the classes for vegetables, Mr. C. J. Waite, The Gardens, Glenhurst, Esher, was first for a collection grown from the Messrs. Sutton's seeds, the prizes being given by that well-known firm. Mr. J. Gibson was second, and Mr. J. Smith, gardener to W. H. Odlinn, Esq., Warkworth House, Isleworth, third.

In the competition for the prizes for a collection of vegetables offered by Messrs. Jas. Carter & Co., Mr. C. J. Waite was again first; Mr. A. Basill, gardener to the Rev. Powell, Woburn Park, Weybridge, was second; and Mr. J. Gibson, third. In another collection Mr. J. Smith was first, and Mr. A. Pentney was second.

For a large collection of vegetables grown from the Messrs. Sutton's seeds, Mr. C. J. Waite carried off chief honours; Mr. A. Basill was second; and Mr. J. Gibson, third. All the material shown in the above-mentioned classes was of very high quality.

In the classes for fruit, Mr. A. Meaton, gardener to J. B. Hilditch, Esq., Asgill House, Richmond, led the way for white Grapes, Mr. J. Smith taking a similar place for Black Hamburghs. Mr. H. Blake, gardener to the Rt. Hon. the Earl of Onslow, Clandon Park, Guildford, was credited with a first for three grand bunches of Madresfield Court, and Mr. W. Tidy for three bunches of Foster's Seedling. Mr. J. Gray, Bodorgan, N. Wales, had the best dish of Peaches, showing Crimson Galand.

Mr. W. Tidy, gardener to W. K. D'Arcy, Esq., Stanmore Hall, Middlesex, was first for a dish of Nectarines, showing Lord Napier. Mr. W. Ford, gardener to W. H. Ellis, Esq., sent the best dish of Figs, and the best dish of Tomatos.

CRYSTAL PALACE—*June 23rd & 24th.*

The excitement and hustle of Jubilee week must undoubtedly have exercised a prejudicial effect upon the Victorian Era Show at the Crystal Palace on the above dates, for with so much decorative work to perform the usual exhibitors must have had a great strain upon their resources. Accordingly, we were not surprised to find that the whole of the floral exhibits on this occasion were confined to the central transepts of the huge glass edifice. Other attractions had been provided in the two ends in the way of exhibits of shipbuilding and other crafts, with relics of various sports and pastimes, etc.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., staged a magnificent group of tuberous Begonias for which he deservedly received the first prize. The exhibit was circular in shape and occupied 300 sq. ft. of area. In the centre rose a mound of Begonias topped by Palms, and rising to a height of about 10 ft. Round this were four other and smaller pyramids also crowned with Palms. The quality of the double varieties, particularly, was remarkably good.

The first prize for a group of Caladiums not exceeding 300 sq. ft. in area in the nurserymen's classes fell to the lot of Messrs. J. Peed & Sons, Roupell Park Nurseries, Norwood Road. The Messrs Peed are well known for their skill in the cultivation of this charming subject, and the specimens here shown were worthy of them. Madame Alfred Magne, Reine de Danemark, Mrs. Harry Veitch, Princess of Teck, Alice Van Geert, and Raymond Lemonier were a few of the finest forms.

Mr. Chas. Turner, Slough, again gave an object lesson of how to grow show and fancy Pelargoniums. His first prize collection contained two dozen well-flowered and symmetrical plants, and the individual flowers and trusses were very fine.

Messrs. Paul & Sons, The Old Nurseries, Cheshunt, carried off chief honours for an exhibit of Cannas in pots. The plants were dwarf, and many of them required another week or two.

Messrs. W. L. Lewis & Co., Southgate, staged a nice group of Orchids, filling about 170 sq. ft. of area, the first award falling to them Included here were some finely coloured forms of Cattleya Mossiae, C. Mendelii, and Laelia purpurata. Odontoglossum cordatum Cypripedium Godefroyae leucochilum, and C. Donald Ross were also noteworthy.

A smaller but very showy collection came from Mr. G. Cragg, gardener to W. C. Walker, Esq. Percy Lodge, Winchmore Hill, which obtained the first prize in the amateurs' class.

The hardy alpine plants from Mr. T. S. Ware

included a considerable variety, and well illustrated the wealth of the Hale Farm collection. They were awarded first prize. Side by side with these the same firm had a huge exhibit of cut flowers that included Liliums, Campanulas, hardy Cypripediums, Irises, Centaureas, and Scabiouses, etc., in variety. In the background appeared a quantity of Lilium Harrisii in pots. This group received the second award for the herbaceous collection. The first prize in this class was carried off by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, who had a superb display of Liliums, Calochorti, Irises, and Brodiaeas Mr. John R. Box, Croydon, occupied the third place in this class.

The only group of nine exotic Ferns forthcoming was sent by Mr. W. Howe, gardener to Henry Tate, Esq., Park Hill, Streatham Common, who was granted the second award. A fine piece of Marattia fraxinea was the central and chief feature here.

Mr. J. W. Hicks, gardener to C. D. Lord, Esq., Duncarn, Sydenham Hill, S.E., was one of two exhibitors of a group of miscellaneous plants 300 sq. ft. in area. He staged a quantity of excellent material in an attractive manner (second prize). Mr. G. H. James, Castle Nursery, West Norwood, S.E., was third.

Mr. Howe was again alone in the class for a group of Crotons, and the second prize only was again given in this case..

The second prize for a group of pot Roses fell to the lot of Mr. Charles Turner, who was the solitary competitor.

Messrs. John Peed & Sons led the way for a group of Gloxinias set up with Maidenhair Fern. The quality of the flowers was excellent, the colours being especially bright.

Among the miscellaneous exhibits some first-rate material was on view.

Mr. Charles Blick, gardener to Martin Smith, Esq., The Warren, Hayes, Kent, received a Gold Medal for a magnificent display of Carnations in pots. All the forms shown were of that high standard of quality that characterises Mr. Martin Smith's productions.

Messrs. Jas. Veitch & Sons, Ltd., had a splendid group of Conifers, for which a Gold Medal was awarded them. The whole of the plants were symmetrical throughout and in capital order. Taxus baccata coombensis, Sciadopitys verticillata, Retinospora pisifera, Abies Sieboldii, and A. excelsa Remontii, were particularly noticeable.

Mr. John R. Box also had a large representative group of Conifers. The plants, although small, were shapely and vigorous little specimens of their kind.

Mr. A. Gulzow, Melbourne Nurseries, Bexley Heath, Kent, obtained a Silver Medal for a very showy group that consisted of small Crotons and Dracaenas interspersed with Cattleyas and Cypripediums. A fine piece of Dracaena sanderiana was remarkable here for the brightness and clearness of the variegation as well as its great vigour.

Messrs. W. Fromow & Sons, Sutton Court Nursery, Chiswick, sent a collection of small Japanese Maples. These were set up with a few plants of Lilium auratum, and the group was edged with the useful Eurya latifolia (Silver Medal).

Messrs. George Jackman & Son, Woking, staged a non-competitive group of hardy cut flowers for which a Silver Medal was given. A similar award was made to Messrs. A. W. Young & Co., Holmesdale Nurseries, Stevenage, Herts; also for hardy cut flowers.

Mrs. M. Hodgkins, 35, Woodland Road, Upper Norwood, S.E., sent a very pretty floral dinner table in which Sweet Peas and Grasses were the decorative material employed (Small Silver Medal).

Messrs. Cannell & Sons, Swanley, Kent, had a grand display of Cannas in small pots. Not only were the trusses large, but the size and substance of the individual flowers were worthy of the highest commendation (Silver Medal).

Mr. F. C. Foster, Brockhampton Nurseries, Havant, Hants, had a collection of cut Sweet Peas in which many of the leading varieties figured to advantage.

WINDSOR, ETON, AND DISTRICT.—*June 26th.* The Rose Show of this society was held as usual in the Home Park at Windsor on the above mentioned date. Fine weather graced the proceedings, and the fixture was again attended with great success. The Queen of Flowers was in capital condition, and the blooms throughout were, if anything, beyond the standard of former years. As will be seen from the following account the Colchester Rose growers met with consistent success in all the principal classes, and, indeed, swept nearly everything before them.

Open classes for Roses.

There were five entries in the premier class for forty-eight blooms of Roses, distinct. The prize, the Queen's Cup, value ten guineas, is presented by Her Majesty the Queen, and if won by a competitor for two years becomes his property. This year it was won by Mr. Benjamin R. Cant, Colchester, who had two magnificent stands of blooms. Charles Lefebre, White Lady, Duke of Fife, Madame Eugene Verdier, Caroline Testout, Cleopatra, A. K. Williams, Duchesse de Morny, Dupuy Jamain, Marie Verdier. Souvenir de S. A. Prince, Gustav Piganneau, Mrs. M. J. Grant, Catherine Mermet, Victor Hugo, Marie Baumann, and Dr. Sewell were some of the finest forms. Messrs. Harkness & Sons were second; and Messrs. Frank Cant & Co., Colchester, third.

There were six entries for eighteen Teas or Noisettes, distinct. Here Mr. George Prince, Oxford, led the way with a fine and even lot. Comtesse de Nadaillac, Souvenir de S. A. Prince, Souvenir d'Elise Vardon, Medea, Ernest Metz, Rubens, La Boule d'Or, Catherine Mermet, and The Bride were some of the best forms. Mr. John Matlock, Oxford, was second; and Messrs. Frank Cant & Co., third. For three trusses each of twelve varieties, distinct, there were eleven entries. The chief honours fell to Messrs. Frank Cant & Co., Braiswick Nursery, Colchester. General Jacqueminot, Francois Michelon, Dr. Sewell, and The Bride were some of the strongest blooms. Messrs. D. Prior & Son, Myland Nurseries, Colchester, were second, and Mr. Benjamin R. Cant, third; so that the Colchester growers had matters fairly their own way. Mr. B. R. Cant showed the best twelve blooms of one variety with Ulrich Brunner. These were massive flowers. Mr. George Prince was second with Comtesse de Nadaillac, and Messrs. Frank Cant & Co., third, with Victor Hugo.

A most interesting class was that for eighteen bunches of garden Roses, distinct. Here Messrs. Paul & Son, The Old Nurseries, Cheshunt carried all before them with a grand exhibit. Second came Mr. Chas. Turner, Slough; and third, Messrs. Geo. Cooling & Sons, Bath.

Amateurs' Classes.

Mr. F. Ley, gardener to S. P. Budd, Esq, had the best twenty-four blooms, distinct. Comte Raimbaud, Ulrich Brunner, Fisher Holmes, Rodocanachi, and Etienne Levet, were some of the strongest forms here. Mr. F. Davis, gardener to T. Gurney Fowler, Esq., was second; and Thomas Hobbs, Esq., third. Mr. Ley also had the best six single trusses of one kind with Ulrich Brunner. Mr. F. Davis was second. Mr. Ley again scored a success for twelve single blooms of Tea or Noisette varieties. The Bride, Madame Cusin, Caroline Kuster, Ethel Brownlow, and Innocente Pirola, were remarkably good here. Mr. T. Guttridge, gardener to W. Colin Romaine, Esq., was second. Mr. T. Elisha, gardener to Mrs. Irving, secured the Silver Medal for the best Rose shown by an amateur, in Catherine Mermet. The first award for three trusses each of six varieties also fell to the lot of Mr. F. Ley.

In the local Classes open only to amateurs within a radius of ten miles of Windsor, the following exhibitors secured first prizes in their respective classes:—Mr. A. Munt, for eighteen single trusses, distinct; Mr. G. Lane, gardener to Miss A. S. Ridge, for six single trusses, distinct; Miss Bailey Denton, for twelve distinct single trusses; Mr. W. Wicks, gardener to Mrs. Burton, for six Teas or Noisettes, single trusses; Mr. John Williams, gardener to F. Ricardo, Esq., for six bunches of garden Roses; Mr. T. Guttridge, for a display of cut Roses, with a very comprehensive collection.

The most tastefully arranged dinner table was sent by Mrs. Edward Gould. Mr. F. H. Beney, gardener to Lady Mary Currie, headed the list of competitors for Mr. Eckford's prizes for twelve bunches in distinct varieties of Sweet Peas sent out by him.

Pot Plants.

Mr. J. G. Mowbray, gardener to the Hon. H. C. Legge, won the first award for four specimen plants, distinct, with grand samples of Asparagus plumosus, Alocasia metallica, and Codiaeum Laingii. Mr. T. Osman, Ottershaw Park, sent the best four Ferns, distinct, Mr. Mowbray occupying the second place. Mr. James Wood, gardener to Lord Boston, was first for six table plants.

The groups of plants were well arranged, although not so numerous as usual. Mr. A. Gillies, gardener to Sir R. Harvey, Bart., led the way. In his group the groundwork chiefly consisted of Maidenhair Fern, out of which arose Francoas, Crotons, and a fine piece of Laelia purpurata. Mr. A. Sturt, gardener to N. L. Cohen, Esq., was second; and Mr. W. Smith, third. For a smaller group the chief honours devolved upon Mr. G Lane.

Fruit and Vegetables.

Here also, there was a good deal of excellent material, the collections of vegetables being especially meritorious.

Mr. D. Paxton, gardener, to the Hon. C. S. Foley secured the first prize offered by Messrs. Jas. Carter & Co. for a collection of vegetables grown from their seeds. Mr. H. T. Lambert was first in the cottagers' class for a collection of vegetables.

In the fruit competitions Mr. W. Smith was awarded Messrs. Sutton & Son's first prize for a brace of Melons. Mr. T. Osman sent the best four dishes of fruit, and also the best two bunches of white Grapes. Mr. G. Lane led the way for two bunches of black Grapes. Mr. W. Smith secured a first award for a Melon, and Mr. J. G. Mowbray received a similar prize for a dish of six Peaches.

The miscellaneous exhibits were comparatively few in number and were all contained within one of the largest tents, still they added materially to the attractiveness and value of the show.

Messrs. Geo. Jackman & Son, Woking, Surrey, contributed a comprehensive collection of cut hardy flowers. Roses, Sweet Peas, Delphiniums, Poppies, Aquilegias and Pinks were all in capital condition.

Messrs. Cheal & Sons, Crawley, Sussex, also staged a fine lot of cut hardy flowers. A small collection of bedding Violas was a central feature here. There was a good deal of variety here, and as the edging of the group was composed of long heavily flowered sprays of Tropaeolum polyphyllum it was very showy.

Upwards of fifty bunches of Sweet Peas arranged with their own foliage in a most effective manner came from Mr. Henry Eckford, Wem, Shropshire. The flowers throughout were exceedingly good, being large and of vivid and varied colours, and formed a fine object lesson of the value of this charming race of flowers which Mr. Eckford has done so much to improve.

Messrs. Hugh Low & Co., Clapton, had the only group of Orchids in the show. Cattleya arnoldiana, C. Wagneri, and C. reineckiana were represented by some small pieces bearing splendidly coloured flowers. They were shielded by special glass cases. Some magnificently coloured pieces of Cattleya Mossiae were also very noteworthy here, and several well-flowered pieces of Dendrobium Bensonae were also well worthy of mention. Oncidium macranthum, in the background, showed up conspicuously with large and handsome flowers.

Cut hardy flowers in quantity were contributed by Mr. Eric F. Such, Maidenhead. These included two stands of bedding Violas.

Messrs. Wm. Cutbush & Son, Highgate, N., staged a fine lot of Malmaison Carnations. The exhibit took the form of a large mound flanked on either side by two smaller mounds. The plants throughout were in first class condition, and the flowers large, of good shape, and beautifully coloured.

Mr. W. H. Tilt, 24, Thames Street, Windsor, exhibited floral devices of various kinds, of which the most unique and conspicuous was a trophy in the shape of a crown on a flat stand about 2½ ft. square, and composed entirely of Sweet Peas.

Mr. Charles Turner, Slough, had a grand group of border Carnations. Several shades of colour in Malmaisons were on view, and in addition to these such fine border varieties as Germania, The Gift, Little John, Knight Errant, and Cedric, were very praiseworthy. Mr. Turner also had a nice group of show Pelargoniums.

ROYAL HORTICULTURAL.—*June 29.* Roses, Irises, Sweet Peas, Calochortus, Delphiniums and hardy herbaceous plants generally were the conspicuous features of the meeting on Tuesday last. Orchids were well shown though the exhibits were less numerous than usual.

Messrs. J. Veitch & Sons, Limited, Chelsea, exhibited by far the largest group of Orchids at the meeting. There was a great profusion of bloom, including well-flowered pieces of Cattleya Warscewiczii, C. Warneri, C. Mendelii, Laelia purpurata, Sobralia macrantha, Dendrobium Phalaenopsis in variety, D. thyrsiflorum, Epidendrum vitellinum majus, Disa Veitchi, Stenoglottis longifolia, and Cypripedium superbiens. Striking and showy hybrids were Laellocattleya Eudora Superha, L. Eximia, L. canhamiana, L. Ascania, Laelia Stella and Cypripedium Curtisii. A fine piece of Cypripedium Parishii carried four scapes and seventeen expanded blooms besides buds. The group well deserved the Silver Flora Medal awarded it.

Messrs. Hugh Low & Co., Clapton, exhibited a group of Cattleyas. Amongst which C. Mossiae in numerous very fine varities was prominent, including C.M. maxima with huge flowers, and a splendid variety of C. M. reineckiana. They also staged C. Warscewiczii (gigas) C. Mossiae Wageneri, C. M. Hardyae, Laelia tenebrosa Charlesworthi and Laeliocattleya arnoldiana magnifica. Very charming were the flowers of Miltonia vexillaria superba. They also showed the new Cypripedium Mrs. E. V Low of charming light colour, and Cattleya Mossiae Bronze Queen, which was very handsome (Silver Banksian Medal).

R. I. Measures, Esqr. (gardener, Mr. H. J. Chapman) Cambridge Lodge, Camberwell, exhibited the magnificent Cypripedium leucochilum grandiflorum, in grand condition; he also staged C. Salus. Cattleya Mossiae Hardyae was shown by Fred Hardy, Esqr. (gardener, Mr. S. Stafford) Tyntesfield, Ashton-on-Mersey. The Revd. F. Paynter (gardener, Mr. Cook) Stoke Hill, Guildford, showed cut flowers of Phaius Humblotii. M. Blandford, Esqr. Bitterne, Southampton, showed a piece of Cattleya warscewiczii Blandford's var. A cultural commendation was accorded to T. B. Haywood, Esqr. (gardener, Mr. C. J. Salter) Woodhatch, Lodge, Reigate, for a splendid spike of Miltonia vexillaria Daisy Haywood, having large pure white flowers and a golden disc. Cut flowers of fine varieties of Cattleya Mendelii, all characterised hy a very dark lip, were exhibited by Mr. H. A. Tracey, Lily and Orchid Nurseries, Twickenham.

A superb group of Malmaison Carnation Princess of Wales came from Mr. H. J. McLeod, gardener to J. P. Morgan, Esq., Dover House. Many of the plants were giants in size and all bore large numbers of huge brightly coloured flowers. It is a long time since we have seen anything to equal these plants at the Drill Hall (Silver Gilt Flora Medal).

Messrs. J. Veitch & Sons staged a unique collection of Conifers near to and on other side of the entrance to the Hall. Without exception the plants were handsome and shapely specimens of their kind, and well-demonstrated what a diversity of habit and colouring is to be obtained among the Coniferae. Abies excelsa Remonti, A. e. inverta, A. e. pygmaea, Retinospora plumosa argentea, Cedrus atlantica aurea, C. Deodara aurea, Abies pungens argentea, Retinospora obtusa gracilis, and R. filifera aurea were a few of the most noteworthy members of a most praiseworthy exhibit (Gold Medal).

Immediately facing the entrance Messrs. Cutbush & Son, of Highgate, had a grand array of Carnations. The large mound of Malmaison Princess of Wales in the centre, backed as it was by Bamboos, was in a capital condition to catch the eyes of visitors. The Blush and Rose Malmaisons, as well as the old Souvenir were well represented. Newer forms were to be seen in the white Nell Gwynne, the scarlet Lord Roseberry, and the crimson scarlet Prime Minister, all valuable varieties (Silver Flora Medal).

Hardy cut flowers in quantity were contributed by Messrs. Barr & Son, King Street, Covent Garden, and very bright and gay they were. Delphiniums, Heuchera sanguinea, Gaillardias, Geums, Thalictrum angustifolium, etc., were very fine. Irises were particularly strong, and some grand forms of I. laevigata were worthy of special mention (Silver Banksian Medal).

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., set up a charming exhibit of hardy cut flowers. A huge central mound Rose to the height of some 10 ft., and as the various bunches of plants were not crowded unduly the effect was good (Silver Flora Medal).

Parnell Powell, Esq. Woodlands, Streatham Hill, had a small group of border Carnations set up with and edged with Ferns in pots.

Mr. Pritchard, Christchurch, Hants, had a choice group of cut hardy flowers. Clematis recta, Cephalaria alpina, and Centaurea macrocephala were specially bright here (Silver Banksian Medal).

Messrs. Dobbie & Co., Rothesay, had a fine array of bedding Violas, Pansies, and Sweet Peas. Of the Violas, Bullion, A. J. Rowberry, Holyrood, Hamlet, Lavender King, Butterfly, Dorothy Tennant, Romeo, Hamish, Cecilia, and Lemon Queen were first class. Of the Sweet Peas, Venus, Novelty, Mrs. J. Chamberlain, Katharine Tracy, Golden Gate, Prima Donna, Dawn of Day, and Firefly represented some capital forms (Silver Flora Medal).

Tuberous Begonias were well shown by Messrs. H. Cannell & Sons, Swanley, Kent. The single varieties were of great size, and the doubles contained many charming and delicate hued varieties (Silver Banksian Medal).

Mr. H. G. Foster, Brockhampton Nurseries, exhibited upwards of seventy bunches of Sweet Peas, in sixty-four varieties. The flowers were arranged in loose bunches with Asparagus, small pot Ferns being interspersed with them. A series of epergnes, vases, etc., suitable for table decoration was also shown by Mr. Foster, with a view to illustrate the utility of the Sweet Pea in this respect. Among the varieties shown the following are a few of the cream:—Mrs. Eckford, Her Majesty, Royal Rose, Senator, New Countess, Gaiety, Brilliant, Mars, Daybreak, Ovid, Coquette, and Apple Blossom (Silver Banksian Medal).

Liliums and Calochortuses were forthcoming in grand style from Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, to whom a Silver Flora Medal was awarded. A fine batch of Calochortus venustus citrinus was very notable. C. v. oculatus, C. v. vesta, C. v. pictus, and the handsome Eldorado strain were likewise deserving of the highest praise. Lilium thunbergianum Prince of Orange, L. t. brevifolium, L. szovitzianum, L. Parryl were some of the finest of the Liliums.

Messrs. J. Cheal & Sons, Crawley, Sussex, received a Silver Banksian Medal for a pretty collection of cut hardy flowers, cut sprays of ornamental shrubs, etc. Bedding Violas were staged in bunches on the usual show stands.

Messrs. J. Veitch & Sons, Ltd., Chelsea, had a small collection of the choicest varieties of Sweet Peas. The flowers were arranged with their own foliage, and sprays of Asparagus were interspersed between the bunches.

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, sent a unique exhibit in the shape of a collection of Adiantums. This exhibit formed a good object lesson in the variety of size, form, cutting, and colour of the frond represented by the different members of the genus Adiantum (Silver Gilt Banksian Medal).

Messrs. Kelway & Son, Langport, Somerset, showed Gaillardias, Delphiniums in their usual thorough style. A stand of blooms of Iris laevigata was also on view, and was much admired, some of the forms possessing remarkable width and substance of segment (Silver Banksian Medal).

Mr. W. Wells, Earlswood Nurseries, showed a few early flowering Chrysanthemums that seemed strangely out of place in the month of June. Messrs. J. Veitch & Son had baskets of a few hardy flowering shrubs, and a stand of the Javanico-jasminiflorum hybrid Rhododendrons.

A group of plants that came from Messrs. F. Sander & Co., St. Albans, contained much that was new and rare. A grand batch of the pure white Watsonia Ardernei was much admired. There were also fine pieces of Encephalartos gracilis, and Phoenix Roebelini. Petunia Mrs. Fred Sander as shown here is a very double rosy pink form. Arisaema fimbriatum is a wierd looking and interesting plant. The group also included a number of varieties of foliage Begonias (Silver Gilt Banksian Medal).

At a meeting of the fruit and vegetable committee Mr. George Kelf, The Gardens, South Villa, Regent's Park, was awarded a "cultural commendation" for three boxes of first-rate Peaches. The varieties were Dr. Hogg, Dymond, and Royal George. A similar award was made to Mr. Hudson, gardener to the Messrs. de Rothschild, Gunnersbury House, Acton, for two boxes of Plums and Cherries.

Messrs. Laxton Brothers sent several dishes of Strawberries; also samples of an early Marrow Pea. Messrs. Kelway & Son sent Gradus Pea, and Messrs. James Carter & Co. Pea Early Morn. Several Melons were sent from various sources, but they were mostly either unripe or lacking in colour.

ROSES.

Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Woodhatch Lodge, Reigate, was placed first in the premier mixed class for 24 single trusses, distinct. Caroline Testout, S. Marie Rhodocanachi, A. K. Williams, Mavourneen, C. Y. Teas, Sir Rowland Hill, Gustav Piganeau, Comte Raimbaud, Mrs. J. Laing, and Beauty of Waltham were some of his best blooms. C. J. Grahame, Esq., Wrydelands, Leatherhead, came second; and the Rev. J. H. Pemberton, Havering, Essex, third. There were five entries in this class.

In the smaller class for 12 single trusses, distinct, there were but three entries. O. G. Orpen, Esq, Hillside, West Bergholt, Colchester, led the way; the Rev. A. Foster-Melliar, Sproughton Rectory, Ipswich, was second: and Mr. R. H. Laughton, Raymead, Hendon, third.

G. W. Cook, Esq., The Briars, Torrington Park, had the best six single trusses distinct. C. J. Grahame, Esq., was awarded first for nine single trusses of one variety. He had both Mrs. John Laing and Kaiserin Augusta Victoria in splendid condition. Mr. J. Salter was second, showing Mrs. John Laing; and the Rev. F. Page Roberts, Scoll, Norfolk, third.

Six single trusses of any H.P. or Tea variety were best shown by O. G. Orpen, Esq., with Kaiserin Augusta Victoria. Mr. R. H. Laughton was second; and G. W. Cook, Esq., The Briars, Torrington Park, third, in this class.

O. G. Orpen, Esq., headed the list of competitors in the class for 24 blooms of Tea or Noisette varieties to consist of not less than 12 varieties, and not more than three trusses of one variety to be shown. Souvenir d'Elise Vardon, Comtesse de Nadaillac, Madame Cusin, Sylph, Anna Olivier, and Ernest Metz were some of the best. C. J. Grahame, Esq. was second, and Mr. C. J. Salter, third. There were four entries.

The Rev. Hugh A. Berners, Harkstead Rectory, Ipswich, won the first award for twelve single trusses in nine varieties. The Rev. A. Foster-Melliar took the second place; and the Rev. J. H. Pemberton, the third, so that in this class at all events the clergy had it all their own way.

The Rev. F. Page Roberts was first for six trusses of Tea or Noisette varieties. C. J. Grahame, Esq. had the best six single trusses of one variety of the same class of Rose, showing both Madame Cusin and Innocente Pirola. O. G. Orpen, Esq, was second with Anna Olivier. In another class for six single blooms of one variety, R. H. Laughton, Esq. was first.

Mr. G. Baskett, gardener to Lord Penzance, Eashing Park, Godalming had an exhibit of old garden Roses,

A Silver Banksian Medal went to Messrs. Paul & Son, the Old Nurseries, Cheshunt, for a group of pot Roses and of cut blooms.

Mr. Rumsey, Joyning's Nurseries, Waltham Cross, contributed a quantity of high quality cut Roses, for which he received a Silver Banksian Medal.

OBITUARY.

MR. JAMES MENZIES.

WE regret to announce the death recently of Mr. James Menzies at the age of 71. He died at Lytchett Manor near Poole, Dorset, where he had been gardener for many years, and was held in great respect by his employers and friends. He leaves a family of sons and daughters to mourn his loss. He was one of the (now few remaining) pupils of Mr. Charles Mackintosh of Dalkeith memory.

MR. GEORGE ANDERSON.

The horticultural world has sustained a loss in the person of Mr. George Anderson who recently passed to his long home at the advanced age of 76 years. He was for many years (upwards of 30) gardener at Thurso Castle, Thurso, Caithness, and his skill as a gardener was well known and generally admitted. At the annual shows of the Thurso Horticultural Society he was usually in evidence. His kindly and honest nature, and his true courtesy to all with whom he came in contact will be recalled by those who knew him. Mr. Anderson served his apprentice-

ship at Dunrobin Gardens, and also worked there for some time as a journeyman. He retired from active service about 5 years ago with a liberal pension from Sir Tollemache Sinclair, his old master. The direct cause of death was influenza, but his end, we rejoice to say, was painless and peaceful.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Names of Plants — *Sigma*: The Aspen or Trembling Poplar (Populus tremula).—*W. G.*: 1, Cattleya Mendelii; 2, Cattleya gaskelliana; 3, Lycaste aromatica; 4, Oncidium pulvinatum; 5, Cypripedium Hookerae.—*T. M.*: 1, Dianthus deltoides; 2, Dianthus multiflorus, a mule Pink or garden hybrid; 3, Iris sibirica; 4, Spiraea astilboides; 5, Saxifraga Cotyledon pyramidalis; 6, Potentilla fruticosa.—*J. P.*: Sidalcea candida.—*W. Barclay*: 1, Rosa gallica var.; 2, Rosa indica var.; 3, Spiraea ariaefolia; 4, Iris Pseudacorus; 5, Corydalis lutea; 6, Cytisus albus.—*T. Good*: 1, Asplenium bulbiferum minus; 2, Athyrium Filix-foemina Victorae; 3, Oreopteris montana; 4, Aspidium angulare lineare; 5, Pteris quadriaurita argyrea; 6, Platyloma rotundifolia.—*J. P. C.*: 1, The Judas Tree (Cercis Siliquastrum); 2, Verbascum Thapsus.—*F. Brewer*: Spiraea Filipendula flore pleno; 2, Armeria vulgaris; 3, Aconitum Napellus var.; 4, Oenothera fruticosa; 5, Geranium armenum; 6, Salvia Horminum.—*J. S.*: Roscoea purpurea.—*Omega*: The Bird's-foot Trefoil (Lotus corniculatus). Other question next week.

Double Poet's Narcissus not flowering.—*J. T.*: Both the single and the double forms of Narcissus poeticus have a bad habit of coming blind at times without any apparent reason, or at all events the case is not always explainable. Recent lifting frequently causes them to flower badly during the following season, but they should be fairly established and flower well the second year. We have always seen this variety flower best when the bulbs were getting rather crowded by being left in the same place for some time. Possibly the sudden and great changes of temperature, or probably a frosty night injured the outer segments of the flower. The specimens you sent certainly looked like this, as the inner segments were generally fresh. On the other hand, we have known severe drought to check the development of flower buds when they were beginning to swell up. You do not say anything about your soil. If it is deep, loose and rich, we should allow it to get firm or even tread it for that purpose in the neighbourhood of the bulbs. If the soil is poor and sandy, a top-dressing of farmyard manure in winter would be advantageous, leaving it there till it decays. We should certainly give the bulbs another trial, for they might behave properly next year.

Ants and Strawberries.—*John Holmes, Jun.*: The ants must be uncommonly numerous in your Strawberry plantations to do so much harm, and by reason of their numbers individually and the number of nests all over the ground, it will be difficult to get rid of them without going to a deal of trouble. Many specifics or remedies are given for the destruction of ants, but as some of them are deadly poisonous they cannot be recommended for use in a Strawberry plantation. Air-slaked lime has proved useful in dry weather. It should be dusted over the nests and the ground in the immediate vicinity. Guano is also said to be useful applied in the same way. A good remedy for use in spring is calomel. One part of it mixed with ten parts of sugar, should be employed by laying it about in little heaps about their nests. The sugar will tempt them to eat the bait and cause them to die. If there were no plants on the ground you could use carbolic acid or paraffin oil, which would kill or drive them away. Any or all of these remedies should be applied at intervals for some considerable time, in order to get rid of the ants effectually. Frequent disturbance of the soil, where possible, would in time drive them away.

Aphides on Lettuce.—*T. B.*: There are several spices of aphides that attack Lettuce, some preferring the leaves and others the roots. From what you say of them, the species is evidently Siphonophora Lactucae. It is difficult under the circumstanes to give an effectual remedy after the leaves begin to form a heart on account of the shelter afforded them. The attack begins when the plants are still quite small, and you should attempt to eradicate the pest then by syringing the interior of the plants frequently with strong soapy water. The small leaves wi l never become usable, so that no harm will result from this treatment in the early stages of the plants. You should also give the plants plenty of room, not crowding them, and keep the ground thoroughly clear of weeds.

Peas failing.—*F. Brewer*: The soil you sent us is full of a fungus, evidently a small fruiting Peziza. What roots we came across in the soil had some of these little white cups attached to them. The upper part of the roots and the base of the stem were also attacked, and the fungus in this case had passed into another stage, showing little black pimples on the stem. We have, therefore, little doubt that the roots of your Peas have been attacked by the fungus and thereby destroyed, thus checking the growth of the haulm and the pods. We would suggest that you should carefully dig up the roots and burn them along with the haulm. Then trench the ground 2 ft. deep, and give it a good dressing of gas-lime, mixing it well with the top 12in. Nothing should be planted or sown in the soil for six weeks or two months, if the gas-lime is at all fresh. Strawberries, Cabbages, Broccoli, Potatos, or some such crop may be planted on the same ground, but not Peas, either this or next year. Wood ashes would also help to enrich the soil, which must be exhausted both by the fungus and crops grown upon it.

Celery Fly.—*D. D.*: In the first place you must pick off and burn all the blistered leaves to kill the grubs in them, otherwise you will get a second brood of flies in autumn. The small blisters may be squeezed between the finger and thumb to kill the grubs in them, and preserve as much of the foliage as possible. You can also dust the plants with dry soot while the sun is shining and the flies about. You must persevere some time in burning the blistered leaves.

Communications received.—Leonard Brown.—Coila.—E. Webb & Sons.—Inquirer.—Botan, next week.—G. B.—W. White—J. R. L.—W. Fey—Season—Reader—T. Ascot—Q.—C. Sharpe.

TRADE CATALOGUE RECEIVED.

J. Weeks & Co., F.R.H.S., King's Road, London, S.W. — Patent Upright Duplex Tubular Boilers.—Testimonials.

COVENT GARDEN MARKET.

June 30th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100 lbs.		
Grapes, per lb	2 0	3 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	1 6	2 6
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips .....per bun.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 0	3 0
Bouvardias, per bun.	0 4	0 6
Carnations doz. blms.	1 0	3 0
Eucharis ...per doz	3 0	4 0
Gardenias ...per doz.	2 0	4 0
Geranium, scarlet, doz. bunches	4 0	6 0
Iris, various doz. bun.	4 0	12 0
Lilac, White (French) per bunch.	3 6	4 6
Lilium longiflorum per doz.	3 0	4 0
Lily of the Valley doz. sprays	1 0	2 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Narciss, various, doz. bunches	1 6	4 0
Orchids, doz. blooms	1 6	12 0
Paeonies, French doz. bun.	5 0	9 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	4 0	6 0
Pyrethrum doz. bun.	1 6	3 0
Roses (Indoor), doz.	6	1 0
" Tea, white, doz.	1 0	2 6
" Niels	1 6	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	2 0	4 0
Pink Roses, doz.	3 0	5 0
Smilax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms ...	1 0	1 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae per doz.	12 0	36 0
Aspidistra, doz.....	18 0	36 0
" specimen	5 0	10 0
Arum Lilies, per doz.	8 0	12 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Erica, various, per doz.....	9 0	18 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Heliotrope...per doz.	4 0	6 0
Hydrangeas per doz.	9 0	12 0
Ivy-leaved Geranium, per doz.	4 0	8 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia .....per doz.	3 0	5 0
Marguerite Daisy doz.	6 0	10 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ...doz.	8 0	12 0
Spiraea ...per doz. ...	8 0	10 0
Scarlets .....per doz.	2 6	5 0
Roots and bedding out plants plentiful and great variety.		

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 10th, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, July 13th.—Royal Horticultural Society: meeting of committees at 12 o'clock.
Wolverhampton Floral Fete (3 days).

WEDNESDAY, July 14th.—Meeting of committees of the Royal Horticultural Society at Chiswick.

THURSDAY, July 15th.—National Rose Society's show at Norwich.
Helensburgh Rose Show.

FRIDAY, July 16th.—Sale of imported and established Orchids by Messrs. Protheroe & Morris.

SATURDAY, July 17th.—National Viola Society's show at Regent's Park.

HAILSTORM FUND.—It will have been gathered from the columns of THE GARDENING WORLD that great damage has been done in various parts of the country by the recent terribly severe hailstorms, and that a number of market growers and others have been ruined by the destruction of their houses and crops. With a view to alleviate the distress of these deserving people, the Proprietors of THE GARDENING WORLD have decided to open a fund for their benefit. They start the list with a donation of two guineas, besides bearing all expenses. They now earnestly appeal to all readers and friends to contribute. Amounts or promises received up to the Wednesday mornings will be acknowledged in the issue for that week. Contributors will be advised as to the way in which the money has been spent.—*Bis dat qui cito dat.*

THE ROSE SHOW AT THE CRYSTAL PALACE. The National Rose Society will have to record in their annals that for once, at least, the weather was entirely favourable for the holding of a show. The day was dull and cloudy throughout, being neither too hot and close, nor too cold for the comfort of the visitors. The same conditions together with a moist atmosphere were most favourable to the duration of the Roses which preserved their freshness for a much longer period than we remember them having done before at the Crystal Palace. We feel sure they would have maintained a respectable display during a two days' show; whereas, on the other hand, we have seen a large proportion of them collapse before they were many hours staged. The atmosphere of the Palace is usually very dry owing to so much ventilation from beneath, but the state of the atmosphere on this occasion prevented any drying effects.

The show itself may be pronounced one of the most successful held by the society, both with regard to entries, quantity, and quality, there being 669 entries, or 141 more than last year. The Victorian Era Exhibition, which has been in progress for some time, prevented the Rose show from getting that justice which it has had on many previous occasions. The Palace Company, we suppose, was responsible for the positions allocated to the Roses, but it cannot be otherwise than detrimental to the display to have many of the leading classes, particularly the amateurs' exhibits, staged in positions from which overhead light was altogether excluded. This annoyed not merely the exhibitors themselves, but the general public who failed to see the true colours of the Roses, owing to the state of semi-darkness which prevailed in those obscure spots, affecting whole tables sometimes. The arrangement and sequence of the respective classes was most perplexing both to the reporters and many of the public, who experienced great difficulty in finding any given class or exhibit, particularly after the place began to get crowded. It may be that the fourth estate is not entitled to any consideration or consultation in the matter; but the inconvenience cannot be said to end there when the public has to double upon their footsteps many times backwards, forwards, and sideways, in order to find the exhibits and properly understand their significance. It would be advantageous to the entire management and to their credit, if on future occasions they would amend these small matters, as tending to the betterment or perfection of the leading show of the queen of flowers in the country. Otherwise we confess that this show was well worthy of the Diamond Jubilee year.

The great mass of the visiting public, connoisseurs and otherwise, were jubilant over the beauty of the Roses, and well they might be, for there is no country in the world where the queen of flowers is grown to greater perfection than in this country, the relatively moist atmosphere in average seasons being conducive to the durability of the modern races of Roses. Some of our American visitors had an eye-opener and could scarcely believe that such magnificent Roses could be grown in the open air in our foggy, murky climate. One American gentlemen turned about on his heel several times trying to imagine by what possible means he could take back some of those prize Roses in a fresh condition to show his friends at home; but as he was not returning till August, and could hardly return immediately to accomplish his purpose, he could only regret the impossible, and express his dissatisfaction at the same. The best American Roses are produced in spring under glass, that is, they are forced in immense quantities. Yet the varieties which succeed best and are most popular here, fail more or less completely in the United States, refusing either to grow or flower satisfactorily, and often succumb to mildew. American Beauty is the most popular Rose there, and is considered to be synonymous with the French Madame Ferdinand Jamain, which is but little known at even the leading Rose shows of this country.

The destruction of gardens and garden property, and the general desolation caused by the recent hailstorm at Chelmsford, could not have extended to other parts of Essex, for that county secured the lion's share of the prizes and honours, a large number of the successful exhibitors coming from the neighbourhood of Colchester as usual. Taking honours alone, we should say that Hertfordshire was the most successful, for both of the Champion Trophies went there, for seventy-two and thirty-six Roses respectively, the latter being for amateurs. The former was taken by a firm having an establishment in Yorks as well as Herts; but taking it all round, the winning Roses came from counties south of Worcester, Shropshire, and Suffolk. The principal counties represented were Essex, Herts, Surrey, Worcester, Somerset, Oxford. Others showing well were Gloucester, Bucks, Shropshire, Cambridge, Notts, Suffolk, Kent, and Down, in Ireland.

The season, obviously, is yet too early for the northern growers who make themselves felt in droughty summers when Roses are early and getting past their best in the south. They will have to make the best of the northern shows this year.

Essex and Herts likewise supplied the four premier blooms in their respective classes, namely, Horace Vernet, Madame Cusin, Muriel Grahame, and Kaiserin Augusta Victoria.. The latter is a vigorous hybrid Tea and took the place of a hybrid perpetual in the amateur's division. The above four are also some indication of the Roses which have given great satisfaction this year. Kaiserin Augusta Victoria was one in a stand of nine blooms of that variety. It occurred in many other stands in fine form. There was a magnificent stand of twelve blooms of Horace Vernet, which were remarkable for the variations of colour, leading many to suppose that there were two or more varieties in the stand. The lighter blooms were much shaded with rose, while the rest were of a glowing crimson shaded with maroon. All the leading exhibits contained magnificent blooms of Gustave Piganeau, and there was a splendid box of twelve blooms. Conspicuous also were whole stands of Mrs. J. Laing and Her Majesty, the blooms of the latter being of good average rather than large size. La France was fairly good and the allied Caroline Testout was often in handsome form. Amongst Tea Roses, Madame Cusin stood out prominently for texture and colour. The Bride, Catherine Mermet, Madame de Watteville, Ethel Brownlow, Marie Van Houtte, Maman Cochet, and several other Teas were also in grand condition. Comtesse de Nadaillac seemed rather scarce. Amongst new Roses Madame la Marquise Litta (1893) and Kaiserin Augusta Victoria (1891), both hybrid Teas, were in fine form, beautiful, and full of promise, taking leading awards. Both received Awards of Merit from the Royal Horticultural Society on the 29th ult. The British Rose Mrs. W. J. Grant, also a hybrid Tea, was shown under that name, and under the American appellation of Belle Siebrecht.

Garden and buttonhole Roses came in for marked attention from the public on account of their great decorative value and wonderful beauty. Under the name of garden Roses anything, single or double, is included that does not come under the designation of hybrid perpetual, hybrid Tea, Tea or Noisette. They were represented in great variety. Buttonhole Roses consist largely of Tea and Noisette varieties, cut in the bud state, in which they are admittedly prepossessing. What charming bits of colour are presented by Ma Capucine, L'Ideal, and William Allen Richardson in their apricot, salmon-red, and yellow tints! Crimson Rambler is characterised by boldness, showiness, and profusion of bloom, but lacks the refined charm of those previously named, while yet in bud. It is, however, a pillar and trellis rose *par excellence*. The huge miscellaneous group of Palms, Crotons, Caladiums, Begonias, &c., exhibited by Messrs. J. Laing & Sons, contributed in no small degree to the effect of the show.

National Carnation and Picotee Society (Southern Section).—This branch of the society has altered the date of its show from the 17th to Wednesday the 21st. inst., owing we suppose to the lateness of the flowers.

Four millions of Sesterces, or about £30,000 sterling were spent by the Emperor Nero in procuring Roses for one feast. This is a florists' bill of quite presentable size. Is it not a pity for the trade that Nero is not alive to-day?

Three thousand pounds of pepper were demanded by Alaric, amongst other things when he besieged Rome in A. D. 408.

The bark of the Elm is often bored by beetles, and a sea-going bark is not always sea-worthy, but the bark of a dog is always sound.—*Snaggs.*

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, July 13th, in the Drill Hall, James Street, Westminster, from one to five p.m. A lecture on "Mutual Accommodation between Plant Organs" will be given by the Rev. Prof. Geo. Henslow, M.A., F.L.S., etc, at three o'clock.

The botanical garden at Pisa was established in 1544, and is considered to have been the first garden of the kind in Europe. The Botanical Garden, Oxford and the Physick Garden at Chelsea were not established till nearly or quite a century afterwards. The Pisa garden was founded by Cosmo de Medici, and was enriched by plants from Europe, Asia and Africa.

Royal Visitors to the Windsor Rose Show.- The Grand Duchess Serge of Prussia, Princess Christian, and Princess Beatrice visited on the afternoon of Saturday, June 26th, the Rose show of the Windsor & District Society which was held in the Home Park by permission of the Queen. Mr. B. R. Cant's prize box of Roses was sent to the Queen for inspection at Her Majesty's special desire, as were also the exhibits of other first prize-winners.

South African Orchids.—It is reported that in that part of Swaziland which was ceded to the Boers prior to the coming into office of Mr. Chamberlain no less than thirty new Orchids which have never yet been cultivated have been discovered by a Transvaal official. One of these is said to possess a pseudo-bulb scented like eau de cologne, and the largest flower ever seen amongst South African Orchids. All these good things may find a way into our gardens if Mr. Chamberlain and Oom Paul can settle matters.

Coloured Memorial Wreaths.—At one time pure white, and pure white only, was *de rigueur* for the composition of Memorial wreaths, croses, etc. Then small fronds of fern, a few Violets, and other flowers of half mourning shades were used. This has led to the employment of even bright coloured Pelargoniums for floral tokens that are designed for public or semi-public funerals. A very attractive feature that has crept into use is the employment of tufts of narrow Croton leaves, and in some of the larger designs some of the smaller Caladium leaves have even been used with excellent results.

The Potato Disease, like the poor, is always with us, and our knowledge of its methods of growth is daily improving; also our system of attacking it. Lately the statement has been circulated that Potatos properly supplied with potash and phosphoric acid never become badly infected. Dealing with this announcement a contemporary supplies an analysis of diseased Potatos compared with the average of fifty-three analyses of sound Potatos, to demonstrate the difference. It was found that the ash of a diseased tuber contained 37·86 per cent. of potash, and 9·96 per cent. of phosphoric acid, as compared with 60·37 per cent. of potash and 17 33 per cent. of phosphoric acid in the sound tuber. Whether this can be turned to practical value remains to be seen.

Onion Cut-Worms have caused great alarm amongst the Onion growers of New York, U.S.A., district. In 1895 and 1896 they did a great deal of damage and in the latter year they destroyed about 46% of the Onion crop. In 1895 some entomologists started to work to discover the life history of the worm and to develope a plant to check its ravages. A bulletin just issued contains the result of their labours. It states that most of the damage is done by the dark-sided cut-worm (Carneades messoria), one of the climbing cut-worms. There is only one brood of worms a year, and this appears in the spring in the uncultivated and neglected places. From thence the worms travel to attack the Onions. A dry bait composed of bran, middlings, and Paris Green was found by experiment to be readily eaten by the worms, and to be most deadly in its effects. This bait can be easily distributed by means of a seed-drill.

The baffled gardener looked dismayed,
And, muttering something, scratched his head,
To see his Carrots turning red.
"Console your grief" the maggot said,
"Your wormy Carrots died in bed."—*Jarge.*

Cardiff Horticultural Society.—At a recent meeting at which Mr. Peace presided, it was arranged to illuminate the gardens as usual on the date of the show, August 11th and 12th. A display of fireworks is to be given by Messrs. Brock, of Crystal Palace fame.

A new Weed Destroyer.—A solution of sulphate of copper for getting rid of weeds is recommended by *Le Journal d'Agriculture Pratique*. A vinegrower of Marigny called attention to the fact that when spraying his Vines with such a solution certain wild plants that were accidently sprinkled were killed. Experiments in this direction have been made this spring and it has been found that a 5% solution of the copper sulphate applied at the rate of 210 gallons to the acre had given a good account of Charlock. M. Brandin, president of the Society of Agriculture at Melun, tried the dressing in fields of Wheat and Oats badly choked up with Charlock and Thistles. The weeds perished, but the corn continued to grow vigorously. One field only was an exception, and in this case rain fell heavily in the night following the application. It seems passing strange that the corn should escape while the weeds were killed, and we should like to know more about this method of destroying weeds before we recommend it. Still there is nothing to hinder the conducting of experiments on a small scale at first.

Ealing and District Gardeners' Mutual Improvement Society.—The annual excursion of this society has been arranged for Thursday, July 22nd, 1897, and will take the form of a river trip to Margate. It has, further, been arranged that the outward journey be made by the magnificent paddle steamer the "Royal Soverign," and the return journey by the new and superb paddle steamer "La Marguerite." Cold luncheon will be supplied on board the "Royal Sovereign" at 12.30 p.m., and tea on board "La Marguerite" at 6.30 p.m. Luncheon, tea, and fare (including rail from Tilbury and Fenchurch Street) 7s. 6d. Time table.—"Royal Sovereign" leaves Old Swan Pier (London Bridge) at 9.35 a.m., and arrives at Margate at 2.15; "La Marguerite" leaves Margate at 6.30 p.m., and arrives at Tilbury at 9.15 p.m., thence by train to Fenchurch Street at 10.10 p.m. N.B.—Latest available trains leave Ealing (District) 8.22 a.m. for Monument. Acton (N. London) 8.12 a.m. for Broad Street. Tickets and other information may be obtained from the committee, from Mr. Geo. Cannon, St John's Nursery, Ealing; Mr. C. B. Green, 11, Myrtle Road, Acton; or Mr. W. Roberts, hon. secretary, 55, Haven Lane, Ealing.

National Chrysanthemum Society's Annual Outing.—The annual picnic and outing will take place on Monday, July 19th. The members will travel to Henley-on-Thames by Great Western Railway, and launches will be waiting at the Royal Hotel landing stage to convey them to Greenlands, the residence of the Hon. W. F. D. Smith, M.P. Dinner and tea will be provided in a spacious marquee in the grounds, and during the afternoon there will be an excursion down the river, returning to Greenlands for tea. Ladies are specially invited. The charge for the day—including return fare from Moorgate Street and Paddington to Henley and back, launches with dinner and tea—will be 10s. to members, and 11s. to non-members. Members not using railway tickets, but joining the party at intermediate stations, or at Henley, will pay 7s. 6d., and non-members, 8s. As this is certain to be a highly popular trip, combining delightful grounds and gardens with a water journey on the Thames, early application must be made for tickets so that the necessary arrangements may be made, more especially in reference to ample accommodation by rail, and for dinner and tea. Members requiring tickets from Moorgate Street, which will be available from any intermediate station to Paddington, must state this on application, and they can alight either at Praed Street or Bishop's Road for Paddington. No applications for tickets can be entertained unless made by the evening of Friday, July 16th.—*Richard Dean (Secretary), Ealing, London, W.*

Getting Even with the Dandelion.—Where Dandelions prove troublesome weeds, it is suggested by an enthusiastic salad connoisseur that the gardener eat them, and thus get even with them.

Flower Service at Brighton.—On Sunday, June 27th, a Flower Service was held in the Brighton Parish Church. Large quantities of plants and cut flowers were received. These were subsequently taken to the hospitals. The vicar, the Rev. Prebendary Hannah, officiated.

Ancient Society of York Florists.—The third show of this season's series was opened in the Guildhall, York, on June 30th. The exhibition of Roses and Pinks were the chief objects of the show, but the number of the latter on view was only moderate. Roses, on the other hand, were excellent. Mr. W. Hutchinson, of Kirby Moorside, was the principal winner. In addition to having the premier light Rose and the premier dark Rose in the show he won no fewer than fifteen first prizes for Roses, Pansies, and hardy perennials. Mr. Wragge, of Burton-on-Trent was the most successful exhibitor of plants—especially Ferns. Messrs. J. Backhouse & Son, York Nurseries, staged a grand lot of hardy perennials, and some fine samples of Rosa rugosa.

Hailstorms.—On Thursday, 24th June, 1897, hailstorms of terrible violence occurred throughout Essex, Middlesex, and parts of Hertfordshire, doing severe damage to glasshouses on over sixty nurseries at Chelmsford and district, Ponder's End, Enfield, Enfield Highway, Waltham Cross, Hellesden, and Harrow. The 21 oz. glass of all sizes was completely riddled, and considerable damage was done to the Grapes, Cucumbers, Tomatos, and all kinds of plants and Ferns. We are glad to hear that thirty Nurserymen who suffered loss were insured with the Nurserymen Market Gardeners' and General Hailstorm Insurance Corporation, of 2, King Street, Covent Garden, who immediately assessed the damage done and paid the claims six days after. One nurseryman lost 70,884 sq. ft. of 21 oz. glass and his claim at 3d. per sq. ft. amounted to £886 1s. 0d.

The Torquay and District Gardeners' Relief Fund is a busy institution with a most laudable object in view. It is formed to give temporary assistance to *bona-fide* gardeners during illness and temporary disablements, also to the widows of gardeners. The fund has many distinguished patrons, and a thoroughly representative executive. Recently the tenth annual Rose show was held at Torquay in the grounds of Messrs. Curtis, Sandford & Co.'s Nursery, the proceeds being devoted to the funds. We are glad to learn that the show was a decided success, both from the quality of the exhibits and the financial returns. The prizes offered amounted in value to £36, distributed over thirty classes. The chief feature of the extra-schedule portion of the show was a grand display of cut Roses made by Messrs. Curtis, Sandford & Co. The same firm also showed fruits from their farm. Mr. W. J. Godfrey, Exmouth, sent Carnations, Sweet Peas, Violas, and hardy perennials. Messrs. R. Veitch & Son, Exeter, had Cacti, a collection of Sweet Peas, Water Lilies, Bamboos, and hardy herbaceous perennials.

Hints for Emigrants.—The particulars given here were taken from the circular supplied us by the Emigrants' Information Office, 31, Broadway, Westminster, S.W. This is the best season of the year for Canada, but there is no demand for any one except farmers with capital, experienced farm labourers, and female domestic servants. All emigrants are warned against paying premiums or other fees to any other agency or person in this country for situations as farm pupils with farmers in Canada. They should apply to the Canadian Government Agents or to the above office. The severe drought in New South Wales is affecting the demand for labour in agricultural and pastoral districts. In the wheat and wool district of Horsham, Victoria, good workmen are sure of constant work. In New Zealand large areas of the best lands are being acquired by the Colonial Government from the natives for the purpose of settlement, so that there are good openings for farmers with a little capital. Large numbers of persons continue to arrive in Cape Colony, and many find difficulty in getting work. At Kimberley, however, there is some demand for bricklayers, joiners, good tailors, bakers, and female cooks, for all of whom good wages are offered. In Natal, the Immigration Restriction Act, which has just been passed, prohibits the landing in Natal of the following persons amongst others—(1) any one who cannot himself write out and sign, in the characters of any language of Europe, a prescribed application form of admission giving his name, address, and business; (2) of any one who is a pauper or likely to become a public charge; and (3) of any one who, not having received a free pardon, has within two years been convicted of a felony or infamous crime or misdemeanour involving moral turpitude, and not being a mere political offence. Otherwise this Act in no kind of way interferes with the landing of respectable immigrants. Female domestic servants are specially warned against paying any fees whatever to any association or person professing to procure them situations at high wages in Johannesburg, South Africa. Emigrants are warned against going there at present, and likewise for Mashonaland.

Mr. William Green.

PEOPLE I HAVE MET.

Mr. William Green, of Leeds, Garforth, Moortown, and Headingley.

To look upon the judicious blending of Art with Nature is always a pleasant occupation; and to become acquainted with the work of Mr. William Green is one of the means by which this pleasure may be enhanced. The business was established in the existing premises somewhere about the year 1840. The premises consist of a large shop with two massive windows and a commodious showroom. The warehouses are situated behind, and are amply stocked with all the various requisites for a business of this description. The nursery trade carried on at Garforth is allocated in the matter of growths, the various trees, plants, &c., being reared at the following places:—The Home Nurseries, Orchard Nursery, Institute Nursery, Cathills Nursery, Bridge Nursery, Brickyard Nursery, Bar Nursery, and the Paradise Nursery. These various seats of cultivation will serve to show that the business of Mr. William Green is of a most varied and far-reaching description. His operations in fruit, forest, and ornamental trees, and shrubs, Coniferae and climbers, are very large; and it would be a matter of great difficulty to mention a specimen of the floral kingdom with which he has not a most practical acquaintance.

A special study has been made by the proprietor in the departments of stove and greenhouse plants, a branch in which he has had large experience. He had the honour of receiving the appointment of plant and floral decorator for the Yorkshire Exhibitions of 1875 and 1879, which were open for upwards of six months at Leeds and York. He also supplied the decorations for Saltaire in 1887. The seed warehouses and virgin cork stores at 5, 6, and 7, Turner's Yard, are replete with goods of a most valuable character; and it should be stated that the windows of the premises at Vicar Lane have long been one of the attractive sights of the neighbourhood, in consequence of the elaborate display of the art of gardening as there represented. The premises have recently been very much enlarged, and now constitute one of the finest seed shops in the northern district of England.

Mr. William Green acts as overseer and Parish Council treasurer, and is one of the school managers for Garforth, a position which he occupies with much acceptance on the part of his constituents.

His working staff consists of about 150 employees, in addition to two commercial gentlemen who are constantly occupied in the outside interests of a concern whose transactions are known, not only throughout the area of England, but have extended to the Empire of Germany, America, India, Australia, and the Cape, &c. A man of middle life, Mr. Green possesses a robust geniality, which is so often the characteristic of the successful business man, and impresses one with the thoroughness with which he deals with all the departments of his extensive business. Quite recently, during last planting season, the contracts in hand included the planting of something like two hundred thousand trees and shrubs on various estates in Yorkshire and the upper Midlands; and naturally it is a matter of considerable satisfaction to Mr. Green that he has invariably been able to successfully carry out these and many similar undertakings of which he has made a life study.—*Gyp*.

FRUIT GROWING AT LEBANON GARDENS, TWICKENHAM.

Fruit is well grown at the above, the estate of W Cunard, Esq., as is well worth recording. The houses are grand buildings, and the trees and Vines perfect pictures of health, and of which anyone might well be proud. There is a splendid house of Muscat of Alexandria, 130 ft. by 18 ft., containing a grand crop of splendid well developed bunches, over 600 of which will shortly give a good account of themselves. They always finish well, and are generally well coloured. Last year they were perfection. Of Peach and Nectarine houses there are many. No. 1 is a Nectarine house, 120 ft. by 24 ft., a splendid span, devoted to Lord Napier. These trees are from 18 ft. to 20 ft. in diameter, well balanced and perfect in every respect. This house has produced upwards of 4,000 fine fruit. On June 14th 780 splendid well coloured fruits were taken from the trees mentioned.

No. 2 is a house about the same size and planted with the same variety. On June 14th 500 fine fruits were gathered. Some of the trees in this house are fully 28 ft in diameter. No. 3 house is 120 ft. by 24 ft., and wholly filled with Pineapple Nectarines, the trees being calculated to produce over 4,000 fruits, which are grand. No. 4 contains mixed Peaches of such sorts as Bellegarde, Goshawk, Dymond, &c. Twelve grand trees just coming will produce between 3,000 and 4,000 fruits. No. 5, 124 ft. by 12 ft., is filled with such varieties as Lord Napier and Diamond. Fourteen fine trees in grand condition now carry over 4,000 fine, well coloured fruits. No. 6, 124 ft. by 12 ft., is planted with early Peaches such as Waterloo, Alexandra, and Amsden June. Thirteen trees, first gathered on May 5th, had over 2,000 fruits taken by June 14th, nearly all extra fine and well coloured. No. 7, 125 ft. by 10 ft., is a lean-to house, containing Nectarine Lord Napier, of which there are seven splendid trees which will ripen their fruits by the end of July, the estimated quantity being 2,000 fruits. No. 8 is a Peach house range with a circular roof. It is 250 ft. long by 12 ft. and contains twelve trees of Peaches, such as Sea Eagle, Princess of Wales, Barrington, and Gladstone. The Nectarines Darwin, Pineapple, Bijou, &c. carry an enormous crop of fruit, as good as one could wish for. Strawberries are likewise a special feature; over 5,000 are forced in pots, President, Sir J. Paxton, Royal Sovereign, and Sir C. Napier being the favourite sorts. They have been extra fine this season.

Orleans House Gardens.

This well known place is also owned by Mr. Cunard, and under the able superintendence of Mr. J. Allsop also. The Peaches and Nectarines are equally well done; two or three houses are just now perfection,

as are also the Vineries. Muscats are the favourites and are splendidly done, as the crop is really wonderful. If they finish as well as they promise they will be fine objects for the exhibition table, many of the bunches being now fully a foot long and well proportioned. A splendid house of Madresfield Court bears the same character. Melons are also extensively grown in frames where the Strawberries are forced. The favourites are Hero of Lockinge and Windsor Castle; the latter has been grown over 8 lbs. in frames and is a grand Melon for frame work.

Tomatos are grown both inside and out. Fine crops of Sutton's Perfection, Chemin de Luli, and Northumberland are the favourites. Two new houses have just been erected for Peaches and Nectarines; of the later Rivers Early occupies one house. These were planted last December and are making grand headway. To Mr. Allsop much credit is due for the admirable condition he has everything. Cleanliness and good order are in strong evidence, for a finer lot of trees, combined with a most excellent crop of grand fruits, well coloured, it would be impossible to find, and I must congratulate him upon his great success.—*Alfred Outram, F.R.H.S.*

A HAWICK AMATEUR'S GARDEN.

Amongst the many lovers of hardy plants in Hawick, Mr. Robert Elliot, of Stanley Cottage, is one of the most enthusiastic. His handsome cottage which stands in the centre of his tastefully-arranged, and well-stocked garden, is a home of which he may well feel proud. Being a working man, his only spare time for tending his fruit and flowers is in the evenings and Saturday afternoons; and judging from what I saw during my visit, he certainly makes good use of his time. Hardy herbaceous and alpine plants, besides a very fine collection of hardy Ferns, being his strong point, it is needless to add that almost at all seasons of the year he has something to admire. His collections may not be so comprehensive as some noted in these columns; but it is being diligently and judiciously added to year by year as circumstances allow.

A few of the most prominent things in flower on the borders and rockwork were Aubrietia Leichtlinii, Linum arboreum, Lithospermum prostratum, red, yellow, and blue respectively. Being in bulk, and near to each other the effect was charming. Prominent also were large breadths of Saxifraga Aizoon, S. rocheliana coryophylla, S. densifolia, and S. marginata in dense sheets of white. Sempervivums were also fine, the most prominent being S. Laggeri. This is a variety I have several times lost, but Mr. Elliot seems to have more luck, as the specimen he has seems very much at home. Its position is an exceptionally dry one, which suits it admirably; this holds good for most Houseleeks. At the same time I have some good specimens of S. Brauni, S. fimbriatum, S. montanum, etc., growing in very damp positions, and doing well. Sedums were also prominent, especially S. ternatum, which is useful and pretty with its myriads of sprigs of white. Tree Paeonies, Lupines, and Aquilegias were at their best, and were represented by the best of each colour only. Hesperis matronalis alba fl. pl., the old true Scotch Rocket, I was pleased to see in such fine clumps. This is a grand old plant which should be in every garden.

Passing to the Ferns, which Mr. Elliot specially admires, I was much struck by the healthy appearance and size of some of the plants, both on a small rockery and in the cool frames. Two lovely things, and in exceptional condition, were Athyrium crispum and A glomeratum elegans, the latter especially being the most striking, its fronds resembles extra fine curled Parsley. It is, I believe, rather rare. The Bladder Ferns were well represented, the most notable being Cystopteris fragilis dickiana and C. montana, both of which were well grown plants. Ceterach officinarum (the Scale Fern), so seldom seen in a healthy condition, was also really fine. Polypodium robertianum and P. cristatum were the best in this section. Polystichum angulare grandiceps and P. Lonchitis (the Holly Fern) were also good. The Spleenworts and Hart's-tongues were represented by the choicest varieties, Scolopendrium digitatum being very prominent. Many other varieties, too numerous to mention, also find a home here; many a long ramble have they cost their owner, who knows the haunts of all the rarer district Ferns, and even further afield. When and wherever on holiday our friend is on the watch for anything worth picking up. Mr. Elliot grows his plants for love of them, and looks not to the competition table to gain him fame, although on one occasion he was tempted to try for a Banksian Medal given for Alpines in pots, which he had the honour to win, and of which he justly feels proud.—*Coila.*

NATIONAL AMATEUR GARDENERS' ASSOCIATION.

Beautiful weather favoured the National Association of Amateur Gardeners on Saturday, July 3rd, when a garden party was held in the gardens of the Royal Botanic Society at Regent's Park. The day was warm without being oppressive and a gentle breeze made matters still more comfortable as the amateur gardeners and their friends, including a considerable number of ladies, strolled among the trees and lawns of the Botanic Gardens. Instrumental music was discoursed at intervals throughout the afternoon. One special feature was the reception of some of the Colonial Premiers, who visited the gardeus towards the close of the afternoon. Altogether the function was a happy and successful one.

In the large tent behind the conservatory a show of garden produce generally had been organised. This, of course, attracted a considerable number of friends and acquaintances of competitors. The strictly business air which invariably seems to attend the ordinary large shows was conspicuous by its absence and as no one seemed to take the competition seriously there was a good deal of dilatoriness in making known the awards and the affixing of the prize cards.

The exhibits in the several classes arranged for in the recently issued printed schedule and report were rather few in number and do not call for any special remark. Pot plants, such as Fuchsias, Coleuses, and exotic Ferns were fairly good.

Cut Roses were represented by a few good blooms. A few dishes of good vegetables were also to be seen. Two floral tables only were forthcoming. One of these was disqualified by the judges for infringement of the rules, and the prize was withheld from the other for want of the possession of sufficient merit on the part of the exhibit.

The show really owed its attractiveness to the miscellaneous exhibits. These were fairly numerous and a goodly proportion of the best known trade growers were represented. These miscellaneous groups were delegated to the higher mounds round the sides of the tent to which they gave a furnished appearance.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., had a large semi-circular group of cut hardy flowers. A considerable variety was manifest, and the material shown was of excellent quality.

A very pretty group was that staged by Mr. H. J. Jones, Ryecroft Nursery, Lewisham, S.E. It was composed chiefly of tuberous Begonias, in the cultivation and improvement of which Mr. Jones has made such a name and fame. Both single and double varieties were worthily represented, and some of the latter were remarkable for the substance and form of the flowers. An edging of Isolepis gracilis was tasteful, and some fair sized pieces of Bambusa gracilis and Acer Negundo had been employed with great judgment for a background and also for dotting here and there over the group for lightening purposes.

Cannas were splendidly shown by Messrs. H. Cannell & Sons, Swanley, Kent. The plants were only in large 48-sized pots, but carried large trusses of grand flowers. Such varieties as Queen Charlotte, Aurea, Pavonia, Duchess of York, Alex. Billard, Simon Maupin, Conquerant, and Incendie were particularly noteworthy.

Two cases of bedding Violas were contributed by Mr. W. Baxter, Woking. The flowers throughout were very fresh and good.

Mr. W. Rumsey, Joyning's Nurseries, Waltham Cross, sent a number of excellent quality cut Roses. The new variety Mrs. Rumsey was shown with long stalks and in sprays to illustrate its value as a bedder.

The Malmaison Carnations from Messrs. W. Cutbush & Son, Highgate, N., were, as ever, first-class. Blush and rose varieties were particularly good, and the dwarfness and vigour of the plants gave evidence of culture of a very high order. An edging of Maidenhair Fern was in capital taste.

Cut hardy flowers from Messrs. Barr & Sons, King Street, Covent Garden, made a brave show. Lilies, Delphiniums, and Eryngiums were especially well shown. A stand of capital samples of Iris laevigata was much admired.

A huge exhibit was made by Messrs. John Laing & Sons, Forest Hill, S.E. Foliage plants occupied the centre, and here some capital Souvenir de la Malmaison Carnations appeared. Flanking these both to the right and the left were cut hardy flowers in great profusion and excellence.

The Sweet Peas that were contributed by Messrs. Dobbie & Co., Rothesay and Orpington, were remarkably fresh and good. Many of the leading varieties were included in the collection.

The Ichthemic Guano Co., Ipswich, had a stand of plants grown by the aid of this special Guano. From appearances it evidently suits Carnations, Fuchsias, Ferns, and Pelargoniums.

The One and All Co., Agar Street, Strand, sent an exhibit of vegetables.

SONNING BRIDGE.

None can go up or down river to Sonning without noticing the bridge—hence I am tempted to make some comments. The structure is considered by some to be "handsome"; I cannot altogether agree with this view. Certainly Sonning itself occupies a delightful site on the Thames a little way below Reading; in fact quaint old Leland calls it an "uplandish town, sette on a faire and commodious ground; the Tamise renneth under it in a praty vale." I am not, however, concerned just now with the village, or "town" as Leland styles it, but with that too conspicuous red brick structure which divides its honours between the Shires of Berks and Oxford.

It is a utilitarian bridge; and, as such, of course fulfils a purpose, but not an ideal. If it have any claim to beauty it lies in the eleven irregular arches, of which it is composed, and in which the fancy may well find a sufficient number of curves to please or play with. But where art has failed, nature has succeeded, and time and weather have not only toned down the colour of the bridge, but have stepped in with amplification and adornment.

Yea, in addition to Moss and Lichen, which have combined to cover its external surface, there are other plants which have found a home and fixed themselves thereon. The chief and most noticeable perhaps—on the 29th May—is the graceful little Ivy-leaved Toad-flax (Linaria Cymbalaria) whose pendulous branches are now alive with pretty, pale-coloured, purple flowers, the palates of which are suggestive of gold, while the curious, short pointed spurs are indicative of nectar, for which the wily bee goes. Its bright, shining, heart-shaped leaves are there, too, in rich profusion; they look elegant and interesting, and doubtless serve, if not to "point a moral," to adorn a wall.

Another plant which, like the Hyssop, may be said to "spring out of the wall," is the Pellitory (Parietaria officinalis). This has rough, reddish stems, and numerous, small, axillary flowers which grow in threes, the middle one being pistiliferous only. The leaves are ovate or lanceolate, in form, rough-looking and unattractive, like the flowers; but which, in their present position, certainly have one good point, viz, to cover up and clothe defects in brick and mortar. The Pellitory is also found growing on rubbish heaps and at the foot of, as well as on, old walls, but, as a plant, it exhibits far more character on a wall than at the base of it.

This red brick bridge also, is not without its representative of the order Filices; for does not the little Wall-rue (Asplenium Ruta-muraria) seek its kindly aid? It is a brave, or hardy little plant with tough, dark green compound fronds, that seem proof against the elements. It is one of the smallest of our British Ferns, and somewhat difficult to cultivate, although if the proper conditions be present it will grow freely enough.

But, as one leans upon the bridge,
And looks adown its side,
One wonders where the tiny spores
Are taken by the tide.

It is a true wall plant and, like the other subjects mentioned, subserves nature's mood as against man's handicraft. I am, therefore, more than willing, in the presence of these little wildings, to recant my former opinion concerning Sonning bridge, by reason of the vegetation on it.—*C. B. G. Acton, W.*

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

PHAJUS GRANDIFOLIUS.—This is a very old friend, indeed, and is met with in almost every garden where there is a warm division suitable for growing such heat-loving things as Crotons, &c. Blooming as it does during the dull winter months it is a most useful Orchid for house decoration in a cut state. The scapes being 3 ft. high, they are particularly well adapted for placing in large vases.

When properly prepared beforehand by being placed in a warm greenhouse and kept dry for a few days, the plants themselves may be placed in the dwelling house without the least injury.

With a small batch of this Orchid it would be possible to have a succession of flower extending over a considerable period, so readily does it submit to the retarding process so much in vogue with Dendrobiums. To do this place the whole lot at the warmest end of the greenhouse as soon as they have made up their growths, which is at the approach of autumn. Gradually allow them to go to rest. The withholding of water induces this. About the end of the year the first batch may be placed in heat, and the rest at intervals of a few weeks according to the requirements of the establishment.

CULTURE. — Being what is termed terrestrial Orchids they require a much stronger compost to grow in than do most Orchids; and being strong growers a fair amount of pot room is necessary. For convenience sake, when wanted for house decoration, they are best grown with single leads in twenty-four sized pots. These require to be well-drained by placing two inches of crocks at the bottom, so that the water which they receive in large quantities when in active growth may pass freely away.

The compost should consist of good turfy loam, peat, dried cow dung, sand, and bits of crock or charcoal broken up moderately fine. Place some old moss or rough material over the crocks before filling in with the compost. When finished the plant should be about level with the rim of the pot and the soil nearly so. Water sparingly until the roots begin to take hold of the new compost, when they must be well looked after as regards moisture.

During the summer months see that they get proper shade without making the growths weak and drawn. Also pay attention to the brown scale which is almost sure to infest the under sides of the foliage if not looked after. Careful sponging with soapy water is the best means of getting rid of it.—*C.*

PLANTS RECENTLY CERTIFICATED.

THE undermentioned awards were made by the Royal Horticultural Society on the 29th ult.

Orchid Committee.

LAELIOCATTLEYA EUDORA SUPERBA. *Nov. var*—The sepals and petals of this variety of a bigeneric hybrid are pale blush-lilac. The lip is of great size with a sub-orbicular crisped lamina, of a glowing crimson-purple, the colour passing round the side lobes. The throat is white, giving place to pale creamy yellow in the tube, the basal part of which is also marked with a few purple streaks. The tube is white on the outer face. The variety is superior to the type in having richer and better defined colours, and is certainly a triumph of the art of the hybridist. First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

CYPRIPEDIUM MRS E. V. LOW. *Nov. hyb.*—It seems that the parentage of this beautiful Cypripedium has been lost. Judging by the flowers it would seem that C. niveum had been crossed with C. leeanum, itself a hybrid. The dorsal sepal is nearly orbicular, white, tinted with green on the lower half and finely spotted with purple there also. The broad margin is pure white. The oblong-elliptic petals are white, flushed with pink, and minutely and thinly dotted with purple. The lip is white and lightly washed with green veins. Altogether it is very pretty and distinct. Award of Merit. Messrs. Hugh Low & Co., Clapton.

Floral Committee.

ADIANTUM FASICULATUM.—Judging from appearances this garden raised Fern might be considered a hybrid between A. Capillus-Veneris and A. amabile. The fronds are ovate or triangular with overlapping branches, and long, wedge-shaped, often deeply lobed segments. The segments of the early fronds are very broad, and all are light green, recalling A. amabile. The upright habit of the plant has a graceful appearance and will be useful for decorative work. First-class Certificate. Mr. H. B. May, Dyson's Lane Nursery, Upper Edmonton.

THUYA GIGANTEA AUREA.—All the twigs and twiglets of this variety are of a golden yellow hue for the greater part of their length, the bases only being green. It will make a handsome subject for planting on lawns and pleasure grounds, or shrubberies, but should be fully exposed to display its beauty and individual character to the best advantage. First-class Certificate. Messrs. J. Veitch & Sons, Ltd.

ENCEPHALARTOS GRACILIS.—A large plant of this distinct and pretty Cycad, carrying about thirty leaves, was shown by Messrs. F. Sander & Co., St. Albans. The leaves are 4 ft. to 5 ft. long, and pinnate, with one spiral twist towards the apex. The pinnae are narrowly linear owing to their being revolute at the edges. The whole plant is covered with a gray, woolly down, and is both distinct and attractive. Botanical Certificate.

BEGONIA LADY PEARSON.—The flowers of this tuberous variety are of great size and double, with broad, wavy petals, not at all crowded. Being of a soft orange-salmon they are very attractive, and borne on stout, upright stalks. Award of Merit. Messrs. J. Laing & Sons, Forest Hill, S.E.

ROSE KAISERIN AUGUSTA VICTORIA.—As a hybrid Tea Rose, this has a leaning towards the Teas in general appearance. In prime condition it is a conical Rose with a few of the broader outer petals revolute at the edges, and comparable to Catherine Mermet, except that it is white with a creamy-yellow centre. It is slightly fragrant. It was put into commerce in 1891, and has behaved splendidly this year. Award of Merit. Messrs. Paul & Son, Cheshunt.

ROSE SOUVENIR DU PRESIDENT CARNOT.—Here again we have a long conical Rose belonging to the hybrid Tea section, and white tinted with flesh in the firmer central portion. The outer petals are revolute at the edges. The leaves vary from ovate to orbicular, and are of a rich dark green. The flowers are softly fragrant and succeed well on forced plants. It was first sent out in 1894. Award of Merit. Messrs. Paul & Son.

ROSE MADAME A. CHATENAY.—This is a large flower with creamy-pink, revolute outer petals, and the inner ones of a softly toned salmon. It is very fragrant, and, like the previous two, is a hybrid Tea. Award of Merit. All three were shown by Messrs. Paul & Son, who are to be congratulated upon getting three Awards for Roses at one meeting, a very unusual occurrence.

CALOCHORTUS CLAVATUS.—The inner segments of this Mariposa Lily are broadly obovate, and deep golden-yellow, with a transverse brown line just above the beard of clavate yellow hairs. The small outer segments have a crescent-shaped brown blotch on the face. A batch of this species has a brave and telling appearance. Award of Merit. M. C. G. Van Tubergen, Jun., Haarlem, Holland; and Messrs. R. Wallace & Co., Colchester.

CARNATION HAMPDEN.—The flowers of this variety are of large size, and of a rich salmon-orange, with very numerous petals, slightly incurved at the outer edge. It is a handsome border variety. Award of Merit. Martin R. Smith, Esq. (gardener, Mr. C. Blick), The Warren, Hayes, Kent.

ROSE MME. LA MARQUISE LITTA.—The blooms of this hybrid Tea are beautiful in shape, and produced in clusters when not disbudded. They are compact, conical in the bud state, and rosy carmine, deepening to a much richer carmine in the centre. In appearance the variety has a leaning towards the hybrid perpetuals. It was sent out in 1893. Award of Merit. Messrs. Wm. Paul & Son, Waltham Cross.

THE FLOWER GARDEN.

WHILE we have had a good deal of bright sunshine and weather hot enough for anything we have also been favoured with substantial rains at intervals. This has suited the flower garden to perfection, and has given the bedding plants just the start they needed. Still if the plants have had a chance to grow freely so have the weeds, and there will be plenty to do in keeping them down. The hoe must be plied freely wherever it is possible to do so, for it is a mistake to let weeds grow to seeding size before they are destroyed. Gravel paths may be kept in trim by a persistent hand picking, or by the application of a reliable weed killer.

THE LAWNS are at the present time in capital condition, and looking far better than they usually do at this season of the year. Mowing is, perhaps, the heaviest labour item in the keep up of the flower garden during the spring and summer months. The grass should not be allowed to get too long or the machine will not be able to get hold of it properly. Nothing looks worse than to see flowering stems of grasses standing up here and there over the lawn defying the mowing machine to remove them. In such cases the scythe will have to be called into requisition.

THE HERBACEOUS BORDER will require a good deal of attention now. Besides the keeping down of the weeds there is staking to be thought about. This is not an operation that can be safely deputed to inexperienced hands, although, more's the pity, it is often thus. It is a far too common sight to see Dahlias, perennial Asters, and other plants of bushy growth tied up like a lot of birch brooms to single stakes. This cannot fail to be simply ruinous to the appearance of the plants, and the border generally. In staking, a sufficient number of stakes must be put to each plant to allow of the required support being given without any undue crowding. Hollyhocks are better confined to a single stem. If the stake was driven into the ground at planting time, as was advised, there is nothing to do now but add ties as growth calls for them.

NARCISSI.—The period at which the bulbs are really dormant is an exceedingly short one, and as it is necessary to catch the bulbs at this period where transplanting is needed in order to obtain the best results, close attention is required. Soon after the old roots have ceased operating new ones commence to form. Any lifting of bulbs that is carried on after this therefore must necessarily be a hindrance to and a check upon subsequent growth. Where Daffodils are semi-naturalised in various places lifting has not to be performed, and even when the bulbs are growing in mixed borders every three or four years is often enough to lift them, except in the case of very choice varieties when it is desired to increase the stock.

PLANTING NARCISSI.—Generally speaking July and August are the best months of the year for planting Narcissi. The exact period in July when it will be safe to lift and replant the bulbs will, of course, depend upon the character of the season. About the third week in July, however, is a good time if the season is at all an ordinary one. Offsets from valuable varieties must be closely looked after, and a good deal of care and a pair of sharp eyes are needed when lifting is going on. A careless workman amongst a patch of valuable Daffodils is about as comforting a sight as a bull in a china shop. Many of the bulbs, both big and little, will be buried or never turned up, and a fair percentage will probably be impaled upon the fork The little offsets require much room for the first year or so, and should be dibbled into a prepared border where they can receive proper attention.

TULIPS which were lifted from the flower beds at the beginning of June will now be fit for removal to the storehouse. Great pains should be taken to keep the several varieties together, otherwise there will be not a little confusion at flowering time next year. If possible each variety should be kept in a special box, and accurately labeled. After lifting the bulbs from their bed of ashes they should be taken into the shade as quickly as possible. Exposure to the sun for even a very short time causes burning of the outer tunic, and this injury often results in serious consequences, as Tulip growers are well aware.

BUDDING ROSES.—We are now on the eve of the budding season. Accordingly, briers should be given a last look over. Any shoots that are not wanted may be removed at once, leaving about two sound healthy growths in suitable positions. Budding will commence as soon as the bark of the briers will lift easily and cleanly. This will vary with the locality, and also to a very great extent with the weather. If the weather keeps hot and dry it is a capital practice to give the plantations of briers a good soaking the day previous to the commencement of operations.—*A. S. G.*

HINTS FOR AMATEURS.

Grapes Ripening.—Those amateurs who go in for a little Grape growing, and force their vines gently, may generally reckon upon getting ripe fruit about the middle of July without very much trouble. Such varieties as Foster's Seedling for a white, and Hamburgh for a black, may be depended upon to give a good account of themselves year after year if treated fairly well. Now while there are many amateurs that look after their vines capitally in the earlier stages, and whose methods of cultivation are good and workmanlike, and would compare favourably with professionals, there is a good deal of rather haphazard treatment given the vines during the time when the fruit is ripening. Now we would not for a moment suggest that amateurs are the only sinners, for, truth to tell, there are not a few professional growers who during the ripening of the fruit treat the poor vines in a highly irrational and unenlightened sort of way. First and foremost we allude, of course, to that pernicious plan of drying off. The practice is certainly dying out, but it is not by any means dead yet.

That starving the vines for water is not the way either to obtain the best flavoured fruit, or to maintain the vines in a state of health and vigour for many years, a few moments consideration will prove. All through the earlier stages and right up to the time when the berries commence to show colour the root action of the vines is stimulated by every means in the cultivator's power. Clear water and liquid manure are given freely, and as a consequence the borders in which healthy vines are growing are full of young absorbing roots. But the berries commence to colour, and the supply of water is cut short: what is the result? First of all many of the young absorbing roots die, and those that do not die are crippled, so that the vines are bound to receive a check that cannot fail to be serious.

This is what is really done in scores of vineries year by year, and yet people wonder why their vines soon become worn out.

Having pointed out the evils attendant upon the drying off system it is now necessary to say what should be done in order to obtain juicy well-flavoured fruit, and at the same time insure the safety and well-being of the vines.

Whilst the fruit is ripening less water will be required at the root, and in the later stages of ripening liquid manure should not be given at all, but only clear water. This should still be applied in sufficient quantities to thoroughly soak the border. Choose the forenoon of a dry day for watering, as this allows of a greater part of the moisture being dissipated before nightfall. At this time of the year it will not be necessary to add warm water to the contents of the tanks in order to raise the temperature, but all water used should be exposed for a while previously to the sun and air. Water taken from wells and underground tanks will still be cold, and would do damage.

During what may be termed the growing period the house has been kept comparatively close, and the air heavily charged with moisture. As soon as colour is observed in the berries these conditions must be modified to a considerable extent. The atmosphere of the house must be drier, and in order to effect this change dampings down must cease entirely. More air too, both by top and bottom ventilators must be given. An ideal state of affairs is a hot day with a gentle breeze passing through the house and causing the leaves to rustle gently.

In many cases, it may really be said in most, the vinery is something of a greenhouse as well, that is to say it is fitted up with stages upon which pot plants are placed. Ferns, for instance, do capitally in a vinery, the moisture and shade is just what they revel in. It will now be too dry and arid in the vinery for these, however, and they should, therefore, be shifted to other quarters with the least possible delay.

Shading Vines.—Generally speaking, vines do not need to be shaded from the sun, but at this time of the year the sun occasionally proves too strong for them, and causes the growths to flag. This is especially the case when we get a very bright hot day after a few dull days. When flagging is observed the best thing to do is to spread Tiffany over the whole of the house so as to check the rapid transpiration of water that is causing the mischief. The border may then be examined, and if it is at all dry clear water, not liquid manure, may be given. This contingency of flagging vines may not have occurred in the experience of many amateurs, but during the present spell of very bright weather it may well do so, and forewarned will be forearmed.

Gathering Peaches.—The majority of people if asked if they knew the way to gather ripe Peaches would probably say "yes! if they had the chance"; but all the same the chances are that they do not possess the requisite knowledge. Everybody knows how soft and easily bruised a fruit a Peach is, but it is not everybody that thinks of this when assaying the ripeness of the fruits. To catch hold of them and give them a squeeze to see if they are soft seems to be the easiest, and, at the same time, the most natural thing to do; but woe betides the poor Peach that is thus treated. Every fingermark shows, and in a few hours the appearance of what was once a good fruit is totally spoiled. Now there is a way to gather Peaches, and to try if they are fit for gathering, that does not expose the fruit to these dangers, and every amateur should know it. In trying any fruit let it lie loosely in the palm of the hand, then clasp it round gently with the fingers, the tips of the fingers and thumb pressing gently on the base of the fruit near to the footstalk. Here the pulp is comparatively hard until the last stages of maturation are reached, consequently there is less danger of a bruise being inflicted here than anywhere else. Grasping the fruit thus, a gentle sideward pressure, which does not bruise the pulp because it is distributed over a large area of the surface, will determine whether it is fit for gathering or not. If it is, it will leave its stalk readily. All the fruits should be stood on their bases in such a way that they are not in contact with each other. Before taking them to table the flavour is much improved if the fruits are stood for a few hours on a shelf exposed to the sun, but, of course, shielded from birds and other two-legged hut unfeathered marauders. Thoroughly ripe fruit fresh plucked from the tree, with the pulp quite warm from the sun's rays has, however, yet to be beaten for juiciness and exquisite flavour.

Nets for Peach Trees.—When the fruit begins to ripen not a few cultivators proceed to suspend nets below the trees with a view to catching falling fruit and preventing it from bruising by the fall. The remedy, however, is nearly as bad as that which it is meant to cure. The nets, although they may be adjusted very carefully and evenly, soon take the form of a number of bags or pockets. Into one of these pockets perhaps two or three fruits fall, and rolling down crash against each other at the bottom, the impact being quite sufficient to bruise them badly. Another plan is to cover the border with a good layer of hay to break the shock of the fall. This certainly is better than the nets, but it is far from being a perfect device, for after such a drop a fruit is scarcely in fit condition to be sent to table. The best plan, therefore, is to go over the trees each day and pluck the ripe fruits. Hay may well be laid down in addition to catch any that may be missed, for if it does no other good it will act like a mulching to the border and help to keep it moist.

Watering Peaches.—With Peach trees, as with Vines, far too many people take it for granted that the moment a certain stage of ripeness of the fruit is reached, water may be entirely dispensed with. If the roots of Peach trees, like Rip Van Winkle could go to sleep for an indefinite period during which they need no nourishment, this would be all very well; but unfortunately for them it is not so. Water they must have, and if they are not supplied with it, then they must suffer in proportion to the severity of the curtailment. The remarks made above concerning Vines may be applied to Peaches with equal force, and we should advise all our readers to take them well to heart and act upon them, and we shall then hear fewer complaints of Vines and Peaches so quickly lapsing into old age.—*Rex.*

Sub rosa.—At some of the convivial meetings of the ancients a white Rose was suspended from the centre of the ceiling in order to indicate that whatever took place in that room was confidential. Hence the word *sub-rosa*, so commonly used in modern English.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Dividing Violets.—*G. B.*: You are very late in splitting up your Violets. Lose no time in getting them done, or the young plants will not have time to make any headway. Dibble the young plants out on a border facing either to the north or to the east, the latter preferably. In such a position they will be shaded from the hottest sun and will soon make a start. Keep them well watered if the weather prove dry, for you cannot afford to lose any more time.

Show Pelargoniums.—*W. White*: After the plants have got shabby as you say yonrs have, there is nothing to be gained by keeping them in the greenhouse, as they only prove a happy breeding ground for green fly. Turn them out of doors and stand them in a sunny part of the yard. Here they may be watered as required. Pruning may be conducted when the wood is fairly hard and well matured, which will be towards the end of the present month.

Gladiolus Colvillei.—I have several 32 pots filled with this charming Gladiolus. They have bloomed well but have now quite died down. When shall I pot them up? Shall I knock them ont of the pots now? *J. R. L.*

Leave them in their pots for the present, taking care to put them in a place where the rain cannot get at them. The corms may be potted up about the middle of August.

Strawberry Layers.—In order to get plants to form a new bed next year, *W. Tey*, you may adopt one of two methods. The plan usually followed is to fill small 60-sized pots with any soil that may be handy; make it fairly firm and peg the runners down into the pots. Some growers prefer to let the runners root in the soil as they list, and lift them when well rooted, afterwards transferring them to their permanent quarters. The former plan is rather the handier of the two, although it is claimed for the latter that the plants do not receive any check and grow away very strongly.

Vegetable Marrows.—*C. Sharpe*: We should say that is not at all a common practice to thin the growths of Vegetable Marrows, as the plants are allowed to grow as they please in most places. You will obtain finer specimens, however, by removing some of the weaker growths, and taking the points out of the stronger ones. For obtaining show Marrows you cannot do better than resort to this plan.

Asplenium bulbiferum.—I have some plants of this Fern which were potted from large 60's into 48-sized pots in March. They have grown vigorously and their roots are coming through the hole of the pot at the bottom. Will the plants require to be potted again this year or not?—*Reader.*

If the plants have well filled the pots with roots, another shift may do them good. If given within the next month or six weeks, they will have time to fill the new pots also, and will thus be in a condition to pass through the winter safely. We do not advise potting Ferns late in the season, as a lot of cold soil about the roots during winter is apt to prove fatal.

Laying Turf.—*T. Menzies.*—It is too late in the season to lay turf, as we now expect hot weather in long continued spells, and this would not suit the turf. Wait until September, when there will be a better chance of rain and heavy dews to assist growth.

Pinks.—Please tell me how to propagate these, whether by cuttings or layers *F. Ashgood.* As the Pinks are usually to be met with in thick clumps layering is rather difficult of performance. Cuttings root fairly easily. They may be taken about the middle of July, and inserted in small well-drained pots filled with light sandy soil. Cover them with handlights, shade, and keep them cool. From 60% to 70% would be a good proportion of rooted plants to cuttings.

Coleuses losing their Leaves.—*Y.*: The plants are potbound, and have not sufficient nourishment. Added to this they have probably been allowed to suffer for lack of water. This has caused the loss of the lower leaves of which you complain. It will be very little use trying to restore to the plants their pristine splendour. Your plan is to grow on others to take their places.

Ficus repens requires a warm house to enable it to do really well, *Enquirer*, and is usually regarded as a stove plant.

Weed Killer.—*Tenderfoot*: For a reliable weed killer consult our advertisement columns.

CARPENTERIA CALIFORNICA.

This is a member of the Saxifrage family and must not be confused with Carpentaria a monotypic genus of Palms native to Australia. The Carpenteria is also the sole representative of its genus, and a very handsome subject to plant in sheltered positions, not necessarily in out of the way corners of the garden, but where it will frequently come under the eye. Its dark green and persistent foliage serves to clothe a wall at all seasons of the year, and when furnished with large white flowers it is very showy indeed. The latter closely resemble a single white Rose, but of greater substance than any wild or cultivated single Rose. The woody stems grow slowly, and for that reason the plant is a suitable subject for well-dressed quarters of the private demesne.

It was known to science as long ago as 1854, when it was figured by the American botanist, Torrey, in *Smithson's Contributions VI.* 12, *t.* 7; yet it only found its way to this country in 1880 from the Sierra Nevada, California. In establishments where rare and beautiful shrubs get that attention which they deserve, the Carpenteria is cared for. It has proved perfectly hardy in various parts of England and Ireland; but there is still room for it in many gardens where it is yet overlooked, and waits recognition at the hands of gardeners having a love for highly ornamental and yet rare subjects. Under favourable conditions it grows to a height of 10 ft. when its large, pure white flowers and central mass of yellow stamens would be difficult to surpass in beauty.

SWEET PEAS AT READING.

Sweet Peas are now in their glory, and a magnificent spectacle the modern race produces, where grown in quantity and variety. Where the soil is deep and rich the recent rains had the effect of sending the plants into rampant growth; but the soil at Reading is light and gravelly so that the Sweet Peas are practically earlier and now in full bloom. At the end of last week we had the pleasure of inspecting the extensive collection grown in the trial grounds of Messrs. Sutton & Sons, Reading. The Sweet Peas are grown in two long blocks, with a pathway down the centre, and covering a considerable area of ground. Altogether there are 349 rows, and one or two lines of each variety are grown; but there are 163 distinct varieties and selections. The leading varieties both of this country and the Continent have been got together as well as the novelties and more recent varieties from America. Sweet Peas are generally so beautiful in themselves that gardeners are often content to go on growing the old sorts. Those who are fortunate enough to see a good collection of the modern race of giant-flowered sorts get an eye opener; for a real improvement has been effected quite independently of the selection of new varieties. The flowers are greatly enlarged, the broadening of the base and the rounding of the apex being very conspicuous in the new race. The old varieties with small flowers, however beautiful, have no chance against the new comers.

Very fine is Giant Primrose Yellow, a vigorous growing sort with a standard 1⅝ in. across, and as decidedly yellow as yet exists in Sweet Peas. Sutton's Giant White is pure white and the standard toes the line for size and shape. Giant Delicate Rose is a pale salmon-rose of great beauty. Giant Pink is a rich and beautiful variety, the colour being indicated by the name. Very free is the bicoloured Giant Carmine and White, the first name referring to the standard, and the wings are nearly white, large, and well expanded, lending much to the effect of the flowers at some distance away. Giant Crimson and White is somewhat similar, but some shades lighter in colour. The darkest of the rich, bright, and telling colours in the field is Giant Brilliant Scarlet, which is well named. The flowers are very durable and keep up a succession for a long time. Giant Sky Blue is larger and darker than the beautiful Countess of Radnor. Giant Dark Blue has the standard shaded with purple, the rest being bright blue. Giant Rich Purple is something in the way of Boreatton, but is darker and a self with bronzy-purple flowers. The lines devoted to a mixture of all the above and other varieties of the giant strain we have not mentioned are very charming and effective, the numerous colours showing one another off by contrast.

Double White is a vigorous growing variety bearing two, three, and four standards in place of one. Emily Henderson still maintains its reputation for the production of large, pure white flowers. Here it is dwarfer than Blanche Burpee, though the reverse is the case in some other soils. Mrs. Sankey has white flowers at first with red pedicels, but eventually they become tinted with blush, and are distinct in that respect. It is a profuse bloomer. Lemon Queen has distinctly lemon buds and a blush standard; both that and Primrose Queen are very floriferous varieties. The large creamy flowers of Queen Victoria are very choice indeed. Delight is a charming light variety with a blush standard crested with a darker colour near the apex, and having white

Carpenteria californica.

wings. Duchess of York is rather a striking light variety, the standard being suffused with blush and the wings paler. A distinctive feature of it is the ridges or undulations at the base of the standard. Very pretty also is Alice Eckford, having a pale salmon standard and white wings.

A new variety raised here has just been named Cottage Maid, which has a rosy-pink standard, and blush wings. The buds are lemon and charmingly marked or blotched with carmine. The old and young flowers mixed give a blending of harmonious colours that are very charming. The variety is very early, for half of the seed pods were set by the time we saw it. The great size of the flowers and their profusion will make this a standard variety for some years to come. Bronze King is a small-flowered Continental variety, having a bronze standard, white wings, and very pretty. We do not admire striped varieties as a rule, but Mrs. Joseph Chamberlain is a showy and striking variety, striped and flaked with purplish-rose. A seedling selected from it is even finer on account of the huge flowers, striped and flaked carmine. The standard of Daybreak is washed with red on a white ground, and the wings are white. A showy and taking variety is Lady Beaconsfield with lilac-pink standards and lemon wings. Princess Beatrice re-selected is a beautiful pink variety, a shade or two darker than the original, and a profuse bloomer. Little Dorritt is a dwarf and very showy variety with a scarlet standard and purple wings marbled with white.

Here again we came across several new and unnamed varieties of great merit. One had standards measuring 1¾ in. across, and presented a charming combination of salmon-pink and soft creamy wings. The buds are of a dark rose, and the blooms of great size. Another was of a soft rosy-pink of great size, and almost always bearing three flowers on a peduncle. It is a giant amongst its kind. A third variety worthy of note had rose standards, paler wings, and the blooms were of great size, and abundantly produced. In a word it may be described as a glorified Apple Blossom. The latter is of some years standing and still very showy and useful. It carries three, four, and five flowers on a stalk. The finest scarlet has yet to be put into commerce, for it has not been named. It occurred as a sport amongst plants of another variety, also new and of course not yet fixed. It is very much larger than Brilliant Scarlet and Cardinal, two of the most brilliant and glowing colours here.

Very handsome is Duke of York with scarlet standards and blush wings suffused with lemon. Empress of India is a great improvement upon Painted Lady which is a popular and showy old sort, still cultivated. A double form of Empress of India is a curiosity in its way for those who like flowers with a multiplicity of standards. Slightly darker than Mrs. Gladstone is Prima Donna. The Mikado is salmon-pink, very floriferous, and of great size. Novelty is orange-scarlet with rich carmine wings and well-deserving of cultivation. The rich carmine-rose flowers of Her Majesty, and the brilliant pink of Lady Penzance are always of the first water and peculiarly handsome. A late variety is Gaiety, having purplish flowers flaked with scarlet. A chaste and charming light variety is Butterfly, having white flowers edged with heliotrope on the upper edge of the wings, and shading the standard to a much greater extent. Amongst the very dark kinds we made notes of only a few of the most distinct and striking. Dorothy Tennant is rich purple; Madame Carnot, blue and purple; and Boreatton, the well-known, rich wallflower-purple, all of which serve to give variety, either in the garden or in the cut state.

Both Cupid and Pink Cupid are grown here, the plants of the former being more profusely flowered than we have hitherto seen them in the open air. Pink Cupid is a bicolor of considerable beauty, and having a slightly more lax habit of growth. Seeds raised of them in this country for a number of generations will probably give rise to varieties more suitable for the climate of Britain. The varieties mentioned above are only a few of the more salient which we noted at Reading. The extensive character of this collection of Sweet Peas at Reading serves the purpose of comparing the varieties and selecting the best. For such an object lesson the general public and gardeners in particular, ought to be truly thankful.

Rice is cultivated over one-half of the arable land of Japan.

SOCIETIES.

ROYAL OXFORDSHIRE HORTICULTURAL.—*June* 29th.

This show which, as an annual fixture, is on the Tuesday in Commemoration Week, derives its distinguishing title from this circumstance; and the present one is, we believe, the sixty-eighth of a consecutive series. Those who are familiar with the most extensive of the college gardens of Oxford know how admirably they are adapted, and how enhanced thereby are the choice and interesting displays that are always presented at the flower shows that are held within them, and those of Worcester College, in which this year's exhibition was located, furnish conditions that make them especially suitable for the purpose. The long stretch of well kept lawn afforded ample space for the erection of the two large marquees that accommodated the classes for plants, flowers and fruit, while beneath the shade of surrounding trees were conveniently arranged stands for the numerous exhibits of vegetables.

In turning into the larger of the marquees, we at once noticed the pleasing effect produced by the large groups of plants occupying the centre, and on closer examination the artistic manner in which they were severally arranged. That of Mr. J. Cypher, Cheltenham, which gained the premier award in the open class, was not only an attractive grouping, but the majority of the plants in themselves were noteworthy as skilfully cultivated specimens of their respective kinds. Mr. W. Vause, who was second, had a very meritorious group, but more massive in its arrangement; and that of His Grace the Duke of Marlborough (gardener, Mr. T. Whillans), in which Carnations and Orchids were conspicuous, helped to form an exceedingly pretty *tout ensemble*. The prize groups of Begonias of Messrs. Mattock, Woolton, and Johnson were well arranged and embraced some of the best double and single named varieties. Densely flowered specimens of Fuchsias were shown by Mr. Jno. Mattock and Miss Greswell; and Mr. Johnson staged good examples of exotic Ferns.

Orchids were all the rage, and a prize group, staged by Mr. Cypher on nearly 100 feet superficial, contained a choice lot of Cattleyas, Dendrobiums, Cypripediums, Odontoglossums, Epidendrums, etc. A very nice group of Orchids was put up, not for competition, by Mr. E. A. Bevers, Broad Street, the twenty-seven plants being very showy, and a First-class Certificate was awarded to this exhibit. A similar honour was conferred on a group of Begonias, Gloxinias, Caladiums (in sixteen new varieties), Streptocarpus, etc., arranged by Messrs. John Laing & Sons, Forest Hill, S.E., the quality of the exhibit securing that firm a well deserved First-class Certificate. A very showy collection of Malmaison Carnations (pink and yellow) was staged as an extra by Mr. Whillans, gardener to His Grace the Duke of Marlborough, a First-class Certificate being awarded; a similar honour was conferred on a new white Antirrhinum "Truce," staged by Mr. J. E. Jefferies, Queen Street, and quite a large amount of space was filled by a display of herbaceous flowering plants, and vegetables, grown specially for Messrs. Webb & Sons by their experts for exhibiting purposes. A stand of plants and flowers, grown by Ichthemic Guano, prepared at Ipswich, completed the extras, save and except a most attractive "shower" bouquet, staged by Mr. P. J. Perry, The Nurseries, Banbury. In cut blooms the roses were *par excellence*, the "display" in the open class by Mr. Mattock being very taking, and altogether superior to the arrangement from Leamington, Mr. Mattock's being choice bouquets of Tea, scented, garden, and Brier forms, mixed with Ferns, etc. The tables "decorated and laid as for dinner" proved a centre of attraction, the premier being a simple arrangement of tiny Cocos Palms and Cyperus alternifolius, with vari-coloured Iceland Poppies and white Sweet Peas, Ferns, and grasses. There was a good show of herbaceous perennials, the twelve distinct bunches being very fine and showy. Florists' Pinks and Pansies were a pretty, though a somewhat limited feature, and the number of boxes of Roses suggested being a miniature special exhibition, the flowers being full-sized and immensely fresh.

Fruit was grand. Fine ripened clusters of Foster's Seedling and Black Hamburgh Grapes; Royal George and Abec Peaches; Lord Napier Nectarines; James Veitch Strawberries; Golden Perfection and Lockie's Scarlet-flesh Melons; Sutton's Perfection, Polegate, and Best of All Tomatos; Royal Windsor Cucumbers; Elton Pine and May Duke Cherries found favour with the judges, and secured the cards in their several classes.

Vegetables proved an extensive feature, there being no less than eleven competitors for the prizes offered by the Reading and Wordsley seed firms, the best known cultivators having entered the lists with high quality exhibits. In the single dish classes Sutton's Early Giant Peas secured the highest awards. The grandest dish of kidney Potatos in the show came from Bletchington Rectory, the variety being International, which for exhibiting is A1, but for cooking and eating is nearly worthless. The amateurs' and cottagers' productions demonstrated the advance of horticultural science in the district, one result being an abundant supply of good quality products.

In the classes open to all members of the society Mr. J. Mattock was first for a group of stove and greenhouse plants. The Rev. W. D. B. Curry, New Hincksey Vicarage, (gardener, Mr. T. Carpenter) took the leading prizes for a specimen stove plant in flower, six Orchids, and six Gloxinias. Mr. George Jacob, Witney, had the best greenhouse specimen, and took other prizes for plants. Mr. J. Johnson, Garsington, had the best exotic Ferns, and nine and six Pelargoniums; and Mr. John Walker, Thame, had the best British Ferns. Mr. Montague Wootten, (gardener, Mr. J. Clarke), Cross Ways, set up the best group of Begonias. His Grace the Duke of Marlborough, Mr. J. Johnson Mr. J. Mattock, and Mr. J. Walker, figured largely for cut flowers.

Mr. S. Brown, Aynho Park Gardens, staged the best black and white Grapes and Peaches; but was beaten by the Duke of Marlborough for Nectarines. Mr. T. Lockie, Diddington Hall Gardens, Hunts., had the best Melon. The Rev. the Provost of Worcester College, (gardener, Mr. J. Holton) took the leading prizes for Cauliflower and Peas. Aubrey Harcourt, Esq., (gardener, Mr. A. G. Nichols) staged the best Cherries, Strawberries, Raspberries, Cucumbers, Tomatos, Carrots, Cabbages, and round Potatos. The Rev. R. F. Dale showed the best kidney Potatos. Special prizes for nine dishes of vegetables were offered by Messrs. Sutton & Sons, Reading; and Mr. G. Neale, gardener to P. Southly, Esq.; Mr. C. J. Waite, gardener to Col. the Hon. W. P. Talbot; Mr. C. Brock, gardener to C. D. Batt, Esqr.; and Mr. R. Wadham, gardener to Admiral Bradshaw, Steeple Aston, took the awards in the order named. Messrs. Webb & Sons, Wordsley, Stourbridge, offered prizes for six dishes of vegetables; and the prizes were taken by Mr. Thomas Lockie, Mr. G. Neale, and Mr. C. J. Waite in that order.

The judges for plants, flowers, and fruit, were Mr. A. Turner, Slough; and Mr. W. G. Baker, Botanic Gardens, Oxford. The amateurs' and cottagers' productions were judged by Mr. A. G. Nichols, Nuneham Park Gardens; and Mr. T. Doherty, Wroxton Abbey Gardens. Mr. W. Greenaway proved an efficient secretary.

FARNHAM ROSE.—*June 30th.*

THE Rose show held at Farnham last week was considered the best ever held by the society, and the management is to be congratulated upon the strength of the exhibits as a whole.

In the 'Cup' class for twelve blooms, the premier award was well taken by Mr. Edwards, gardener to Mrs. Knight, Leigh House, Farnham. Mr. Edwards does his Roses well, and his board evoked considerable interest from both cultivators and visitors.

Amongst other principal exhibitors, Mr. Gamer, of Waverley Abbey Gardens, sent some extensive exhibits of both fruit and flowers, whilst outside the tent, owing to the limited staging under canvas, several non-competitive groups were contributed by Mr. Samuel Bide, of Alma Nursery, Farnham. Diversity of colour and a well-grown lot of plants, handled and arranged with excellent skill, gave a very pretty effect.

In the open class for 24 Roses, Mr. Will Taylor secured "first" in a very close competition, whilst Mr. Bide also shewed a handsome exhibit of the new Rose, "Kaiserin Augusta Victoria," not for competition. This exhibit, as may be supposed, was also one of considerable interest. A committee of fourteen members govern the affairs of the Association and Mr. C. C. Knight is secretary.

EALING HORTICULTURAL.—*June 30th.*

By kind permission of the Messrs. de Rothschild the beautiful grounds at Gunnersbury Park were thrown open for this annual show. The efforts of the management were again crowned with the success they deserve and a very comprehensive display of garden produce was brought together. Five tents of varying sizes accommodated the exhibits which included pot plants, cut flowers, fruit, and vegetables, besides various non-competitive exhibits from members of the trade.

In the larger tent, which contained the pot plants, a very pretty group of miscellaneous plants was staged at one end by Mr. J. Hudson, the gardener at Gunnersbury House, and at the other end by Mr. Reynolds, who holds the reins of management at Gunnersbury Park. The latter group contained a quantity of grand Malmaison Carnations. Both these exhibits added much to the general effect.

The competitive classes for groups of plants proved very popular and some very praiseworthy exhibits appeared in this department. The first awards in the two classes fell to the lot of Mr. W. Roberts, gardener to J. Harris, Esq., 18, Northcommon Road, Ealing; and Mr. C. Edwards, gardener to H. Peel, Esq., Oakhurst, St. Stephen's Road, Ealing. The second prizes were won by Mr. W. J. Simpson, gardener to C. T. Sutton, Esq., The Beeches, East Acton, W.; and Mr. Thomas Wiseman, gardener to J. Butler, Esq., 5, Northcommon Road, Ealing.

Mr. C. Long, gardener to E. P. Oakshott, Esq., Orchardene, had the best four Fuchsias, showing large and well-flowered samples between 5 ft. and 6 ft. in height. Mr. W. J. Simpson occupied the second place. The latter exhibitor headed the list of those showing six foliage plants, Mr. W. Roberts following him in the second place. In a class for four foliage plants Mr. R. Green, gardener to N. Owen, Esq., The Elms, Castle Bar, was first; and Mr. William Meriden, gardener to Mrs. Boosey, Tennyson House, Mount Avenue, was second. The best six exotic Ferns were sent by Mr. Thomas Wiseman; the finest four Caladiums, distinct, by Mr. R. Green; and the best four exotic Ferns by Mr. W. J. Simpson. Mr. C. Long contributed the first prize lot of six flowering plants distinct, showing some capital stuff. Mr. W. J. Simpson won yet another first prize for a specimen stove plant with Allamanda Hendersonii. A group of twelve flowering and foliage plants, coming from Mr. W. J. Simpson, received first award; the second prize being given to the group sent by Mr. W. Roberts.

The small groups of plants measuring 6 ft. by 4 ft. and arranged on the tables were a unique feature. Mr. A. Cottrell, gardener to A. G. Dixon, Esq., 75, Madeley Road, was placed first; and Mr. C. Long, second.

The following exhibitors won first prizes in their respective classes:—Mr. William Meriden, for four foliage Begonias, distinct; Mr. R. Green, for six Gloxinias; also for six tuberous Begonias; Miss Soames, 32, Park Hill, for cut hardy flowers; Mr. Whyte, gardener to H. Hall, Esq., Crowhurst, for cut hardy flowers; Mr. R. Green, for twelve bunches of Gloxinias, three flowers in a bunch; and also for twelve bunches of cut stove and greenhouse flowers; W. W. Richardson, Esq., Lyddscote, Mount Avenue, and R. Cook. Esq., Stourbridge Park, for six Roses; Mr. W. Lowe, Belmont, Castle Bar Road, for twelve Roses.

There was a good deal of competition in the class for twenty-four Roses in not less than twelve varieties, Mr. C. Long winning the first prize; Mr. R. Green was second; and Mr. H. Skingle, gardener to W. Ponting, Esq., Mount Avenue, third.

In the classes for table decorations Mrs. E. Slade, Bulwain, Mount Avenue, sent the best epergne. Miss Slade also headed the list of those showing a stand or vase of wild flowers. William Meriden won the first prize for three very prettily executed epergnes.

A fair amount of competition was observed in the cottager's classes, and the quality of the exhibits was fair.

In the classes for fruit Mr. R. Green was first for three bunches of white Grapes. Mr. S. Wickenden, gardener to R Dawes, Esq., Edmoncote House, took a similar place for three bunches of black Grapes. The best two dishes of Strawberries came from Mr. H. Knightley, gardener to A. Robinson, Esq., Mill Hall, Southall; also the best and only Melon; Mr. White was credited with a first for a single dish of Strawberries.

First prizes for collections of vegetables fell to the lot of Mr. R. Green, and Mr. W. Robertson.

Among the non-competitive exhibits the show Pelargoniums from Mr. Chas. Turner, Slough; hardy ornamental trees and shrubs from Messrs. Charles Lee & Son, The Royal Vineyard Nursery, Ealing; some handsome bouquets from Messrs. H. B. Smith, The Broadway, Ealing; cut Roses from Messrs. J. Veitch & Sons, Ltd., Chelsea; Mr. Chas. Turner; Messrs. G. & W. H. Burch, Peterborough; Messrs. S. Spooner & Sons, Hounslow; and Messrs. Charles Lee & Sons were all very praiseworthy. Messrs Fromow & Sons, Sutton Court Nursery, Chiswick, had a group of miscellaneous stove plants, and another of Japanese Maples.

CROYDON HORTICULTURAL.—*June 30th.*

Croydon was favoured with a sultry summer day with a refreshing shower in the afternoon, in referring to which a local contemporary says there is always rain at Croydon Show. In some departments the entries were not so numerous as in previous years; but the show as a whole was voted as a good all round one, although in the speeches which followed there seems to have been some difference of opinion to this.

In the nurserymens' open class for forty-eight Roses, Messrs. Harkness & Sons led the way followed by Mr. B. R. Cant, Colchester; and Messrs. D. Prior & Sons, third. In the class for twenty-four the order was reversed, Mr. B. R. Cant taking first prize. In the next class for twenty-four distinct, Messrs. G. & W. H. Burch, Peterborough, secured first; G. W. Piper, Uckfield, second; and John R. Box, Croydon, third.

The other classes of special notice were as follows:—In the amateurs' classes the new Challenge Cup was secured by E. B. Lindsell, Esq., Hitchin; T. B. Haywood, Esq (gardener, Mr. C. J. Salter), Reigate, was second; and A. Tate, Esq, Leatherhead, third. The latter was first for twenty-four Roses; J. Gurney Fowler, Esq., South Woodford was second; and W. Campion, Reigate, third. A. Tate, Esq., had the best six Roses; and T. B. Haywood, Esq., the best twelve. T. B. Haywood, Esq., had the best twenty-four varieties of cut flowers. Mr. M. Mills had the best twenty-four bunches of hardy flowers. Mr. Norman Wrightson, Addiscombe, had the best eighteen blooms of Begonias, taking the Silver Medal.

Amongst the exhibits not for competition we notice the following:—Mr. J. R. Box, group of Conifers, &c.; Mr. Wallace, Colchester, group of Lilies; Mr. J. Charlton, Tunbridge Wells, collection of herbaceous cut flowers; Messrs. J. Laing & Sons, group of tuberous Begonias (Silver Medal) with group of Caladiums (Silver Medal); Messrs. Cheal & Son, collection of cut flowers; G. H. Cooper, Sydenham-road nursery, collection of Pelargoniums; Messrs. Peed & Sons, collection of Carnations; Mr. Butcher, George-street, group of plants; J. Williams, Ealing, table decorations; boxes of Roses from Parkhill Recreation Ground; and the Ichthemic Guano Co., Ipswich had also a representative exhibit by Mr. W. J. Absalom, Poplar walk Nurseries.

ROYAL HORTICULTURAL OF IRELAND.

July 1st.

The pretty grounds at Merrion Square, Dublin, were, on the above date, the scene of the Rose Show of this old-established society. The weather was all that could be desired, and a continual stream of gaily dressed visitors enlivened the scene. The entries all round showed a marked increase upon those of last year, and the quality of the exhibits was high and well sustained throughout.

Roses.

There were nine entries for thirty-six cut blooms, as against five last year. A good deal of interest centred round the awarding of the chief prize here, a challenge cup given by the horticultural seed trade of Dublin. Mr. Porter, gardener to Lord Ardilaun, and Mr. Colohan, gardener to F. V. Millar, Esq., who competed, had both won the cup twice, and the third win would decide its ownership. Finally Mr. Colohan was placed first. His blooms were remarkably fresh and well coloured Lord Ashtown's collection received the second prize.

There were seven entries for twenty-four blooms as against four last year. Mr. Colohan was again first. Mr. Thomas Goff, gardener to Mrs. McCann, Simmonscourt Castle, was second; and Mr. Thomas Byrne, gardener to Mr. Drimmie, Bellevue, third. For twelve blooms there were five competitors. Mr. Leonard, gardener to Mr. Darnley, Fern Hill, was first here.

In the class for Tea and Noisette varieties there were nine entries, contrasted against the two of last year. Mr. Colohan was the most successful with these, and was followed in the second position by Mr. D'Olier, of Bray.

A grand stand of blooms of Alphonse Soupert won for Mr. Colohan the first prize in its class. Mr. Campbell, St. Ann's, had the best lot of light Roses, showing La France in capital condition. Mr. Colohan was second with the same variety.

In the nurserymen's classes for Roses, Messrs. Alex. Dickson & Sons, of Newtownards, as usual, carried everything before them. The wondrous quality and beauty of their blooms was much admired all round, and assisted in no small degree to make the show attractive.

General Exhibits.

Mr. McKellar, Durrow, carried off Mr. Hartland's cup for 24 blooms of Begonias. This was the first occasion on which the cup has been offered. Mr. McKellar had a fine lot of Begonias, among the best of them being such varieties as Mrs. Robert Brown, Madame la B. de St. Diedier, Leviathan, Dr. Nansen, and Picotee. Mr. O'Leary, gardener to Mr. Dudgeon, Merveille, had the best twelve trusses of zonal Pelargoniums, whilst Mr. McKellar came to the front for six trusses of the same flower. Mr. John Millar, Baggotrath House, was first for Pelargoniums in pots. A similar position was occupied by Mrs. Goodbody, Obelisk Park, Black Rock, for a group of foliage and flowering plants.

Grapes were largely and well shown in the classes for fruit, the quality being of a high order. Mr. J. Caldwell, gardener to — Tedcastle, Esq., repeated his last year's success for two bunches of black and white varieties, showing Muscat of Alexandria and Black Hamburgh in capital condition. Mr. Caldwell also topped the list for two bunches of white Grapes with Duke of Buccleuch. Mr. McKenna, Charlesville Forest, was first for two bunches of a black variety with Black Hamburgh. Mr. Campbell sent the best dish of Peaches in Royal George.

Miscellaneous Exhibits.

Mr. Watson, of the Clontarf Nurseries, had a nice collection of hardy herbaceous plants. Messrs. Hartland & Son, of Cork, had a grand lot of blooms of Begonias, over 200 being staged. Show and zonal Pelargoniums were likewise very tastefully arranged on this stand. Messrs. Alexander Dickson and Sons had one of the largest exhibits on the ground. It consisted of Roses and hardy herbaceous plants in great variety and in magnificent order. Messrs. Sanders & Son, Friar's Walk Nurseries, Cork, had tuberous Begonias, zonal Pelargoniums, etc. Messrs. Ramsay & Son, Ball's Bridge, showed an assortment of tuberous Begonias, foliage, and flowering plants. Messrs. Henderson & Sons, Lincoln Place, Dublin, displayed some excellent flowering and foliage plants; also Edwardian ware in great variety of style. Mr. Robert Jameson, Park Avenue, Sandymount, showed similar material. A group of decorative plants was lent for the occasion by Mr. Moore, of the Botanic Gardens, Glasnevin.

NATIONAL ROSE.—*July 2nd.*

The annual Rose show of the National Rose Society held at the Crystal Palace, on the above date, was one of the finest they have held for many years. The morning opened cool and cloudy, remaining so all day, and constituting an ideal day for a Rose show. The rain we have had at intervals for some time past has acted very beneficially upon the Roses, giving them texture, colour and staying power, so that they seemed almost as fresh at the close of the show at 6 p.m. on the 2nd inst. as they were in the morning. The only evidence of adverse conditions was that the outer petals of some of the hybrid Perpetual and Tea Roses had been damaged by late frost and cold winds while they had still been in the bud stage. There was a great crowd of visitors, mostly admirers of Roses, between 3 and 6 p.m.

Nurserymen.

Messrs. Harkness & Sons, Bedale, Yorks, and Hitchin, Herts, carried off the society's Champion Challenge Trophy for seventy-two distinct single trusses. Amongst H. P. Roses they had fine blooms

of Thomas Mills, Francois Michelon, Beauty of Waltham, Madame Montet, Gustave Piganeau, Mrs. John Laing, Fisher Holmes, Horace Vernet (the premier H. P. in the nurserymen's division), Mrs. Paul, Ulrich Brunner, Captain Hayward, Her Majesty, Margaret Dickson, Marie Verdier, Duke of Edinburgh, Victor Hugo, Marie Rady, Mrs. W. J. Grant, Comte de Raimbaud, Marie Baumann, Sir Rowland Hill, La France, Madame E. Verdier, Earl of Dufferin, Crown Prince, &c. Amongst the Teas we noted blooms of The Bride, Kaiserin A. Victoria, Madame de Watteville, Catherine Mermet, Madame Cusin, Souvenir d' Elsie, and the Noisette Marechal Neil. The blooms were of large size, fresh and clean, bespeaking a season that has been very favourable to the growth of Roses. Mr. Benjamin R. Cant, Colchester, secured the second award, staging fine blooms of A. K. Williams, Duke of Edinburgh, Gustave Piganeau, Countess of Oxford, Duchess de Morny, Madame Cusin (the premier Tea), and the Bride. Messrs. Frank Cant & Co., Braiswick Nursery, Colchester, took the third place with smaller, though fresh blooms. Gustave Piganeau, Victor Hugo, Marie Rady, and several otbers were good.

Mr. B. R. Cant took the premier honour for 40 distinct Roses, three blooms of each. He had grand blooms of Gustave Piganeau, Merveille de Lyon, Her Majesty, White Lady, Mme. de Watteville, Caroline Testout, Alfred Colomb, Etienne Levet, Lady Mary Fitzwilliam, La France, Madame Eugene Verdier, Mrs. Jobn Laing, A. K. Williams, &c. In most cases they were beautifully fresh and attractive. Messrs. Harkness & Sons in this case came second with fine triplets of Gustave Piganeau, S. de H. R., Rodocanachi, Ulrich Brunner, Her Majesty, &c. Messrs. Frank Cant & Co. took the third place, showing some grand blooms.

Messrs. J. Townsend & Sons, Worcester, bad the best 40 blooms of Roses, sbowing Gustave Piganeau, Victor Hugo, Mrs. Sharman Crawford, Caroline Testout, &c., in fine condition. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, took the second place with grand blooms of Horace Vernet, Tom Wood, Marquise Litta, Suzanna de H. R.Rodocanachi, &c. Messrs. G. and W. H. Burch, Peterborough, came in third with a good exhibit.

Mr. C. Turner, Slough, staged the best 24 blooms distinct, including fine blooms of Francois Michelon, Mrs. J. Laing, Fisher Holmes, and Caroline Testout. Mr. J. Mattock, New Headington, Oxford, took the second place, showing Teas well. Mr. R. Crossling, Penarth Nurseries, Soutb Wales, was a very good third, his blooms being large and of good form, but not very varied in colour.

Messrs. D. Prior & Son, Colchester, had tbe best 24 Roses in triplets. Some of his finer blooms were Abel Carriere, Gustave Piganeau, Mrs. J. Laing, Marie Finger, Ulricb Brunner, and Caroline Testout. Mr. George Mount, Canterbury, took the second place here witb some fine blooms of Mme. Eugene Verdier, Her Majesty, and S de H. R. Rodocanachi.

Messrs. Harkness and Sons again lead the way for the best twelve single trusses, showing shapely blooms of Helen Keller, and Earl of Dufferin. They were followed by Mr. B. R. Cant, and Messrs. Frank Cant & Co., in the order named.

Amateurs.

E. B. Lindsell, Esq., Bearton, Hitchin, led off with the best stands of thirty-six Roses, single trusses, in the amateurs' division, taking the Cbampion Challenge Trophy. He had grand blooms of Mrs. J. Laing, Horace Vernet, S. de H. R. Rodocanacbi, Duc d'Orleans, Her Majesty, Madame Hausmann, Muriel Grahame, Mme. Hoste, K. A. Victoria, and Mme. Cusin, the four latter being Teas. Muriel Grahame was the premier Tea in the amateurs' classes. C. J. Grahame, Esq., Wrydelands, Leatberhead, was a good second with splendid blooms of Mrs. W. J. Grant, White Lady, Merveille de Lyon, Mrs. R. G. Sharman Crawford, S. de H. R. Rodocanachi, Chas. Lefebvre, Bridesmaid, and others. H. V. Macbin, Esq., Gateford Hill, Worksop, was tbird.

E. B. Lindsell, Esq., again took the lead in another class for thirty-six Roses, distinct. Some of his best blooms here were Mrs. J. Laing, Ulrich Brunner, Gustave Piganeau, Caroline Testout and La France. Thos. Hobbs, Esq, Easton, Bristol, took the second position, with grand blooms of Sta of Waltham, Mrs. J. Laing, &c. A. Tate, Esq., Downside, Leatherhead, was a very good third.

E. B. Lindsell, Esq., was again the champion in the class for nine Roses in triplets, Earl Dufferin, A. K. Williams, Horace Vernet and Ulrich Brunner being very fine. The Rev. J. H. Pemberton, Havering-atte-Bower, Essex, came in second, showing excellent blooms of Comte Raimbaud and others. A. Tate, Esq., was again third.

In the class for twelve blooms of any Rose except a Tea or Noisette, the leading award was taken by H. V. Machin, Esq., with a magnificent stand of Gustave Piganeau. J. Gurney Fowler, Esq., Glebeland, South Woodford, Essex, was second with Her Majesty. The Rev. J H. Pemberton, was third with Mrs. J. Laing.

In the classes open only to those who grow 2,000 Roses, the leading award for twenty-four varieties was taken by S. S. Berger, Esq. (gardener, Mr. W. Eyden), Braybury, Stevenage, whose blooms were fresh and beautiful. Edward Mawley, Esq., Rose-Bank, Berkhamsted, was second with small but fresh and neat blooms. R. E. West, Esq., Firth Dene, Reigate, was a good third.

E. Mawley, Esq., led the way for six distinct varieties in triplets, which were excellent. He was followed by P. Burnand, Esq., Hill Grange, Reigate. Conway Jones, Esq., Hucclecote, Gloucester, was third.

For nine distinct Roses other than Tea or Noisette, O. G. Orpen, Esq., West Bergholt, Colchester, took the lead with Kaiserin Augusta-Victoria, one bloom of which was the premier bloom (not a Tea or Noisette) in the amateurs' division. E. M. Bethune, Esq., Denne Park, Horsham, was second with Marie Baumann. A. Slaughter, Esq., Jarvis Villa, Steyning, was third with Charles Lefebvre.

Amongst the classes open to those who grow 1,000 Roses, the first prize for nine blooms was taken by G. Moules, Esq., Hitchin. E. M. Cook, Esq., The Briars, North Finchley, had the best six in triplets.

In the division open to those who do not grow more than 500 Roses, tbe first award for nine varieties, single trusses, was taken by R. Foley Hobbs, Esq, Bromyard Road, Worcester. A. Munt, Esq., Templewood, Slough, had the best six. H. P. Landen, Esq, The Lodge, Shenfield, Brentwood, staged the best four in triplets.

The Challenge Cup offered for the best twelve blooms, distinct, and open only to those growlng not more than 1,000 Roses was taken by W. Kingston, Esq., 52, Grey Street, Bedford. All of his blooms were very good. The Rev. A. Cecil Johnson, Capel St. Mary, Ipswich was a good second. G. W. Cook, Esq. took the leading award for six blooms of any Rose except a Tea or Noisette, showing Mrs. John Laing. This variety was shown by six out of seventeen competitors in this class.

The Dickson Challenge Cup presented by C. J. Grahame, Esq., for amateurs, was taken by E. B. Lindsell, Esq. The Piece of Plate presented by Messrs. D. Prior & Son for amateurs who have not hitherto won a prize at the N. R. S. was taken by the Rev. A. Cecil Johnson. S. S. Berger, Esq., won the first prize for six Roses, open only to amateurs who have joined the society since last year. G. W. Cook, Esq., took tbe first award for Roses grown within eight miles of Cbaring Cross. He had very fine blooms.

The first prize for new Roses was taken by the Rev. J. H. Pemberton, who exhibited very fine blooms of Marquise Litta, Marchioness of Downshire, Captain Hayward, Charlotte, Guillemot, Mrs. Sharman Crawford and Helen Keller. There were three other exhibitors in this class.

Teas and Noisettes.

In the Nurserymen's Classes for this popular section of Roses there was some first-rate material forthcoming. There were three entries for twenty four single trusses, distinct, tbe winning stand being sent by Messrs. Frank Cant & Co., Braiswick Nursery, Colcbester. Souvenir d'Elise, Marie Van Houtte, Ethel Brownlow, Maman Cochet, Madame Hoste, Madame A. Etiénne, Anna Oliver, Madame de Watteville, May Rivers, and Catherine Mermet were some of the best. Messrs. D. Prior & Son, Colchester, were second; and Mr. G. Prince, Oxford, was tbird.

There were twelve entries for eighteen single trusses, distinct. Messrs. J. Burrell & Co., Howe House Nurseries, Cambridge, led the way with a beautifully coloured and even sized lot. Madame de Watteville, The Bride, Princess of Wales, Etbel Brownlow, and Madame Angele Jacquier were of tbe best. Mr. John Mattock, New Headington Nursery, Oxford was second, and Messrs. J. Townsend & Sons, Worcester were third.

There were five entries for eighteen varieties, three trusses of each. Mr. G. Prince headed the list here with a grand lot. Madam Cusin, Princess of Wales, Maman Cochet, Marie Van Houtte, Miss G. Brownlow, Comtesse de Nadaillac, and Niphetos were the leading blooms. Mr. B. R. Cant, Colchester was placed second; and Messrs. D. Prior & Son, occupied the third position.

In the Amateurs' Classes O. G. Orpen, Esq., West Bergholt, Colchester, carried off chief honours for 18 single trusses, distinct, showing Cleopatra, Madame Cusin, Medea, Catherine Mermet, Innocente Pirola, Ernest Metz, and The Bride, in magnificent condition. Second came C. J. Grahame, Esq., Wrydelands, Leatherbead; and third, S. P. Budd, Esq., Gay Street, Batb. There were nine entries in this class.

Twelve single trusses, distinct, were best shown by G. M. Bethune, Esq., Denne Park, Horsham, followed by the Rev. Hugh Berners, Harkstead Rectory, Ipswicb, ; and S. P. Budd, Esq. C. J. Grahame, Esq, carried off chief bonours for three trusses each of eight distinct varieties. He had Tbe Bride, Madame Cnsin, Catherine Mermet, and Maman Cocbet very strong. S. P. Budd, Esq., followed in the second place; and O. G. Orpen, Esq, in the third.

Tbere were seven entries in the class for nine trusses of one variety. E. M. Bethune, Esq., won first prize with Catherine Mermet; C. J. Grahame, Esq., second, with Madame Cusin; and O. G. Orpen, Esq, third, with the same variety. J. Parker, Esq, The Croft, Old Headington, was first on the list of competitors for 12 single blooms, distinct. The Rev. J. H. Pemberton, Havering-atte-Bower, Essex, was second; and Conway Jones, Esq., Hucclecote, Gloucester, third. There were no fewer than nine entries in this class. Miss Baker, Holmfels, Reigate, was first for nine blooms in distinct varieties; the second prize falling to the lot of P. Burnard, Esq, Hill Grange, Reigate. In a similar class the Rev. A. Cecil Jcbnson, Capel St. Mary, Ipswich, was credited with the first award. In a still smaller class for six blooms, distinct, tbe Rev. F. R. Burnside, Berrington Rectory, Shrewsbury, was first. Six single trusses of one variety were best shown by R. Foley Hobbs, Esq., Bromyard Road, Worcester, with Catherine Mermet. R. Parker, Esq., The Croft, Old Headington, won the first prize for three trusses eacb of four varieties. There were twelve competitors.

O. G. Orpen, Esq., headed the list for six bunches, seven trusses to the bunch, of distinct varieties.

Open Classes.

In tbe class for buncbes of seven trusses each, Mr. John Mattock, won premier honours for twelve bunches. Messrs. Paul & Son, The Old Nurseries, Cheshunt, took second place. Mr. G. Prince was first for twelve single trusses of any yellow variety with Comtesse de Nadaillac. Messrs. J. Townsend & Sons were second.

Tbere was a good deal of competition for twelve single trusses of any white Rose, the blooms staged being magnificent. Messrs. A. Dickson & Sons, Newtownards, Co. Down, Ireland, topped the list with Kaiserin Augusta Victoria. Mr. B. R. Cant was second with Marchioness of Londonderry.

There were nine entries for a dozen single trusses of any crimson Rose. Messrs. A. Dickson & Sons came to the front with a superb stand of A. K. Williams. Messrs. D. Prior & Son were second with Ulricb Brunner; and Messrs. J. Townsend & Sons, third, with A. K. Williams.

Twelve trusses of a dark crimson Rose was a most interesting class, the entries being eight in number. Messrs. Harkness & Sons, Bedale, Yorks, were first with a magnificent set of Horace Vernet. Mr. B. R. Cant was second with the same variety, and Messrs. A. Dickson & Sons, third, witb Louis Van Houtte.

Messrs. J. Townsend & Sons carried off the first prize for twelve trusses of a light Rose, showing Mrs. John Laing. Mr. B. R. Cant was second with Her Majesty; and Messrs. D. Prior & Son third, also with Her Majesty.

Twelve single trusses of a Tea or Noisette were best shown by Mr. B. R. Cant who had Madame

Cusin; Mr. Geo. Prince was second. Messrs. Frank Cant & Co. were third with Madame de Watteville.

Messrs. Paul & Son received a card of commendation for three trusses of the new single variety Royal Scarlet.

Messrs. A. Dickson & Sons led the way for twelve single trusses of a new Rose. They showed fine samples of Mrs. W. J. Grant. Messrs. Harkness & Sons were second with Helen Keller; and Messrs. Frank Cant & Co., third with Mrs. Frank Cant.

GARDEN ROSES.

NURSERYMEN.—In the class for thirty six bunches distinct varieties, and occupying a space of 10 ft. by 3 ft., Messrs. Paul & Son came out with flying colours. Madame Falcot, Crimson Rambler, Mignonette, Blanche Moreau, and the single forms Bardon Job, and Andersoni were remarkably bright and good. Messrs. Geo. Cooling & Sons, Bath, made a very close second, their bunches being arranged with rather more foliage that was present in those staged by the Messrs. Paul.

In the smaller class for eighteen bunches of similar size and material Mr. Chas. Turner, Slough, was placed first. Mr. J. Mattock fell into the second place; and Messrs. J. Townsend & Sons into the third.

Nine bunches of single flowered Roses, distinct, not less than three trusses going to a bunch were best shown by Messrs.Geo.Cooling & Sons. Lucy Ashton, Green Mantle, macrantha, rugosa, and Pissardi were some of the most noteworthy forms that found a place in the exhibit.

Messrs. Paul & Sons were second, and Miss Mellisch, Hodsook Priory, Worksop, was third.

Mr. J. Mattock won another first for a grand exhibit of buttonhole Roses, showing some neat, shapely, and beautifully coloured Tea varieties. Mr. Geo. Prince was second; and Mr. A. G. Green, Gt. Horkesley, Colchester, was third. No Roses in the show were more admired than these handsome little specimens.

AMATEURS.—The premier award for eighteen bunches, distinct, fell to the lot of H. V. Machin, Esq., Gateford Hill, near Worksop, who had a capital lot of material. Second came A. Tate, Esq., Downside, Leatherhead. Six bunches coming from Mr. A. F. Perkin, Oak Dene, Holmewood, Surrey, were credited with the first award. T. W. Campion, Esq., Colley Manor, Reigate, occupied the second place; and the Rev. J. H. Pemberton the third.

TABLE DECORATION.

In this section the competition was open only to lady amateurs who are either subscribers to the National Rose Society or are members of the family of a subscriber.

The most handsome Rose bedecked table measuring 8 ft. by 3 ft. 6 in. was contributed by Mrs. O. G. Orpen. Miss West, Frith Dene, Reigate, was second; and Miss A. V. Shackleton, West Hill, Sydenham, was third. Mrs. O. G. Orpen also had the prettiest single vase of cut Roses, arranged with fern and grasses.

MISCELLANEOUS.

The miscellaneous exhibits were not numerous, and as may be expected, were chiefly composed of hardy flowers and Roses.

Messrs.John Laing & Sons, Forest Hill, S.E., made a mammoth exhibit that admirably demonstrated the wealth of material at their disposal. They occupied a large portion of the huge stage, temporarily erected for the Handel Festival, standing on the southern side of the central transept facing the organ. The plants were spread over an area of some 8,500 sq. ft. with a depth of 100 ft., and a frontage of 85 ft. In the background were Kentias and Cocos plumosa interspersed with a few flowering plants to break the monotony. In the foreground appeared a meritorious collection of tuberous Begonias both single and double, Caladiums in variety, Gloxinias, Crotons, Dracaenas, and Malmaison Carnations. An edging of Isolepis gracilis ran the whole length of the frontage. On the right hand side of the foliage plants were staged a representative collection of cut hardy flowers, arranged in small bunches.

Messrs. Wm. Paul & Son, Waltham Cross, had a most interesting group of Roses (including both plants and cut blooms) of varieties introduced by them during the Victorian Era. Among the finer varieties Queen Mab, Sylph, White Lady, Captain Hayward, Gloire Lyonnaise, and Sunset were very noticeable. The Polyantha Rose, Gloire de Polyantha, was also in remarkably good condition.

Mr. M. Pritchard, Christchurch, sent a group of choice cut hardy flowers that included some capital flowers of Lilium Brownii and Spiraea venusta.

Messrs. A. W. Young & Co., Stevenage, Herts, also sent cut hardy flowers in quantity. A number of Foxgloves and Canterbury Bells in the ranks behind served to give height and finish to the group, and the whole effect was exceedingly good.

Messrs. J. Cheal & Sons, Crawley, Sussex, had hardy cut flowers, including Roses and bedding Violas in considerable variety. The material, however, was too crowded to show off to the fullest advantage.

Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, showed cut Liliums and Calochortuses in capital condition. The latter were a very representative collection, the range of colour being remarkably great.

Messrs. Geo. Bunyard & Co., Maidstone, sent a large number of cut Roses, including fourteen dozen single trusses. Comtesse de Nadaillac, Gustave Piganeau, Ethel Brownlow, Madame de Watteville, Mrs. John Laing, Chas. Lefebre, Marie Baumann, and Madame Gabriel Luizet were some of the finest. In addition to these were bunches of small Roses, Duchess Mathilde, and Ma Capucine being two of the best forms. A stand of Polyantha varieties was also on view, and contained many leading forms.

Messrs. Geo. Jackman & Sons, Woking, sent some excellent Roses. Of the single trusses Ulrich Brunner, Fisher Holmes, Duke of Connaught, Mrs. Paul, Camille, Camille Bernardin, and Abel Carriere were exceedingly good. Polyantha and Moss Roses in variety formed part of the exhibit.

Mr. W. E. Tidy, Brockhampton Nurseries, Havant, Hants, showed bunches of many first-class varieties of Sweet Peas.

Mr. W. Rumsey, Joyning's Nurseries, Waltham Cross, staged a dozen blooms of the new Mildew proof Rose, Mrs. Rumsey.

Messrs. John Laing & Sons also showed a grand lot of cut Roses. There were upwards of twelve dozen single trusses, as well as a representative collection of single and garden forms.

BY TELEGRAPH.

IPSWICH HORTICULTURAL.—*July 7th.*

IPSWICH Show opened in fine weather, and with a much larger entry in all departments. The judges engaged are Mr. Richard Dean, Mr. Hudson, Gunnersbury House; Mr. W. Allan, Gunton Park; and Mr. Wallis, Gunton Park.

The herbaceous section was perhaps the finest display ever seen in the provinces. First for a collection arranged for effect on a table 8 ft. by 3 ft. came Messrs. Wallace & Co., Colchester, with a representative group, the Lilies being particularly noticeable. Mr. C. Jacobi, Henley Road, Ipswich, takes a well merited second. Mr. Geo. Gilbert, Floral Nurseries, Ipswich, leads the way for twenty-four bunches all well staged and well grown. In groups arranged for effect the same exhibitor secures the coveted Silver Cup award with a graceful bank in undulating form, composed mostly of rich foliage plants. Mr. R. C. Notcutt is second.

The classes for table decorations produced fifteen entries, a show practically in itself. In the open class the first prize was well won by Miss Gilbert of Ipswich, with a graceful arrangement of Sweet Peas. Miss Dudley, of Melton, was second. The lady amateur class contained twelve competitors, the leading award going to Miss Steward, Graham House, with a truly exquisite arrangement of Sweet Peas in a great variety of colours, interspersed with Grasses and light foliage. The second prize went to Miss Orford, Castle Hill, Ipswich, whose exhibits consisted of yellow Aquilegias, mauve and white Sweet Peas, and Erigeron, with Fern and Grasses. The third place was voted to Miss B. Ridley, Helenscote, Ipswich, with a somewhat heavier arrangement.

In the open class for thirty-six distinct Roses, Mr. B. R. Cant, of Colchester, in continuation of his success this season, takes a well merited first with large bright blooms of good quality and splendid depth of colour. Messrs. D. Prior & Sons are second with blooms a little lacking in colour and freshness. The third goes to a new exhibitor in Mr. A. G. Green, of Great Horkesley. In the next class practically the same order is observed.

For twelve Teas, Messrs. Prior take first, Mr. B. R. Cant second, and Mr. Green third. In the amateur section, Rev. A. Foster-Melliar, Sproughton Rectory, takes a long lead and is very deservedly first; the Rev. H. A. Berners is second, but in the next class, this exhibitor secures first, and Rev. Foster-Melliar second. The latter gentleman is again a good first for twelve Teas. In the fruit section the Ichthemic Guano Company's special prize of silver salad bowl, value £2 2s., goes to a grand collection of six varieties staged by Mr. W. Messenger, The Gardens, Woolverstone Park; whilst Mr. A. Andrews, The Gardens, High House, Campsea, Ashe, comes in a good second.

LEEDS FLOWER SHOW AND GALA.—*July 7th, 8th, and 9th.*

LEEDS people have done the right thing. It used to be said that in the busy city of smoke and iron and steel that a really good show was not possible; but in the formation and compilation of the present exhibition the society has laid lines and made provision for what ought to be one of the most successful annual events in horticulture with Ald. Alfred Cooke, J.P., as President and Mr. J. H. Armitage in office as Chairman of Committee. It will be readily understood that the schedule submitted for competition is of a progressive and diversified character. Nor has money been stinted to make premiums really worthy of the classes which exhibitors are invited to stage.

For instance, in the class for groups of miscellaneous plants of not less than 250 sq. ft., a sum of £36 is distributed in four prizes from £15 downwards. In another similar class for smaller group £18 is offered, and so on. Ferns, Orchids, Roses, Pelargoniums, and Begonias all have their separate sections with really substantial prizes; whilst the leading class for fruits and vegetables has £18 allotted for competition in three prizes. All this goes to shew that other things being equal, Leeds will be a smart competitor with York and Shrewsbury as a first rank exhibition. No entrance fees are charged, and given fine weather there is no reason why Leeds should not attain the high water mark of a pronounced success. The total number of exhibits is considerably over 200, and of a very high order, the chief feature being the large group (Class one).

Mr. J. S. Sharp, Huddersfield, carried off leading honours with a magnificent and artistically arranged group, Messrs. R. Simpson & Son, Selby, following very closely, the third falling to T. Beckett Faber, Esq. For another very good group in class two, local amateurs also, groups not exceeding 120 sq. ft, first, J. Rhodes, Esq. (gardener, R. Mason); second, Mrs. Tetley (gardener, J. Eastwood); third, F. Kitchen, Esq. (gardener, A. Gamble). In class three, for six stove or greenhouse plants, the second prize was taken by Mr. J. Sunley. In the class for four ornamental plants, distinct, first, R. Simpson & Son, Selby; second, E. Beckett Faber, Esq.; third, Mr. J. S. Sharp. Class seven, Stove plant: Mr. Sunley, first; Mrs. Tetley, second; Mr. A. Taylor, third. Class eight, open, single foliage plant: first, Mr. J. Sunley; second, E. Beckett Faber, Esq.; third, W. J Dixon.

For three Crotons distinct, Mr. J. Sharp is first, Mr. Beckett Faber, second, and Messrs. R. Simpson & Son, third. For six Coleuses, open, first comes J. H. White, Esq., second, Mrs. Tetley. In the amateur's class for three Coleuses, the leading honours again fell to Mr. White, with Mrs. Tetley, second, and Mr. J. Rhodes, third. For six exotic Ferns (open) J. Rhodes, Esq., carries off the first award with six beautiful specimens. Mrs. Tetley is second, and Mr. Taylor, third. In the amateur's class for three exotic Ferns, J. Rhodes is first, M. Kitchin, Esq., is second, and Mrs. Tetley, third.

The cut-bloom table plants and fruit were nicely arranged in a special tent. For six Gloxinias, open, Mr. Edwards gained first with some good specimens; second, A. Kirk White. In the amateur class for three Gloxinias, Mr. Edwards was also awarded first; second and third being Mr. J. W. H. White, and Mrs. R. Meredith respectively. Under the cut blossoms class some very fine ball and bridal bouquets are shewn. Mr. Taylor, of Newton Nursery, gains first for a lovely ball bouquet and second for a fine bridal bouquet. Messrs. Shaw Bros. gains first by a very artistically arranged bouquet, and second for their ball bouquet. For a basket of cut flowers, Messrs. Shaw Bros. are first, Mrs. Taylor, of Newton Nursery, second.

The exhibits of cut Roses were not up to the standard numerically, the leading honours in the open class going to the well known Scotch firm, Messrs. Croll, of Dundee, who gained first for twenty-four distinct, and first for twelve Teas. For forty-eight distinct there was no competition. The collections of fruit are really splendid, all due credit to the show and exhibitors, the Grapes and Strawberries being far above the average. In Class LII., for a collection of fruit, ten kinds, Mr. J. Edmonds carried off the first prize, £8, his Grapes Madresfield Court and Muscat of Alexandria, and Strawberries James Veitch being specially noteworthy. The second was awarded to Sir J. W. Pease, Bart, M.P. (gardener, Mr. McIndoe), who had also a splendid exhibit; third, Earl of Harrington (gardener, Mr. J. H. Goodacre, of Chrysanthemum fame), who also gained second for Peaches, the first going to Mr. Sheepshanks' gardener, Mr. A. Large; third, Mr. J. Edmonds.

In class LIV. for bunches of Black Hamburg Grapes, first, Rt. Hon. Lady Beaumont (gardener, W. Nicholls); second, Mr. W. Sheepshanks, whose exhibit only lacked colour, but who gained the second place for three bunches of white Grapes by a splendid exhibit for both size and colour. The first goes to Lady Beaumont, whose Grapes give token of splendid culture, together with first for a dish of twelve Tomatos, and first for a tray of vegetables. Sir J. Pease, Bart., is second for the latter.

Miscellaneous Exhibits.—Messrs. Clibran, of Manchester, had a large and varied exhibit of some of their specialities, Violas, Zonal Pelargoniums, and a collection of herbaceous plants of exquisite beauty. The well known Ipswich firm had an exhibit of their Ichthemic Guano. Messrs. Webb & Sons, Stourbridge, had a splendid collection of Sweet Peas. Messrs. Edwards & Son, of Nottingham, had a large exhibit of their famous pottery for table decoration.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Converting a Vinery into a Rose House.—I should be glad if you will give information upon the following. I have a house that has been used as a vinery that I am thinking to turn into a Rose house. The house is a lean-to rather heavily built; the size as follows: Length, 40 ft.; width, 15 ft.; height of back wall, 14 ft.; front to roof, 7 ft.; length of roof, 18 ft. The two ends are walled up to the roof; stage, 2 ft. wide along front level; stage in centre with walk back and front. The middle stage is very strong and covered with gravel. I should be glad of the opinion of some of your readers. If you recommend the roof to be covered, or part of it, would you plant in vine border or in pots on front stage? Also say something about the back wall and ends, and kinds best suited if you recommend all pot plants. There are other houses that plants may be taken for forcing at any time. My object is quantity for cutting when there are none outside. The house is heated with hot water and well ventilated top and bottom. Any information through the Gardening World will oblige.—*Roses.*

Names of Plants.—*Botan*: 1, Linaria vulgaris; 2, Matricaria inodora; 3, Silene inflata; 4, Epilobium angustifolium; 5, Galium cruciatum; 6, Rumex acetosa; 7, Lathyrus pratensis; 8, Vicia Cracca; 9, Hieracium vulgatum; 10, Centaurea nigra; 11, Anthriscus sylvestris; 12, Equisetum arvense; 13, Tanacetum vulgare; 14, Rhinanthus Crista-galli.—*J. J.*: 1, Geranium sanguineum; 2, Geranium reflexum; 3, Lupinus elegans; 4, Iris sibirica; 5, Euphorbia Cyparissias; 6, Lilium pyrenaicum; 7, Chelidonium majus; 1, Alchemilla alpina conjuncta.—*H. W.*: 1, Lychnis alpina; 2, Lychnis fulgens; 3, Spartium junceum; 4. Masdevallia Lindeni; Masdevallia ignea.—*A. J. B.*: 1, Pteris longifolia; 2, Asplenium Bellangeri; 3. Asplenium flabellifolium; 4, Woodwardia radicans.—*G. H.*: 1, Oncidium pulvinatum; 2, Cattleya Mossiae; 3, Cypripedium Sedeni; 4, Dendrobium chrysotoxis suavissimum; 5, Aerides odoratum.—*J. Walters*: 1, Helenium pumilum; 2, Geum miniatum.

Best way of growing Cyclamen.—*L. M.*: For autumn flowering you should sow the seeds in October or November in good fibrous or turfy loam, sufficiently decayed to make it mellow and friable; mix this with an equal proportion of leaf mould rather flaky or not too decayed, with sufficient clean, sharp sand to render the whole porous and open. Drain the seed pans with pot sherds, and fill them with the compost, making it rather firm Make little holes in the compost, about 1½ in. apart each way, and drop the seeds singly into them. Stand the seed pans in a house with a temperature ranging from 45° to 50° Fahr., which should be kept as regular as possible. The seedlings having plenty of room may be allowed to grow till they have made two or three leaves, when they may be transferred to thumb pots singly. Place these in the same temperature and keep them well exposed to light and well ventilated. Shift them into larger-sized pots as they require it, and keep them growing steadily and without check, till they bloom in 4½ in. or 6 in. pots according to size. Shade them in very hot weather in summer, and when the flowering pots are getting filled with roots, assist with weak liquid manure from the stables and cow-houses; but manures should always be used cautiously. When first put into pots give them more loam and less leaf mould; and the loam should be increased till the last shift when it may consist mostly of turfy loam, with sufficient sand. Keep the heat pretty uniform, the atmosphere moist, and do not neglect watering. See that the plants do not get infested with thrips. If you sow in January or February for late flowering, germinate the seeds in a temperature of 60° to 70° Fahr. Give them plenty of light in winter, shading in summer as for autumn sown plants.

Address of Onion Raiser.—*F. K.*: The address is Mr. H. Deverill, 30, Cornhill, Banbury, Oxfordshire.

Transplanting Narcissi.—*Omega*: You may transplant them any time between this and the end of August; that is, you should do it after the leaves have thoroughly died down and before the bulbs commence to push out fresh roots If we get plenty of rain and warm weather, the bulbs might begin to grow before the end of August; so to avoid risk of breaking the roots, you should make a point of lifting the bulbs before we get much of a rainfall. If you transplant them now they will be quite safe. We do not know that there is any actual necessity for keeping the bulbs out of the ground at all if the fresh site is ready for them. If not, you can keep them in a cool dry place up till the middle of November, if necessary; but the sooner they are planted after the end of August the better. Bulbs of Narcissi have been planted as late as December, but at the expense of their weight and growing power. Make a point of planting early rather than late.

Climbers to flower in Autumn.—*Inquirer*: In the more favoured districts in the south of England, we have seen Rose Gloire de Dijon flowering beautifully till Christmas and after; and though your county is not so far south as Devon, yet it is more under the influence of the Gulf Stream and presumably milder. Nevertheless, we can suggest other subjects that will flower late. Passiflora caerulea with blue flowers, and P. c. Constance Elliott, a white variety, flowers till frost comes, and the yellow, egg-shaped fruits hang till well into winter, unless very severe frost destroys them. Solanum jasminoides, with white flowers, also blooms late in the open air. Tecoma radicans and T. grandiflora, with crimson-scarlet flowers, especially the first named, should give you satisfaction. Clematis Flammula, with a profusion of small, white flowers, blooms in early autumn, say in August and September. Magnolia grandiflora makes a magnificent wall plant, with large white, sweet-scented flowers, but grows only moderately rapidly. Clematis Jackmanni, with moderately large, rich purple flowers blooms till frost comes, if the stems are cut to the ground in winter and trained up afresh in summer. Rich soil helps it greatly. Jasminum revolutum (yellow) flowers from May to October; and J. officinale (white) from June till October.

Araucaria imbricata coning.—*A. J. Vaughan Pryse*: You do not say whether the tree that bears the cones is a male or female. The male or pollen-bearing cones are cylindrical, not unlike those of such Pines as Pinus excelsa or P. Strobus. The female cones are roundly-conical. Sometimes both kinds of cones are produced on the same tree; but this is uncommon. If the cones are female, fourteen of them produced on a tree about 30 ft. high, would be an unusually large number, though probably not breaking the record. It would be difficult to say why your other tree of the same size is not bearing cones, because trees vary greatly in that respect. Some mature earlier than others, but generally the Araucaria attains a good age before it fruits. If the fruiting tree is a male that might account for it, because male cones are usually the first to be produced by a good many Conifers. If you send a cone either now or when mature, we could tell you whether it is a male or female, if you have any difficulty in determining.

Communications received. — Bulbs. — Harry Davey.—T. E. Henwood.—A. C.—A. O.—H. S.—W. B.—F. Ford.—J. F.—Hendry.—J. Sim.—T. Cassie.—M. W.—Rory.—Y. A.—G. Elford.—S. Craig.—David N.—Norman T.—James Crurie.—Alton.—M.N.—Francis.—L.L.—W.C.G., next week.

TRADE CATALOGUE RECEIVED.

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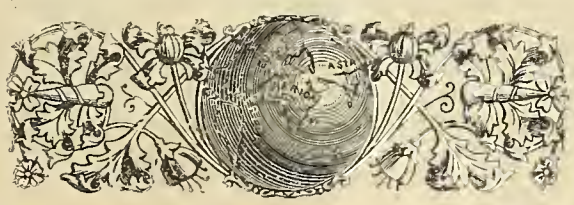
OUR APPEAL.

We have pleasure in acknowledging a first list of donations received at this office in response to our last week's appeal.

We again wish to ask our Readers to assist their fellows who have lost the means of making a livelihood through the dreadful visitation of Hailstones.

	£	s.	d.
The Proprietors of The Gardening World	2	2	0
Messrs. Clay & Son	2	2	0
Mr. H. M. Hicks	0	10	0
Mr. Alexr. Wright	0	10	0
Mr. J. Mayne	0	2	6



"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 17th, 1897.

NEXT WEEK'S ENGAGEMENTS.

WEDNESDAY, July 21st.—National Carnation & Picotee Society's show at Regent's Park.

THURSDAY, July 22nd.—Halifax Rose Show. Trentham and Hanford Rose Show.

FRIDAY, July 23rd.—Sale of Orchids by Messrs. Protheroe & Morris.

THE HORTICULTURAL EXAMINATION.—The results of the annual examination held under the auspices of the Royal Horticultural Society have again been published and now lie before us. Whatever may come of such examinations, the necessary drilling in the science and art of their profession, to which gardeners and others connected with horticulture are subjected, cannot but make for good to the community generally and the individuals themselves in the long run. The standard and merit of the papers submitted to the examiners, have been greatly raised compared with those of former years; but as time goes on we should like to see a much larger number of young British gardeners coming boldly forwards to sit for the examinations. The value of the latter to gardeners of either sex will largely depend upon the use to which the examinees put the knowledge, so gained in their daily practice, quite independently of any reputation which success may secure for them. A male student tops the list on this occasion with the full complement of the maximum number of marks obtainable, and takes the Society's Silver Gilt Medal and Chiswick scholarship. He is closely followed by two lady gardeners, of whom there are seventeen who have passed in the first class

The Horticultural College, Swanley, and the Technical Laboratory, Chelmsford, again bring forward the largest number of students from any given centre of teaching. Twenty-three students from the former school pass in the first class, seven in the second, and one in the third, making a total of thirty-one. Chelmsford doubles its record of last year with sixteen in the first class, and six in the third. This speaks well for the teaching, considering the limited accomodation at the Technical Laboratory. The town of Tamworth, overlapping the borders of the counties of Stafford and Warwick, comes next with five students in the first class and five in the second. The Horticultural School, Holmes Chapel, Cheshire, follows with five students who passed first class, three second, and one third. The other students are fairly well scattered over the country, but particularly the southern and midland counties, and serve to show where the interest in this modern phase of horticulture is keen. Scotland follows the lead of England; but we should have liked to see a larger number of students from the northern part of the island.

We note that two Kew students who wrote their examination papers under our superintendence have come out with flying colours in the first class. They attended no school nor special class in working up for this examination, at least during the past winter. Other students in more northern counties both in England and Scotland, who asked for instructions how to proceed in their studies through the medium of THE GARDENING WORLD, have also passed first class. We commend them for their diligence and congratulate them upon their success. The examiners' report of the examination will be found on another page, so that details are unnecessary here.

THE STRAWBERRY SEASON.—Those who grow Strawberries for their own use or for sale are all too cognisant of the fleeting nature of the crop, and the favour with which it is received by old and young alike. This, of course, applies more particularly to the southern than the northern counties where the season is always later by virtue of latitude, and sometimes longer on account of the cooler and moister atmosphere. Strawberries appear in the London markets about the middle of May, and may even be procured earlier for special purposes by paying the price that the artificial forcing of them necessitates. Of course, these unseasonable fruits are expensive luxuries, and of poor quality compared with those ripened naturally in the open air under the influence of sunshine. In the early days of the year the murky and sunless atmosphere of this island augurs ill for the flavour of any kind of fruit ripened under glass with the aid of fire heat. The price required for them prevents Strawberries from making a feature in the markets at that early period.

Most of France lies considerably to the south of Britain, and for that reason cultivators there are able to flood our markets with Strawberries from the open air ten to sixteen days earlier than the home grown supply. During that time steamers ply regularly every day between the nearest of the French ports and those of our shores. The countries lying to the north of France have no chance in our markets, at least till the home supply is over. This is, of course, due to the tardiness of their more northern clime as far as this fruit is concerned. The advent of the home grown fruit is the signal for the foreign supplies to cease, as the superior quality of home grown fruit, owing to its greater freshness and proximity to the market, enlists the sympathy of the consumers at once. The earliest supplies come from Hants, but Kent in a few days hurries up with her precious harvest by hundreds of tons. Strawberries are grown in greater or less quantities in different counties; but those who travel on the South Eastern and London, Chatham and Dover Railways during the season, cannot fail to notice the broad acres covered with groups of men, women, boys and girls harvesting

the luscious fruit. Strawberry picking is as important an operation during its season as hop-picking. Light spring vans take up a position at one side of the field, and between the pickers and the vans, boys pass to and fro carrying the baskets of fruit which the vans, in their turn, convey to the nearest available railway station, to be conveyed from thence, not only to the London markets, but to all the great leading towns in the midland and northern counties. Special trains are called into requisition to whirl these luscious but perishable fruits to their several destinations, for without them the industry in its present dimensions could not exist. Something like one or two hundred tons of Strawberries a day pass through Covent Garden during the height of the season; yet the share falling to the poorer inhabitants of London is but small.

The glut of Strawberries is already over as far as the southern counties are concerned; and the crop has been for the most part harvested in glorious weather. The heavy rain about the middle of June might be looked upon as Nature's last supply of water to bring the crops to perfection. The Strawberry plant requires a good supply of moisture, but as soon as the fruits are fairly well coloured, that supply should cease, or nearly so, otherwise the fruits carry and keep badly, thus entailing untold losses. Only a momentary inconvenience was caused by the great thunderstorm which traversed the country on the 24th ult., when the rain was unaccompanied by hail and tempests of falling ice; and fortunately for the Kentish growers the hail was very local in its occurrence. Had the hailstorm that occurred in parts of Essex, Herts, and Beds visited the Strawberry fields of Kent, the fruits, ripe and unripe, would have been beaten to pulp.

In the United States of America the more southern towns supply the more northern with fresh fruits, the harvests passing successively northwards with the sun, till the northern fields and gardens return the compliment to the south in the shape of late fruits. To some extent this is done in Britain; but surely it could be carried to a much greater extent to the advantage of northern and southern growers alike, as well as to the home industry in fruit culture. For instance, Mr. Gladstone himself admits that though the climate of Aberdeenshire is one of the worst in the country, yet it can and does grow good Strawberries, and harvests them long after the crop of the more southern parts of the island has been accounted for. Even supposing that the appetite of consumers were fairly satiated for a season, the northern crops would still be available for preserving and conserving for use during the remainder of the twelve months.

Telling Lies to children is like planting weeds amongst flowers.

Gladiolus is diminutive for *gladius*, a sword, and means a little sword in illusion to the shape of the leaves.

The best Fruit.—Izaak Walton in his well-known book the "Complete Angler," says "God could have made a better fruit than the Strawberry, but he didn't."

Growing Trees were converted into Newspapers in less than three hours at Elsenthal. During that brief space of time the trees were cut down, made into paper and the latter printed.

Lecture on Roses.—The Rev. J. R. Buchanan gave an exhibition of Roses with a lecture at Herne Bay on the 8th inst., in aid of the Herne Assistant Curate Fund. In the course of his long experience he had never seen Roses in greater perfection than they are this year. He grows Roses largely in his own garden.

Red Poppies bloom year after year on the field of Waterloo.

Rosa canina.—The Romans credited the roots of the wild Rose with curative properties in cases of dog bites and hydrophobia. The specific name "canina" is supposed to refer to this belief.

The Bermuda Bulb Growers are in a bad way according to the *American Florist*. They have exported all the good ones and have kept the diseased stock for propagating purposes. If this practice has been pursued for long complete failure cannot be very far off. Japan will thus have one of her most formidable rivals in the bulb-growing industry crippled, which will be a good thing for the England of the far east.

The Value of Common Salt.—The *Sanitary Record* has been taking up the cudgels on behalf of common salt, and finds that it may be put to a variety of uses and is of service in all of them. Salt is said to be the best sanitary and hygienic agent we possess. Salt sweetens the pasture, prevents mustiness in hay, and imparts moisture to dry soil. Stables and cow-sheds may be purified by it, and it is stated, moreover, to be one of the best-known insecticides. In the domestic circle salt is used for seasoning food and preserving meat. Finally, on the farm it is said that it improves the crops and ripens them earlier, grain being plumper and the straw whiter where it has been employed.

Dutch Horticultural and Botanical Society—At a meeting of the Floral Committee of this Society on June 12th, 1897, First Class Certificates were awarded to Messrs. E. H. Krelage & Son, of Haarlem, for Anemone coronaria fl. pl. The Bride; to Mr. H. J. Lemkes, Jr., of Alfen, a/R, for Pteris Wimsetti; and to Mr. Jac Smits, of Naarden, for Rosa hybr. Thea Souvenir du President Carnot, Rosa hybr. Thea Souvenir de Mad. Eugène Verdier, and Rosa hybr. fragans Fiamette Nabonnad. Certificates of Merit were accorded to Messrs. J. Stravers & Son, of Willige, Langerak, for Pelargonium zonale Hortulanus Budde; and to Messrs. E. H. Krelage & Son, of Haarlem, for Tropaeolum Leichtlini. Votes of thanks were accorded to the botanical garden of Utrecht for Viola tricolor Thomas Glen and Anastatica heirochuntica.

West of England (Plymouth) Chrysanthemum Society.—The committee of the above society, with their friends to the number of forty odd, had their annual outing on Wednesday the 7th inst. Leaving Millbay station at 6.30 a m., they journeyed as far as Sharcross. Alighting there they partook of breakfast. This being over a steam launch conveyed them across to Exmouth, where they had the pleasure of inspecting the extensive Nurseries of Mr. W. J. Godfrey, of Chrysanthemum fame. His collection is one of the finest in Devon, and he has raised many a good seedling. The plants were all in the best possible condition, strong and clean, with foliage to the pot, which augurs well for the "Autumn Queen." Begonias and Carnations are also well done here, and were quite a show, indoors and out. The Peach houses and vineries too were very promising; some very large bunches are taken from the latter, and usually exhibited at the Exmouth Chrysanthemum Show in November. After seeing the various departments, luncheon was partaken. After this a move was made to reach Budleigh Salterton, which was done by road, three large brakes conveying them thither. From Salterton they drove on to Bicton, to view the beautiful gardens there, which were kindly thrown open to them by the generous owner, The Hon. Mark Rolle. Here they spent about two hours looking through the many glass-houses and the extensive flower garden and pleasure grounds which were all in very excellent order. Leaving Bicton at 5 p.m., they were driven over Woodbury Common, thence on to Exeter, which they reached about 7-30. p.m. Here a sumptuous dinner awaited them at the Bude Hotel, which was much appreciated after the long dusty drive over the moor. The company left St. David station a little after 11, reaching Plymouth about 1 a.m., most of them apparently glad to get home after such a long day's outing. The weather was very fine which added greatly to the day's enjoyment.—*Devonian.*

Five Thousand unloaded Bees Weigh a Pound, so that one is equal to the one-five-thousandth of a pound. When loaded with honey or pollen it weighs about three times this amount.

The State Legislature of Iowa, U.S.A., has by resolution adopted the wild Rose as the official state flower, and the legislative bodies of Michigan have chosen the Apple blossom as their floral emblem.

A Royal Rose.—Mr. T. Giles, of Dartford, forwarded a handsome flower of the Rose named Her Majesty to the Queen at Buckingham Palace on the 20th June. He received the following reply:—The Private Secretary has received the Queen's commands to thank Mr. T. Giles for the kind and loyal expressions conveyed in his communication of the 21st June, and for the accompany Rose. Buckingham Palace, 25/6/97."

Desperate Remedies.—First male passenger (in train from Waterloo to Windsor): "When I first got hold of Xavier Olibo, I had pretty well to cut him to pieces."—Second M. P.: "That's the way to do it. I gave the Marquise de Castellane the same treatment. In some cases there's nothing like the knife!" [Old lady in the corner nearly faints on hearing of these atrocities, and changes her compartment at Vauxhall; but, after all, the supposed assassins were only enthusiastic Rose-growers.]

New Brighton Rose Show.—This fixture was held on the 10th inst. in the charming grounds of Dr. Bell, the beautiful weather drawing the *élite* of the neighbourhood. The blooms were of unusual excellence, those from Messrs. A. Dickson & Sons, of Newtownards, Co. Down, being of high merit and gaining first prizes for forty-eight distinct varieties, twelve blooms of any light sort, twelve Teas or Noisettes, and twenty-four varieties, three trusses of each. A special Certificate of Merit was awarded to this firm for Lady Moyra Beauclerk (hybrid Tea). Amongst the more important blooms in these stands were Miss Bessie Brown, Ulster, Muriel Grahame, Alice Lindsell, Alice Grahame, Avoca, &c. Messrs. Dicksons, Limited, Chester, secured an equal first for twelve light sorts, and seconds in the other open classes. Mr. H. V. Machin secured the National Society's Gold Medal for twenty-four varieties of high excellence, also the first award for eighteen sorts. For twelve varieties, Mr. T. R. Bulley was to the fore. Mr. Machin secured the premier awards for the best six dark, and six light varieties, and for the twelve Teas or Noisettes. The same exhibitor won the National Society's Silver Medal and first prize. Hardy perennials were in strong form, Mr. T. R. Bulley staging the finest. Mr. Chas. Young, West Derby, was awarded a Certificate of Merit for a very fine collection of Carnations. Dr. Bell and Mr. T. R. Bulley, the hon. secs., were responsible for the very satisfactory arrangements.

Outbreak of Potato Disease.—The Potato disease, we regret to say, has broken out in various parts of South Lincolnshire, where the acreage devoted to the tuber crop is as large as in any district in the kingdom. It is seldom, indeed, that the presence of the disease-fungus is detected so early in the season, but the atmosphere is laden with the unmistakeable odour associated with the diseased haulm. The intense heat at times experienced, the torrential rains, and the highly electrical condition of the atmosphere have no doubt all encouraged this early development of Potato blight. Field and garden crops have alike been attacked, but the efficacy of sulphate of copper sprayings has been so clearly demonstrated that growers may, if they please, guard their crops with almost absolute certainty against destruction. We learn that Messrs. Strawsons, of 71a, Queen Victoria Street, London, who have done such excellent service in checking the spread of Potato disease in Ireland, are this season supplying their fungicidal preparations containing sulphate of copper in quantities suitable to the grower of 100 acres or more of potatos on the one hand, and to the humble cultivator of a small allotment on the other. The value of their preparations has been so fully recognised in Government and other official reports that no excuse can be pleaded for going to foreign sources for appliances and materials that can be more cheaply obtained at home.—*The Times, July 5th*, 1897.

Fruit on Excursion Trains.—The railway companies in Mexico are advertising Strawberries on their trains for the free use of their passengers all the year round. Another railway company in Georgia announces that in addition to the low rate of fares, there will be 500 fine Water Melons placed on ice in the refrigerator car for the use of the passengers. By such means the companies advertise for passengers.

The Joobly Muddle.—Deer Sir I 'opes you are not in this Joobly muddle like me. I niver wur at no bored school, and no need neither; but I knows that the kween 'as rained sixty years, and that the ryal 'orticultural siciety ware to strike sixty meddles, wun fur each year, in 'onour uv them whot lived to see the raycord rain. Well, 'ere's w'ere I ham muddled. W'en them 'orticultural papers come in I tryed to count the names menshuned and made out seventy 6. Now says I, I says, that's rong. The missus counted and sayd it wur only a bakers' duzzen chucked-in-like for luck. But that would only come to 60 five. "O" says she, she says "you wur born two soon, and is now much be'ind in yer 'rithmetic. It's the noo way of calkylashun." "If I wur born two soon, 'ow can I be be'ind," says I. But she sayd something about 'er Joobly bonnet w'ich I did not understand, so I went to see my naybour gardener wots down on the list to offer 'im my congratsulayshuns, but he larfed and said that v. m. h. ment "very much 'ad." "Well it's laffable" says I; "but if the seventy 6 'ave to toss for the meddles, there will be some 'ard 'itting."—*P. Merribone.*

Victorian Diamond Jubilee Cups and Medals at Birmingham. — The Birmingham and Midland Counties Great Victorian Diamond Jubilee Chrysanthemum, Fruit, Primula and Vegetable Exhibition is to be made worthy of the name. It is to be held in the Bingley Hall, Birmingham, on the 9th, 10th, and 11th November next. The Right Hon. J. Chamberlain, M.P., is president. The City of Birmingham Victorian Diamond Silver Cup, value £25, is offered for a display of floral arrangements. A cup having the same title and worth £17 10s. is offered as the second prize; and others worth £10, £6, and £4 as the third, fourth and fifth prizes. Cups of the value of £15, £10, £5, and £3 are offered in as many prizes for a collection of British-grown fruit, not to exceed a space of 50 sq. ft., the first and fourth being offered by the gardeners of Birmingham. Victorian Diamond Jubilee Gold, Silver and Bronze Medals are offered for nine large-flowering Chrysanthemums, and a similar set is offered for a group of Chrysanthemums. Groups of Chrysanthemums arranged with Ferns and foliage plants are to be similarly honoured. Victorian Diamond Jubilee, Gold, Silver and Bronze Medals are offered for twenty-four incurved, and also twenty-four Japanese Chrysanthemum blooms, distinct. Money prizes are also offered along with all these medals, so that we anticipate a very lively and contested struggle for the premier honours. Similar medals and money prizes are offered for Chinese Primulas, open in one case, but only to gardeners and amateurs in another. Grapes, Apples and Pears are similarly honoured. Altogether there are sixty-three classes in which prizes are offered, but this number is increased to 90 by special prizes.

Wild Flowers.—The paper recently read on wild flowers before the members of the Paxton Society at Wakefield by Mr. G. Bott was of a most interesting character. In his opening remarks the essayist said that wild flowers forced themselves upon them. They were to be met in the hedgerow by the wayside, on the heath and common, and confronted them at every turn. Some preferred the meadow, some the marsh, and some the dusty roadside. One of the most pleasing features of the study of them was that the scenes varied from month to month. Not long ago, for instance, the railway banks were dotted with the bright yellow of the Coltsfoot. Then come sheets of the yellow Hawkweed, trailing Convolvulus and lilac Scabious. He did not know why a railway bank should form such a rich wild-flower garden, except it was that it caught many seeds blown by the wind; but he had repeatedly found plants growing there which grew nowhere else in the neighbourhood. Mr. Smith then went on to give interesting details concerning such common flowers as the Daisy, Speedwell, Ragged Robin (once considered a sovereign remedy for dropsy), Herb Robert, Campion, Fumitory Stellaria and Forget-me-not. The Silver-weed (Potentilla anserina) was one of the prettiest of wayside weeds. The Pimpernel, commonly known as the poor man's weather glass was remarkable for its beauty and sensitiveness to the weather. The Lysimachia was said to have been put upon the yokes of restive oxen by the King of Sicily, when the oxen became quiet as lambs. An old writer has also said that the serpents healed their wounds with the herb. Mr. Smith also remarked upon the great vitality of which the seed of the Poppy was possessed. In conclusion the lecturer pointed out that the true beauty of many wild flowers was not to be seen except by close examination. The careful observer would find that they were not a whit behind the cultivated flowers in point of interest.

SCOTTISH NOTES.

The year 1897 will long be remembered in the north by gardeners of every class. The extremes of cold during summer, with high winds and cold rains, have rendered the raising of seedlings in the open ground a task which the smartest of cultivators can hardly cope with.

Many of our amateur friends, who have long been leaders at provincial exhibitions are loosing spirit, because the destruction to vegetable crops, and flowering plants (especially herbaceous species) is appalling. Among vegetables which are very late, and have not done well are Onions, Leeks, Peas, Cauliflowers and Turnips. Where frames and other glass protection is ample difficulties are considerably reduced. We fear from cold and wet that French Beans, and Scarlet Runners will be very poor in the open, even if they pod at all. We are getting good supplies from plants grown in pits, but those on borders and other space struggle for existence. Potatos were four weeks later with us this season than for two years past. These are grown on a sharp ridge facing the sun, and protected with wire hurdles and mats. By far the earliest we have tried is Sharpe's Victor—Peas grown in boxes and planted out are three weeks later than usual. Chelsea Gem, for earliness and an abundant cropper, is one of the best. Gradus is a fine sort, but has not stood the untoward weather well. We have had, several times in July, the Thermometer fall from 55° at night to 35° and 36° in the morning. Winds are often from North East, and often change suddenly to South West, causing great changes of temperature.—*M. T., Carron.*

SWEET PEAS IN ROOMS.

At this season of the year no one with a garden even of limited dimensions need be without cut flowers of some kind or other according to taste, with which to adorn their rooms and render the cool evenings both bright and pleasant, with simple and inexpensive flowers that may vie with the brightest and rarest Orchids.

Various hardy flowers might be mentioned as invaluable for the purpose, but the object of this note is to call attention to the eminent suitability of Sweet Peas alone, without admixture of anything else. Flowers of one colour alone may be used, or mixtures of colours, according to fancy. They need only be cut or pulled the whole length of the flower stalks and mixed with a few sprays of their own foliage. No other dressing or accompaniment is necessary for the filling of glass and other vases with the most exquisite and quaintly formed flowers of all colours and shades of colour except dark yellow. Even Orange Prince, Adonis, and some others are salmon and pink rather than either orange or gold. Cream, creamy-yellow and primrose, are the darkest of this particular hue yet in existence. All other colours, from the purest white to the darkest, as well as the brightest glowing crimson, scarlet, and carmine, are already at the command of the cultivator and the flower lover.

These flowers impart a brightness to a room during the day, and are even brighter and more charming by artificial light. When you have forgotten their presence, the scent becomes more powerful and penetrating, calling your attention to them as the shades of twilight fall. Have as many vases of them as you like or can bear in a room; but never on any account crowd the flowers, or you will rob them of more than half of their quaint and smiling beauty.

CARNATIONS AT CHELSEA.

Just after the first flush of the Rose's beauty has passed comes the Carnation with all its many and subtle shades of colour to cheer our homes and adorn our gardens. July is the month of Carnations, and June is usually regarded as the month of Roses. The Gilliflower of Chaucer has been wondrously developed in the lapse of centuries, and now flaunts a garb strangely different to that worn by its progenitors of which the old herbalists wrote and the old poets sang. The Carnation of to-day is a wonderfully good tempered flower. It is at home in the country, and it acts its part right well amidst the murkier and less kindly atmosphere of the town and city. Messrs. J. Veitch & Son, Limited, have at the time of writing an excellent display of Carnations and Picotees in their nurseries at Chelsea, and as their collection comprises all the leading varieties the interest attaching to it is of the greatest. The outdoor plants are accommodated in the same beds as usual. Owing to the fact that a change of soil was given to these beds last autumn wireworms have proved very troublesome, and a vacancy here and and there in the ranks of the plants speaks of the necessity of keeping a sharp look out for this pest.

A large number of plants have been grown on in thirty-two sized pots, and these are being flowered under glass, where the colours of the flowers can be easily preserved by shading. Both indoors and out unequivocal evidences of good culture are to be seen, and, as the list of varieties each year is subjected to a severe scrutiny, only the highest quality of flower finds a place. Some of the old varieties however, still hold their own. Of these, perhaps, Germania is the most notable instance, for it is to-day, as it was when introduced, a yellow without which no collection could be complete. With regard to the general character of the collection the predominance of self-coloured forms is noteworthy, thereby affording an index to the popular favour. Picotees are grown, and grown well too, but the demand for them seems to be falling off, the self evidently usurping its place except in the case of the yellow-ground section. Flakes and bizarres, once so highly thought of, are being gradually relegated to the limbo of a dead past. Their capricious behaviour is doubtless largely to blame for this, and besides, the markings when true give the flower a rather garish appearance, and we are nothing if not aesthetic in this *fin de siecle* age.

Amongst the newest selfs there are several grand forms. Her Grace has large flowers of perfect form, delicate blush in colour, changing to white in the later stages. Seagull is very similar in build and habit, but exhibits a several shades deeper hue. Exile is one of the largest of the newer sorts. It is deep rose in colour, and has petals of great substance, added to which it is of vigorous habit and very free flowering. Garville Gem is the best of the heliotrope coloured forms, and is a good doer and free bloomer. Bendigo with its dark blue-purple flowers is noticeable, not only for its colour, but also for the stoutness and strength of the flower stalks. Hayes Scarlet is still the best of the scarlet selfs, and should be in every collection. Sadek has dark rose flowers, and it is a great pity that the colour should go so quickly, for it is very sensitive to the influence of the sun. Very charming is Miss Maude Sullivan, which has perfectly formed salmon-pink flowers with very full and well developed centres.

The old Crimson Clove is always a favourite on account of its rich colour and sweet scent. The newer variety Mephisto has the same colour, but is a smaller and better formed flower, and is not so much addicted to the sin of pod bursting. Duke of Orleans is one of the very best yellows, and has done and is doing especially well at Chelsea this year. Waterwitch is a very handsome flower, large, well shaped, and with petals of great substance. The edges of the latter are fringed prettily, and this adds to, rather than detracts from, the flower. Mrs. Eric Hambro is the perfection of a white variety for form, habit, and constitution.

Joe Willet as a bedding variety is simply grand. The habit is dwarf and sturdy, and the bright scarlet flowers are produced in great numbers on stout footstalks. Mrs. F. Watts is the counterpart of Joe Willet as far as habit goes, but the flowers are pure white. Although perhaps not up to the highest florist's standard these two sorts are well worth growing. Rose Celestial may be added to the list of good bedders.

The yellow-ground section has been strengthened very considerably of late years, and now contains some of the richest and most handsome flowers. Almira and Colonial Beauty are well-known standard sorts. Cardinal Wolsey is one of the best and a great improvement on Victory both in build and colour.

Coming to the Picotees, the yellow-ground section is very strong, and many of the varieties grown by the Messrs. Veitch are as near perfection as we have seen. Eldorado has bright yellow flowers edged and striated with bright rosy red. Golden Eagle is rich golden yellow, edged and marked with bright red. These two grand varieties, together with two other fine forms, viz. Xerxes, and Voltaire, were raised by Martin R. Smith Esq., in his garden at Hayes. All four, moreover, have been awarded First-class Certificates at various times.

Of the other sections the following varieties have acquitted themselves well :—Norma Carr, heavy red edge ; Edith D' Ombrain, Mrs. Sharpe, and Little Phil, heavy rose edge ; Amy Robsart and Muriel, heavy purple edged ; and Gannymede, crimson edge These varieties are the pick of the collection with regard to form and markings of the flower, and they are all possessed of a robust habit. Malmaisons, too, are well grown at Chelsea, and the healthiness of the plants, which were for the most part out of flower at the time of our visit, gives a visitor a good idea of the size and quality of the flowers. A few of the latter were still to be seen and even these were good. That superb white variety, Nell Gwynne, has been a marked success this year. The same might be said of the Prime Minister, which has the distinction of being the first scarlet Malmaison raised. Its vigour and beauty are remarkable. Princess May, Mrs. Everard Hambro, and the Churchwarden are three other splendid sorts ; indeed there is a great deal of variety now obtainable in the ranks of the Malmaisons alone, and the popularity of this section can scarcely fail to increase by leaps and bounds once the novelties are generally known, and their price other than prohibitive.

GARDENING MISCELLANY.

BROCCOLI UNIVERSAL.

This is a splendid Broccoli for late work coming in after Late Queen. I can always depend on it for cutting in June. Out of the ten varieties grown three years ago, only two passed through 28° of frost, namely, Champion and Universal, every plant of Late Queen being killed.—*Thos. Cockerill, Wirksworth.*

CORREA CARDINALIS.

This is in my estimation the most beautiful of the family. It is a New Holland plant, more frequently grown some years back, when there was not the demand for cut flowers for personal and room decoration there is at the present time, and when many would rather have the pleasure of seeing the flowers on the plant than elsewhere. This was just the plant to suit such, for it will often remain in flower for months. It is not one of those things for the careless grower to take in hand. It likes a good sandy peat, and a fairly large plant may have a little good yellow loam mixed with it. A good airy greenhouse for about nine months of the year, and a cold pit or frame or a position behind a north wall during the summer months will suit it admirably. Like the other coloured members of the genus, it does not do well on its own roots, but succeeds best grafted on C. alba. C. cardinalis is the highest coloured member of the genus ; the tubular flowers are of a bright deep scarlet tipped with greenish-white.—*W. B. G.*

HARDY FRUITS.

In northern parts there are many complaints on the scarcity of small fruits—Gooseberries and Currants almost nil—but with us these are abundant and promising, though very late. Apples in many gardens and orchards are a small crop, and have suffered severely from wind and cold rain after they had set well. There are some varieties which seem almost invulnerable to cold, sunless weather, and every year are a full crop. All the codlin classes (Keswick does so especially) Lord Grosvenor, Golden Spire, Stirling Castle, Cellini, Seaton House, and King of Pippins never fail, and these make sure of plenty of fruit from August to May. Morello Cherries were heavily set with fruit, but many shrivelled up by reason of cold and damp. Sweet Cherries suffered severely. The finer sorts of Plums have suffered ; Victoria is the hardiest.—*M. Temple, Carron.*

ABELIA FLORIBUNDA.

The flowers of this Abelia are totally different from those of the better known and hardy A. chinensis, and comes from Mexico, from which it reached our shores in 1845. The Chinese species has relatively short white flowers, but A. floribunda has slender, tubular flowers widening to a five-lobed but short lamina, and of a uniform gooseberry-red. When badly grown, the plant belies its name bearing only a few flowers, whereas when properly treated it produces clusters of five to six of these showy blossoms, suspended from the apex of the slender shoots. The plant belongs to the same family as the Honeysuckle, and in shape the flowers may be compared to those of L. sempervirens, though widely distinct in colour. In this country it requires the shelter of a cool greenhouse. It is quite dwarf, and makes a pretty pot plant when properly cared for. There is a coloured plate of it in the *Revue de L'Horticulture Belge.*

BRIDAL WREATHS.

To be able to supply Orange blossom for the construction of bridal wreaths has often been a sore puzzle to gardeners at certain seasons of the year, particularly in winter. Old customs are, however, passing away and giving place to others. Lily of the Valley is now considered to be more elegant, graceful, and moreover, in accordance with good taste. Lily of the Valley is a native plant, and above all is easily forced at any time during winter, so that gardeners will be thankful for that even if they reckon it more economical to send to market for the flowers then to grow them. Other flowers suitable for such occasions are white Tea Roses, Hyacinths, Camellias, Lilies, and Carnations. If a florist supplies the flowers, the ribbons he employs to tie them may be obtained to match the bridal gown by sending a sample of it. This will be no trouble to a first-class florist who studies his business.

A UNION FOR GARDENERS.

A union amongst gardeners is needed, because wages of masters and journeymen are going back, and housing accomodation is much the same as it has been for many years back. Wages can never rise with so many men in the market ready to sell their horticultural ability for what it will bring. The great body of gardeners has never had a union as understood amongst other trades ; they have united in districts in a temporary way for the attainment of some common object, and the union was then dissolved as soon as the question was settled ; so that the success or failure of a union amongst gardeners has yet to be decided.

Three of the commonest arguments against a union are (1) living in isolated groups ; (2) occupying their employers' houses as part of their pay ; (3) that gardening is not a necessary of life. Country labourers have overcome the first argument as they are isolated and have a union. Colliers have overcome the second, as they live in their employers houses (not all), and have a union ; and neither of the two bodies of workmen boast of their intelligence. The answer to the third argument is that fruit and vegetables are necessaries of life, and cut-flowers and plants (like tea) are indispensable luxuries. If gardeners had a union they would not, as votaries of the gentle art, care to fight, except as a last extremity. If the executive used reasonable arguments and had the pressure of public opinion at their back, gardeners would get many things improved without going to the last extremity. One of the reasons why gardeners have not a union is the foolish idea of head gardeners, that their interest and their men's interest are not the same, and will therefore take no part in forming a union.

The facts are a head gardener's remuneration and tenure of office are largely influenced by the number of young men in the market ready to take their place. Some think that gardeners could get their position improved by approaching their employer individually. True, a man could approach his employer with cap in hand and eye on ground and beg of him &c., but ten to one if he would succeed ; if not, if he did not leave, the relation afterwards would be strained. A wail in The Gardening World might influence a generous employer here and there, but it would have no effect on the great body of employers. A union is undoubtedly the only means by which gardeners can improve their position ; if union is impossible, then gardeners must remain behind in the upward march of the working classes ; and console themselves with the reflection that they are very clever fellows.—*W. K.*

NOTICE OF BOOK.

Hartland's Conference Daffodils, &c. Drawings by Gertrude Hartland. Special Jubilee Issue. William Baylor Hartland, Cork, Ireland. Price 3s. 6d. post free.

This may be described as an Album of Daffodils, for its ninety-eight pages are mostly devoted to illustrations of Daffodils, the greater number of which are well recognised as leading and indispensable varieties in any good representative collection. It was originally brought out in 1890 ; but since then it has been considerably enlarged by fresh additions. The illustrations consist of woodcuts, and are in no way overburdened with text, seeing that they are merely accompanied by the name of each respective variety. By some, this might be considered a defect ; but the matter is easily remedied, by applying to the author for the descriptive little book of over 200 varieties, of Daffodils, with original Tulip list of May flowering sorts, which may be had on application.

By consulting the pages of this album of Daffodils, we note good illustrations of Ard Righ or Irish King, Golden Plover, Golden Spur (well adapted for forcing purposes), Vicar of Lulworth, Primrose Dame, Maw's Bicolor, Corbularia citrinus, Cyclamineus, Bicolor Horsfieldi, Bicolor Grandee, Incomparabilis Sir Watkin, Muticus or The Omega, Muzart Orientalis, Madame de Graaff, Glory of Leiden, Countess of Annesley, and various others of similar importance.

Paper and printing are excellent, so that altogether this may be considered a unique and interesting collection of illustrations of the most popular of spring flowers for outdoor work. The album would make an excellent companion to any work with a merely descriptive list from which the colours may be taken. There is a poetical address to several Nineteenth Century men accompanied by portraits such as James Watt, George Stephenson, Thomas Alva Edison, and Professor Rontgen. There are also a poetical address to Princess Victoria on her birthday on May 24th, 1837, and other pieces. The Daffodil pictures are mostly very faithful to nature.

The Orchid Growers' Calendar.

Angraecum falcatum.—What a dear little gem this is ! It is one that takes up but such a small space that room should be found for it without much difficulty. Unlike other kinds, too, it thrives best under cool treatment. In summer the shade and moisture of the Odontoglossum house is just what it likes, but during the winter months for safety's sake we suspend our plants up near the glass of the Cattleya house.

Being a dwarf grower, basket culture is the most suitable. A six inch basket would accommodate a six lead plant ; or it could be made up to that amount. Such a basket would have when in bloom perhaps ten or twelve spikes in full flower at once, making a very pretty object. A few crocks and live sphagnum moss worked in together is all we use to grow it in, for it only requires just enough to keep it from drying up too quickly. When the moss gets sour by constant watering it should be renewed.

Laelia tenebrosa.—It is very rarely that we do much potting during the month of July, but there are some things that are very much benefited by a shift along now, and one of these is the above fine addition to the summer flowering Laelias. As soon as the growths are fully made up they begin to put forth large fleshy roots ; and we contend that they should have some fresh material to root into and be enabled to build up a sound, healthy constitution. Without this the next season's growths will be small,

and the flowers scarce. The compost should consist of good peat (not that which is dug from underneath Pine trees, as this abounds in fungus spores) and a little live sphagnum moss. Always allow good drainage, and elevate the plant above the pot slightly.

After the potting is done, the plants will only receive just enough moisture to keep the moss alive and the plants from shrivelling. It is surprising what a quantity of fine healthy white roots they will make under these conditions, but give them too much water at the roots and they will turn black at the points and ultimately die.

ODONTOGLOSSUM HASTILABIUM.—For summer flowering this is a very good Odontoglot, and as it lasts a long time in perfection, it comes in well for exhibition purposes. We treat ours in the same way as advised for O. harryanum; that is, cool house treatment in summer, and a position at the cool end of the Cattleya house in winter. In other respects they receive the same attention as O. crispum.

DENDROBIUMS.—As the growths of the forward plants are made up, they may be removed into a cooler place, where the air is somewhat drier, and finally placed in a very light position to ripen; but see that they do not get burnt.—*C.*

VEGETABLE CALENDAR.

IT will be necessary at the present time to look forward to having good supplies of all the most useful of the Brassica tribe during the winter months, and no opportunity should be lost in filling up all vacant ground with some crop of this kind. The removal of early crops of Peas, Lettuce &c., should take place the moment they cease to be useful, and if the ground receives a liberal dressing of soot, or quicklime, it will do a double benefit in destroying slugs now they are most active, and enrich the land at the same time, and render it in good condition for supporting another crop of any kind of winter greens.

CABBAGES.—The sowing of the earliest spring crop may be made any time before the end of the month. The ground intended for the seed bed should be well worked and pulverised, and a good dressing of soot forked in previous to sowing will greatly assist in promoting early growth and keeping the plants a good colour. Sow thinly in rows 8 or 10 in. apart, and remove all weakly plants from the seed bed, in an early stage of growth. This will give light and air round the stems of the most promising plants, and tend to render them hardy and strong, and better able to stand sudden fluctuations of temperature during winter.

LETTUCE.—A long supply depends upon the sowings made during the end of this month. A sowing made now and another a fortnight later will be the safest plan to adopt, as with a fine open autumn the latest sowing may prove the most useful for giving a crop just in the right stage of development, for lifting into frames and other structures, to extend the supply far into the winter. An open position should be selected for the seed bed, and the ground previous to sowing should be liberally dressed with soot and quicklime to destroy slugs, which, if plentiful, would eat up the plants as fast as they appeared. Avoid thick sowing, and thin out early, to prevent the plants getting drawn and weakly before planting time.

ENDIVE.—The principal winter crop must be sown at once in nice friable soil not over rich, as under these conditions the young plants will make abundance of fibrous roots, and transplant almost without any check. A sowing may be made where the plants are to remain in the seed bed for the earliest winter crop, transplanting the thinnings for a succession. In this case the rows in the seed bed should be at least one foot apart, and in thinning out for planting the strongest plants should be left at equal distances in the seed bed. Where an early sowing has been made the plants should now be fit for planting out, and a border from which early Potatos have been lifted will be a suitable position for them to occupy.

PARSLEY.—The present is a good time to put in a few rows to give good results during next season, as plants sown now are not liable to run to seed until late in the year. Where the crop is now abundant on strong roots, a portion should be cut over to promote a new growth for winter supply.—*J.R.*

HARDY FRUIT GARDEN.

PEACHES ON WALLS.—At this season too great attention can scarcely be paid to the syringing of the foliage. The garden engine should be regularly employed at the close of hot bright afternoons, and the water applied with no illiberal hand. The exact time at which it will be safe to syringe will depend upon the situation of the trees, but about five o'clock is a good time. An hour's work then will do much towards keeping down fly and red spider.

SMALL FRUITS.—The gathering of Currants, Strawberries, and Gooseberries for preserving and bottling purposes gives a good deal of work in the month of July. Housekeepers usually declare unutterable vengeance against gardeners who send in preserving fruit at all damp, and if by any chance the preserves keep badly it is generally put down to the gardener's credit, and remembered against him. All fruit intended for jam making, therefore, should be as dry as possible.

STRAWBERRY LAYERS.—As soon as the fruit has been gathered preparations should be made for pegging down the layers. A few cultivators allow them to root in the ground as they list, of course taking the precaution to cut off a number of the weaker ones for the benefit of the stronger. The practice of pegging down the layers in pots filled with soil is, however, to be preferred to this as it affords greater convenience for transport. Small 60 sized pots are the handiest size to use, and for soil almost anything may be employed. Stand the pots containing the layers together in batches if possible, as this renders it easier to give water when required.

SUMMER PINCHING OF FRUIT TREES.—This must be busily practised now in order that the strength of the trees may not be unduly wasted. In dealing with tall pyramidal Pears the lower growths should be left a few days longer than the higher ones in order to give the branches bearing them a better chance. In addition the shoots of Morello Cherries, Peaches, Nectarines, and Figs growing on walls require to be securely tied in their proper places, avoiding crowding as far as possible.—*A. S. G.*

FRUIT UNDER GLASS.

EARLY PEACHES AND NECTARINES.—The fruit having all been gathered from the first house, the trees should be gone over at the earliest opportunity and the growths for which there is no longer any need removed. Shoots that have borne fruit this year, and which are not required to extend the spread of the tree, or to carry other shoots, should be cut out, and the succession shoot at the base trained in in their place. Lateral growths are also pushing out. These must be pinched with the finger and thumb. By relieving the trees of all unnecessary shoots those that are left will have a much better chance from the increased light, air, and nutriment that they will obtain. The proper maturation of next year's bearing shoots will be expedited, and the formation of flower buds assisted. Trees that receive a good thinning out directly after the fruit has been gathered rarely want much pruning at winter time.

During the time that the house has been kept dry to assist the ripening of the fruit it is more than likely that red spider will have made its appearance to some extent. A heavy syringing with the garden engine if it can be got into the house is a capital practice, and will go a great way towards clearing the trees of insect pests. After this primary washing the syringe may be plied regularly twice a day. The border should be carefully examined, and if it is at all dry waterings must be given at short intervals until it is reduced to a properly moist condition. Clear water only must be given, for the trees have had enough of stimulant for one season.

Plenty of air will of course be required, and it is a good plan to slide a few of the top lights right off—say every third—and thus throw the house wide open. The lights must be placed out of harm's way so that a big, glazier's bill will not be necessary to to put them ready for use again.

SUCCESSION HOUSES in which the fruit is ripening must be kept drier than formerly, and more air may be given. Go over the trees occasionally and push aside any leaves that may be shading the fruit, as this assists the ripening process. The border should be covered with a good depth of hay so as to prevent any fruits that fall from being entirely spoilt. The practice of affixing nets beneath the trees is not one that recommends itself, as it does not answer the purpose of preserving the fruit. In the later houses see to the thinning of the fruit, and stop the growths beyond the fruit in order to throw more vigour into the latter.

VINERIES in which ripe grapes are hanging should be kept cool and airy. The borders must not be allowed to get dust dry, as is far too often the case, but manure water in any shape or form must not be given, only clear water.

MUSCATS as a rule need a higher temperature to finish properly. Still the house must not be kept too close and stuffy, as the berries colour much better when a circulation of air is kept up.

In the later houses see to the stopping of laterals at the first leaf. The strain on the vines is now very great, and the supply of food must not be stinted. An occasional dressing of "Thomsons," pricked in slightly with the fork, and followed by a good soaking of clear water is a safe and reliable vine food, and will work wonders in a crop. Mealy bug in most vineries is more or less of a nuisance, and in some localities constant attention is necessary to prevent the pest from getting established in the bunches. A teaspoonful of petroleum in a quarter of a pint of warm water, well stirred up, and applied with a small brush will keep the bug in check. The only danger in using this, however, and it is a danger in the hands of careless workmen, is that the petroleum does not mix readily with the water, and it must therefore be kept constantly stirred.

MELONS.—As the fruit commences to ripen the bed may be allowed to get dry, and it will hasten maturation if the greater part of the foliage be removed from the plants bearing the ripening fruit. As a rule it is easy enough to tell by means of the sense of smell whether any fruit is fit for the table or not, although, more's the pity, the olfactory organs cannot test the flavour. When a crack shows round the base of the footstalk it is also a pretty sure sign that the fruit is about ready.—*A.S.G.*

Gleanings from the World of Science.

THE undermentioned subjects were brought before the Scientific Committee of the Royal Horticultural Society on the 29th ult.

Romneya, diseased.—The following report was received from Kew upon the specimens sent to the last meetiug: "The disease is caused by an obscure organism, considered by Prunet as a species of Cladochytrium.' A preliminary notice is given in 'Comptes Rendus,' October 1st, 1894. The detailed account there promised is not yet to hand."

Grapes attacked by Glaeosporium.—With reference to the examples sent to the last meeting, Mr. Malcolm Dunn writes, after inspecting the Vine houses at Auchterarder House, that "the vinery is of the usual 'lean-to' form, well heated and ventilated, with everything in good order for growing healthy Vines and first-rate Grapes. The Vines comprise some six or seven varieties, but only Black Hamburgh suffers to a serious extent from the disease; although it could be detected on a few berries of Foster's White Seedling, and still fewer of Alicante. As far as I can remember Muscat of Alexandria, Lady Downe's, Madresfield Court, Gros Colman, and one or two others were not affected, although intermixed with the Vines attacked. The Vines are all in vigorous health, and bearing a fine crop of splendid bunches of Grapes. With regard to the treatment they were receiving I saw nothing to which I could object."

Harpalus ruficornis attacking Strawberries. Mr. McLachlan showed specimens of this beetle, which belongs to a carnivorous family. Its prevalence in Strawberry beds is probably caused by the presence of the litter. That it will attack Strawberries, and that it has destroyed entire crops have been known for the last ten years. As it is nocturnal in its habits, it must be looked for at night, for it lives in the soil.

HINTS FOR AMATEURS.

Roses.—For some weeks past Roses have been the chief feature in the flower garden, and the rosarian will have been repaying himself for all the months of trouble that his Roses have cost him. He will feel fully repaid in fact, by the sight of his favourites, in all their rich and varied hues, making his garden beautiful, and every sniff of the fragrance exhaled so freely by the blooms, is grateful to his inmost soul. If, apart from this, competition at one or more of the local or central shows has been included in the programme, the excitement attendant upon competition will doubtless have acted as an incentive to further efforts in the cultivation of the queen of summer flowers.

Where it is intended to enter the competitive lists, the grower naturally tries to get as many of his plants into flower about the time of the show as possible. This gives him a greater quantity of material from which to choose his winning lot, but at the same time it means that just as there is a flush of bloom for a short time, there will also be a re-action when very few flowers will be obtainable, as the bushes will be all out of flower at one and the same time. The break between the first and second crops of bloom among the hybrid perpetuals is thus brought greatly into evidence.

On the other hand the amateur for whom the show tables have no allurements as far as he is personally concerned, and who has no wish to lick his neighbours, far or near, for the best dozen or whatever quantity his resources may suggest, is able to husband the flowering qualities of his Roses. By a judicious distribution of the pruning over the autumn, winter, and early spring, the break between the first and second crops may be greatly reduced, if not obviated altogether, and a continual succession of bloom obtained from June until the advent of the autumn frosts.

Note taking.—This is one of the things that every rosarian must do assiduously. With regard to the matter of pruning, for instance, the time at which any particular plant is dressed should be noted, and then in the summer the time at which it commenced to bloom should likewise be marked down. Reliable data for the locality is thus obtained, which cannot fail to be of guidance in future years. Books dealing with Rose culture are all very well, and advice from practical growers is even better, but both of these should be supplemented by personal observation and experience if a full measure of success is expected. The different habits and characters of each variety should be made the subject of a note, also the behaviour of the plants under special climatic conditions such as drought or superabundance of rain. This will all prove handy for reference. Naturally, in the case of exhibitors, successes and failures are commented on so that a standard for comparison may be set up.

Bushes in bloom should be treated liberally with some stimulant. There is really nothing better for imparting depth and vividness of colour to the blooms than good liquid farmyard manure, and happy is he who can obtain a supply of such material. Then again the cutting off of dead flowers, although really a matter of detail, is of considerable importance, if only for the sake of the trimmed air it imparts to the plants.

Gathering Roses—It may be of service to make a remark or two under this heading. In very few gardens indeed are all the Roses allowed to remain on the bushes; some are cut—often the greater quantity—and used for the embellishment of the house. Now in order to get the most out of the blooms they should be cut early in the morning, while the dew is yet on them, and placed in water immediately. Blooms culled at this time will last much longer than those which have dried up with the fierce sun for a few hours before cutting. The next best time for cutting to the early morning is late in the evening after the flowers have to some extent recovered from the effects of the heat. The exact stage at which a flower should be cut in order to have it at its best will depend to a very great extent upon the variety. Many of the thin petaled sorts should be less than half expanded, whilst some of the thick petaled sorts may be allowed to open a little fuller than this with advantage. From 4 in. to 5 in. of the stem should be cut with the bloom, although in special cases, and if it can be spared from the tree, a longer stem may be allowed. The necessity for judgment in cutting Roses is, of course, greatest when the blooms are to be staged for exhibition. For ordinary house decoration fairly full blown flowers may be cut, as the season wears on, and autumn approaches with its heavier dews and damper atmosphere generally.

A Good Rose.—Before making a selection of any varieties, or passing an opinion upon others it is needful to know what a good Rose is. Possibly we should not find absolute accord between the various growers as to the exact value to be attached to the various qualities, and the precedence which one qualification should have over another, but the various opinions, although they might differ to some extent in matters of degree, would yet tend generally in the same direction. Broadly speaking, a good Rose should be hardy and possess a healthy and fairly robust habit, so that when the blooms appear they are backed up by good substantial foliage. Not a few cultivators attach primary importance to the quality of habit, and justly ask what is the value of a Rose that may be up to exhibition standard as far as blooms go, but whose habit and constitution are such that the plant can rarely be had in good condition.

After habit may well be listed fine form, good size, and substance. The form may vary to a considerable extent, from globular to cup-shaped and expanded. The petals must be even in size, distributed regularly, with their margins entirely free from cutting. The outer row of petals ought to be broad and closely folded, and of very great substance. Such flowers will stand much longer, and will come better in dry seasons than those varieties which have thin and flimsy outer petals.

The colour, too, is a most important point, and it is the one upon which probably more prizes are won and lost than upon any other. Two stands may have flowers of equal size, shape, and refinement, but let the colour of the one lot be even a little better than that of the other, judges do not as a rule hesitate long. The colour, then, must be distinct and decided. It should, moreover, be uniform and lasting, and not liable to change after the flower has been cut to a duller and less attractive shade.

Freedom of blooming must on no account be forgotten, and this quality will recommend itself very forcibly to amateurs who grow Roses for the adornment of their gardens simply. Fragrance, although of considerable importance in the writer's estimation, is not looked after so closely as it ought to be. People seem apt nowadays to forgive a lack of fragrance if size, depth, shape and colour are all good; but really half the charm of a Rose is, we opine, in its lovely smell, and we are sure there are many lovers of the Rose who think the same.

With regard to the flower stem, a qualification in which not a few varieties are behind:—It should be stout, and capable of supporting easily the weight of the flower in such a way that the beauty of the latter may be seen and admired without having to lift it up with the hand. During wet weather where the blooms are large the weight and strain upon the flower stem is considerable, and even stout stems will hang their heads occasionally under the strain.

Budding.—Very shortly now the budding season will be in full swing, and the professional Rose grower, as well as the modest amateur will be busy working up stock for another season, increasing the supply of plants in order either to extend the area of land devoted to Roses, to make good deficiences by death or old age, or to substitute good varieties for others which have proved to be comparatively worthless. The amateur, who aspires to grow his own stock, has to think about all these things, but he assuredly has his reward in knowing that he has nobody but himself to thank for his success. We do not propose to go into the theory of budding on the present occasion, as there is plenty of time to do that in a subsequent issue, but we may take the opportunity of pointing out that the Briers to be operated on may want a little attention in the meantime. Often enough they are planted closely together, and like the wheat and the tares allowed to "grow together until the harvest," and as they please. The results are that when budding time comes the Briers are all in a delightful condition of "mix-up." It is a good plan, therefore, to regulate the growths, leaving two well-formed and vigorous ones which are situated in the best positions on the central stem, and cutting away the rest. The growths that are allowed to remain must not be shortened, but allowed to remain at their full length. They may cost the budder a little skin, and possibly try his temper by the way they lovingly cling to his legs, but these are only some of the delights of Rose growing, for who would have a Rose without its thorn?—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Cinerarias Dying.—*Francis*: From what you say we are inclined to think the Cinerarias have been overwatered. Give less water, air freely, and shade during that part of the morning when the sun is on the frame. As the latter faces to the north the sun will be off it by about 11 a.m., when the artificial shading had better be taken off.

Melons in Frame.—I have planted Melons in a frame placed on the top of a hot-bed made up for propagating purposes in the spring. There is very little heat left in the manure now, and I have been thinking that the Melons will not ripen. They are now about the size of swan's eggs. Please tell me if you think they will have time to ripen.—*L.L.*

It all depends upon the season. If we get a bright August and September your Melons should finish fairly well, but they will have a rough time of it if the weather is cold unless you give a little artificial heat by adding linings of fresh fermenting material round the frame. Shut the frame up early in the afternoon, say soon after three o'clock for the present month, and thus imprison a good deal of the sun's heat.

Vines.—*M. N.*: Your Vines are badly infested with Thrips. The leaves you sent us bore unmistakeable traces of their presence, and as if to make assurance doubly sure two or three of the insects themselves accompanied them. We should not advise you to fumigate unless the Thrips are very numerous. If only a comparatively few leaves are attacked you might try sponging with tobacco water.

Suckers on Raspberries.—I notice that in a couple of rows of Fastolf Raspberry that are growing in my garden the whole of the plants are throwing up a lot of young suckers. Shall I thin these out now, or wait until presently when the crop of fruit is gathered?—*Alton.*

You will gain nothing by waiting, for you will husband the strength of the plants, and obtain stronger canes for next year by cutting out the surplus suckers now. Leave from three to five to each stool according to the strength of the plant.

Endive.—*Rory*: The strongest plants will be those left by thinning out the rows as they will be able to grow on without any check. The plants that are pulled out if carefully handled may be dibbled into a situation where the soil is light and rich. Keep them watered, and they will soon take hold of the new soil and make plants.

Border Carnations in Pots.—*James Crurie*: After flowering the plants may be stood out of doors. The old flowering stems should be cut away as soon as possible after the flowers have all finished, and layering may commence. A little fresh soil, rather sandy if possible, should be worked over the surface, and the layers pegged down all round the side of the pot. If the plants are in 8-in. pots you will find plenty of room to do this.

Weevils on Peach Trees.—*Y. A.*: In order to catch the pests you may spread a white cloth beneath the tree, and give the latter a smart shake. The weevils will drop from the tree at the slightest alarm or disturbance, and being easily visible on the white cloth can then be made short work of.

Tulip coming Double.—Some bulbs of what were supposed to be single Tulips that I bought last autumn have this year thrown semi-double flowers. Will they do the same thing next year, or will they revert to the normal single form? The flowers in question were rather coarse, and not very good colour.—*Norman T.*

If you have grown your Tulips in very rich soil

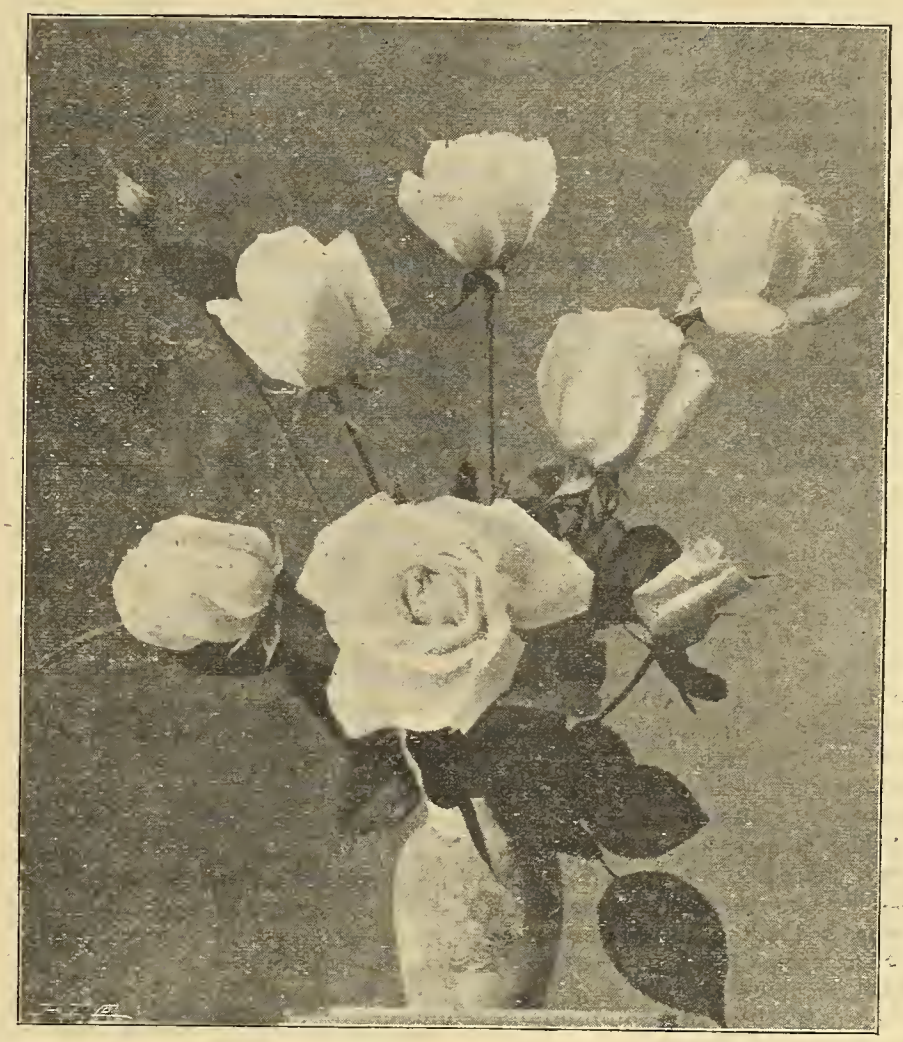
this year it is most likely that the flowers will be double next season. If, on the contrary, you put them in comparatively poor soil the doubleness may not be so apparent, although it is scarcely likely that it will, disappear all at once. It often takes several years' starving to bring the flowers back again to the single form. The finer varieties of florists' Tulips are very apt to have their distinctive markings spoiled by being grown year after year in fat soil, and they get so bad sometimes that to throw them away seems the best way out of the difficulty. It is well, therefore, to give the bulbs a season's sojourn in poor soil now and again as a corrective.

ROSE SOUVENIR DU PRESIDENT CARNOT.

THIS charming hybrid Tea Rose must not be confounded with the hybrid perpetnal President Carnot, which was put into commerce in 1892. The variety under notice was first sent out in 1894 by Pernet-Ducher, and is a seedling from Lady Mary Fitzwilliam raised by the late Mr. Bennett, of Shepperton, Middlesex. This latter variety is rather a moderate grower, under certain conditions at least; but curiously enough Sou. du President Carnot is a vigorous grower with smaller flowers of different shape. In form they bear a close resemblance to those of Niphetos, but are of a pale flesh colour in the centre, but so soft that for all practical purposes it may be regarded as a white Rose, except perhaps for exhibition and some other special purposes. The outer petals are revolute, and the flower is softly fragrant.

For some little time past, the variety has sprung into great popularity in the United States for forcing purposes to supply the market. The accompanying illustration was prepared from a photograph supplied us by Mr. John N. May, florist, Summit, New Jersey, who gives great attention to Roses and Carnations, with which he is very successful.

New Roses, like many other things, are so greatly weakened by excessive propagation during the first few years, that we are not at all surprised that they require some years to establish a reputation. Seeing that the variety under notice was only sent out in 1894, its spread and popularity in America is marvellous. Rose growers in this country, however, have not been remiss in their attentions; and we were made fully aware of this fact at the Crystal Palace on the 2nd inst. when the variety made its appearance in fine form in many stands. An Award of Merit was also accorded it by the Royal Horticultural Society on the 29th ult., so that it may be considered well established in this country and its merits fairly well recognised. The photograph shows the favourite method of exhibiting Roses in America, and which is very different from the prevailing style of showing here.



ROSE SOUVENIR DU PRESIDENT CARNOT.

BEGONIAS AT FOREST HILL.

IT is too early in the season to speak of tuberous Begonias out of doors, as they are yet comparatively young. Already, however, the season for pot plants has been going on for months and will continue till the seedlings give over flowering in the dark days of autumn and early winter. Being in the neighbourhood of Forest Hill the other week we had a glance at the Begonia houses of Messrs. John Laing & Sons, Stanstead Park, Forest Hill, S.E., and found the plants in the height of their season, and about to appear before the public at numerous Rose shows in various parts of the country. Groups of Begonias had to be supplied for eight shows on one particular day, thus entailing a heavy amount of work upon the staff and all concerned.

DOUBLE VARIETIES.

In spite of the large number of varieties which have been named, many first-class varieties, particularly amongst the more recently raised sorts, have not yet been honoured in that way. Very handsome is a large creamy sort, tinted with salmon at the edges. Others are bright scarlet, soft salmon, carmine, scarlet, white tinted blush, golden yellow, rich magenta, rose, glowing crimson and other shades. They are being selected for their broad petals, fine form, upright and free branching habit. The petals may be wavy, crimped or goffered, but never confused nor overcrowded. The solid flowers of many small petals are now things of the past. The crimped forms resemble a double Hollyhock, but those with smooth or flat petals are comparable to the Camellia. Diamond Jubilee is a rich golden-yellow with Camellia-shaped erect flowers. Very large and handsome are the primrose-yellow flowers of Mrs. Montague Wootton, with crimped petals. Both curious and handsome is a white flower, tinted with blush on the outer petals, some of which are cut at the edges like leaves, and occasionally tinted with green. They really hint at the origin of the petals from leaves. A good exhibition sort is Li Hung Chang, with its huge rosy-crimson flowers and massive appearance. Orange, buff, and bronzy flowers are always favourite colours with ladies, and in this respect Lady Pearson should give satisfaction. It is a large flower, with broad, wavy petals, but various descriptions of the colour have been given by different writers with little agreement in terms. Buff-apricot, orange-salmon, and other descriptions have been given, but, in any case, the colour is soft and pleasing.

A deep salmon-pink flower in the collection is very pleasing, and the broad petals refined in appearance. Lady Pirbright accords with this in colour, but the petals of this superb variety are crisped and wavy. The cerise flowers of Lord Rosmead are of beautiful Camellia-shape. There are other varieties having flowers of various shades of rose, there being a handsome magenta-rose sort with broad, spreading outer petals, while the inner ones form a central cone in the younger stages. Those of Lady Harris are of a rich and handsome rose hue. Bright crimson flowers in various shades present themselves including a variety named Hon. Cecil Rhodes, of refined shape. The habit of Duchess of Marlborough is good, the beautifully formed flowers being of a charming shade of salmon-pink. The bright orange scarlet flowers of Dr. Jim are very freely produced. The broad yellow petals of another sort are charmingly overlaid with bronze. Rich salmon varieties are equally refined, and well worthy of cultivation in the most select collections.

All of the above varieties are new or comparatively new, the named varieties being now sent out for the first time. Many of the older forms are yet very grand subjects for pot culture, including such as Duke of Fife, rosy salmon and a grand bedder; Duchess of York, soft orange tinted with peach in very subtle combination; and Duchess of Teck, which has been a splendid exhibition variety for years past. Lady Theodora Guest is of a delicate shade of apricot. The white flowers of La Lorraine are large. Laing's Rosebud is still a choice variety of exquisite shape. Many more might be named that are admirably adapted for pot culture and conservatory decoration; and some of them that prove conspicuous objects in the flower garden. There are still many collections in gardens that might be improved by gradually replacing them with some of the many fine things named.

SINGLE VARIETIES.

Within recent years so great an impetus has been given to the cultivation of double varieties for indoor work that the singles have been in danger of being neglected. Not so, however, at Forest Hill, for the single varieties enjoy the attention given to the doubles, and it must be admitted that free-flowering varieties are very effective, especially those which carry their flowers erect. Basket plants of pendulous habit serve, of course, a distinct purpose. A very striking flower is a rose one, shaded with scarlet and tinted with white towards the edges. A white sort, with foliage of the Pearcei type, is very handsome. There are orange-scarlet and glowing scarlet flowers, one of the latter of which we found to measure 6½ ins. across. Charming also is a white variety with broad, pink, fringed edges. Another Picotee-edged sort is white, with pink edges without fringes.

Lady Hamilton is a pure white variety of great merit, and making a fine contrast with Earl Brownlow and Earl Cowper, both of which are crimson, but in different shades, and quite distinct. The Pope of Rome is rather a startling title, but it is given to a large salmon variety with a beard or crest on each of the four petals and arranged in the form of a cross. This remarkable development is evidently quite fixed in a new race exhibiting this character. The beard seems to consist of a cluster of stamens adnate to the petals. A bold and useful exhibition sort is Admiral Rawson with fiery scarlet flowers. Dr. Nansen is useful for the same purpose and has salmon-scarlet, circular flowers like all the rest of the newer types. Beautiful habited plants are Mrs. Faudel Phillips, bright yellow, and Viscountess Falmouth, deep rose. British Flag is a rich bronzy flower of striking appearance. Charming also are the cheerful pink flowers of Marchioness of Northampton, of regular outline. The refined and

pleasing flowers of Countess Nelson are blush. Like all othe rcerise flowers Mrs. Crisp is winsome and attractive. Other sorts mostly unnamed amongst new varieties are pink, rosy-pink, brilliant crimson, rich carmine with white centre, soft pink with white centre, soft orange-scarlet, and deep magenta flowers. Very choice is a golden-yellow variety shaded with bronze externally, and sometimes edged internally with the same hue.

BEDDING VARIETIES WITH DOUBLE FLOWERS. Many gardeners are under the impression that small-flowered varieties succeed best for bedding purposes; but several large varieties give great satisfaction under this mode of treatment, notably Duke of Fife which succeeds well here. Several bedding varieties large and small are bedded out at Forest Hill. Major Hope is of medium size and flowers profusely. In shape it is not unlike an Anemone Chrysanthemum, with broad, pink, outer petals, and shorter and paler central ones edged with bright pink. Those of Madame Courtois form a creamy button fading to white at the edges. Small but profuse and brilliant scarlet are the flowers of Phosphorescens. The leaves are also small and the plant well adapted for bedding purposes. Multiflora Eugene Verdier also produces small bright scarlet flowers; and Multiflora Henry Vilmorin is similar in type. To the same dwarf, small-flowering race belongs Soleil d'Austerlitz, with bright scarlet flowers. Many others are bedded out for the purpose of testing their capabilities for this kind of work. Their merits can best be determined by an examination in September after they have been subjected to the ordeal of our climate. Many others might have been named in the above list, but any one coming London way might do well to see for themselves.

EXAMINATION IN HORTICULTURE.

APRIL 6, 1897.

EXAMINERS' REPORT.

To the President and Council of the Royal Horticultural Society.

Gentlemen,—We beg leave to report that we have examined the papers submitted to us—in all 184.

Of these we selected 88 as worthy to be placed in the first class, 55 in the second, and 28 in the third. The remainder, 13, are not placed; the number of marks attained being below 100.

The distribution of the examinees were 169 in England, 6 in Scotland, 1 in Ireland, 1 in Wales, and 7 gave no address.

The present Examination shows a very considerable improvement upon the results of that held in 1896. This will be apparent from the following comparison of percentages:—

Those not classed are only 13 in number, or nearly one-third of that last year (34).

The percentage of the third class (100 to 149 marks) has fallen from 32·2 (1896) to 15·2 (1897).

The percentage of the second class (150 to 199 marks) is nearly stationary; viz., 34·8 (1896); 29·8 (1897).

The percentage of the first class (200 to 300 marks) has made the astonishing increase from 10·5 (1896) to 48·3 (1897).

These results are most encouraging. Speaking generally, the answers are extremely well done. The information is accurate upon the whole, and the subject matter well expressed. Perhaps the "Practical Horticulture" showed, as might be anticipated, a slight superiority over the "Elementary Principles."

GEORGE HENSLOW.
JAS. DOUGLAS.

The names and addresses of the successful candidates, together with the marks assigned to each, are given in the following Class List, to which is appended the questions set by the Examiners:—

CLASS LIST.

Maximum number of marks obtainable, 300.

First Class.

	No. of Marks gained.
*1. Mr. H. S. Langford, Horticultural College, Swanley	300
2. Miss F. M. Broade, Horticultural College, Swanley	288
2. Mr. J. H. Dick, 8 Victoria Place, Trinity, Edinburgh	288
2. Mr. F. Isted, Technical Laboratory, Chelmsford	288
2. Miss G. Webb, Horticultural College, Swanley	288
6. Miss E. Barratt, Technical Laboratory, Chelmsford	286
7. Mr. A. J. Cocke, Horticultural College, Swanley	284
8. Miss O. Field, Horticultural College, Swanley	282
8. Mr. J. I. Goodlet, Horticultural College, Swanley	282
8. Mr. H. J. Hickin, Tamworth	282
11. Mr. H. Reynolds, The Laurels, Hayle, Cornwall	279
11. Mr. J. Stone, Board School, Tamworth	279
11. Miss F. E. Worland, Horticultural College, Swanley	279
14. Mr. A. D. Hogg, Botanical Gardens, Edinburgh	276
15. Mr. F. H. Harris, Technical Laboratory, Chelmsford	270
15. Mr. W. Pilcher, Horticultural College, Swanley	270
15. Miss B. S. Watson, Horticultural College, Swanley	270
18. Mr. H. G. Rogers, Rettenden, Edmonton	267
19. Mr. C. J. Langley, Technical Laboratory, Chelmsford	264
19. Mr. E. Miller, Technical Laboratory, Chelmsford	264
19. Miss A. Morison, Horticultural College, Swanley	264
22. Mr. E. J. Allard, Botanical Gardens, Cambridge	258
22. Miss E. Hodsoll, Horticultural College, Swanley	258
22. Mr. G. W. Young, Technical Laboratory, Chelmsford	258
25. Mr. A. W. Day, Horticultural School, Holmes Chapel, Cheshire	255
26. Mr. F. J. Mason	252
26. Miss G. B. Robertson, Horticultural College, Swanley	252
28. Miss B. Allman, Horticultural School, Holmes Chapel, Cheshire	250
29. Mr. A. D. Berney, Horticultural College, Swanley	246
29. Mr. C. H. Hooper, Horticultural College, Swanley	246
29. Mr. F. M. Newton, Technical Laboratory, Chelmsford	246
29. Mr. A. W. Snipe, Tamworth	246
29. Mr. E. H. Wilson, Kew	246
33. Mr. W. Hales, 16, Gloucester Road, Kew	243
34. Mr. W. J. Flower, Horticultural College, Swanley	240
34. Mr. J. H. Jones, Board School, Tamworth	240
34. Miss F. Petty, Horticultural College, Swanley	240
34. Miss F. Potter, Horticultural College, Swanley	240
34. Mr. H. Stapley, Rose Cottage, Gatten Park Road, Redhill	240
34. Mr. G. C. Watson, 626, High Road, Tottenham	240
34. Miss E. J. Welsford, Horticultural College, Swanley	240
41. Mr. W. B. Bygrave, Royston, Herts	237
41. Mr. M. Paton, Stewarton, Ayrshire	237
41. Mr. W. R. Reader, Osmaston Manor, Derby	237
41. Mr. E. Smith, Montford, Brierfield, Burnley	237
45. Mr. C. Leeson, Wrawby, Brigg	235
45. Mr. G. Underwood, 23, Free School Lane, Leicester	235
47. Mr. A. Edwards, 47, Russell Street, Cambridge	234
47. Mr. H. Martin, Technical Laboratory, Chelmsford	234
47. Miss J. Newsham, Horticultural College, Swanley	234
47. Miss E. Vaughan, Technical Laboratory, Chelmsford	234
51. Mr. A. J. Dover, Eccleshall, Staffordshire	232
51. Mr. D. Rutherford, Tutbury, Burton-on-Trent	232
53. Mr. A. E. Burgess, Technical Laboratory, Chelmsford	228
53. Mr. O. D. Carter, Technical Laboratory, Chelmsford	228
53. Mr. F. A. Dance, Technical Laboratory, Chelmsford	228
53. Mr. H. F. Easton, Technical Laboratory, Chelmsford	228
53. Mr. W. H. Elbourn, 74, Russell Street, Cambridge	228
53. Mr. W. Lord, Milburn Gardens, Esher, Surrey	228
53. Miss M. White, Technical Laboratory, Chelmsford	228
60. Mr. J. Banting, Pontyclun, Llantrisant, Monmouth	227
60. Mr. W. J. Bell, Upper Tean, Stoke-on-Trent	227
62. Mr. F. Holt, Park View Nursery, Accrington	225
62. Mr. W. Robinson, Hawk's House, Brierfield, Burnley	225
64. Mr. C. Bishop, Board School, Tamworth	222
64. Mr. N. Collard, Horticultural College, Swanley	222
66. Mr. W. H. White, 3, Avenue Extension, Clarendon Park, Leicester	220
67. Mr. J. H. Annear, Technical Laboratory, Chelmsford	219
68. Mr. E. D. Smith, Technical School, Gravesend	217
69. Miss F. Andrews, Technical School, Gravesend	215
70. Mr. E. J. Callender, Horticultural College, Swanley	213
70. Mr. E. C. Kenny, Horticultural College, Swanley	213
72. Mr. S. G. Wilcock, Boroughbridge, York	212
73. Mr. F. K. Derbyshire, Horticultural School, Holmes Chapel, Cheshire	210
73. Mr. C. Gosling, Goring-on-Thames	210
73. Mr. W. Hunter, Great Ayton	210
73. Mr. B. G. Nettleton, Technical Laboratory, Chelmsford	210
77. Mr. H. Brook, 171, Every Street, Nelson	207
78. Mr. R. Bellerby, Askham Grange Gardens, Askham-Richard	205
78. Mr. R. Francis, Rockdale, Sevenoaks	205
78. Mr. J. Read, Horticultural School, Holmes Chapel, Cheshire	205
78. Mr. H. Ward, Vine Cottage, Charing, Kent	205
82. Mr. H. W. Jackson, 60, Russell Street, Cambridge	204
82. Mr. A. C. Pickford, Horticultural College, Swanley	204
84. Mr. H. Baker, Castle Ashby, Northampton	200
84. Mr. D. R. Hicks, Sandon, Stone, Staffordshire	200
84. Mr. J. Laws, 3, Walnut Tree Place, Wimbledon	200
84. Mr. J. Slack, Horticultural School, Holmes Chapel, Cheshire	200

Second Class.

1. Mr. W. Sproston, Great Haywood, Staffordshire	198
2. Mr. E. W. Ashley, Botolph Claydon Board School, Winslow	197
2. Mr. W. H. Kidwell, Colwich, Staffordshire	197
4. Mr. G. W. Hunt, South Knighton Road, Leicester	195
5. Mr. F. A. Guilliam, Palace Gardens, Gloucester	192
5. Mr. G. B. Pratt, Technical Laboratory, Chelmsford	192
7. Mr. C. H. Burden, Horticultural College, Swanley	189
7. Mr. A. Fairfield, Glascote Heath, Tamworth	189
7. Mr. J. W. Thompson, Holywath Cottage, Coniston	189
10. Mr. W. Cranfield, 3, Coronation Street, Cambridge	186
10. Miss C. M. Hull, Technical Laboratory, Chelmsford	186
12. Mr. D. P. Bass, Bednall, Staffordshire	185
12. Mr. J. J. Cooper, School House, Walsall	185
12. Mr. J. Jefferey,	185
12. Miss M. Mackenzie, Horticultural School, Holmes Chapel, Cheshire	185
12. Mr. A. W. A. Shaw, Great Ayton, R.S.O.	185
12. Mr. G. Wicking, Clarendon Park, Leicester	185
18. Mr. U. Warren, 20, Woodville Terrace, Darwen	182
19. Miss B. Hay, Horticultural College, Swanley	180
19. Mr. J. W. Heweson, Great Ayton	180
19. Mr. J. Hardy, Horticultural School, Holmes Chapel, Cheshire	180
19. Miss E. Watts, Horticultural College, Swanley	180
19. Mr. J. Wilkinson, 73, Devonshire Street, Accrington	180
24. Mr. W. Ingram, Board School, Kettlebrook Road, Tamworth	177

* Wins the Society's Silver Gilt Medal and Chiswick Scholarship.

24. Mr. J. Thompson, Horticultural College, Swanley 177
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26. Mr. A. Cutter, High Street, Cheshunt, Herts 175
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30. Mr. W. G. Hatch, 2, Windsor Road, Southend-on-Sea 174
30. Mr. W. J. Reed, Technical Laboratory, Chelmsford.. 174
30. Mr. W. Kenny, Horticultural College, Swanley 174
33. Mr. J. J. Cooper, ... 171
34. Mr. E. Timson, Leicester Frith, Leicester 168
35. Mr. A. Bennett, Technical Laboratory, Chelmsford.. 167
36. Mr. W. Jennings, Horticultural School, Holmes Chapel, Cheshire 166
37. Mr. S. Laskey, Castle Hill Gardens, Egham 165
37. Mr. R. Lyon, Greenhall, High Blantyre .. 165
37. Mr. A. D. Morris, Barrowmore Hall, Chester 165
37. Mr. A. Shaw, Broad Royal Head, Staincross, Barnsley 165
37. Mr. H. Spooner, Technical Laboratory, Chelmsford.. 165
42. Mr. J. Benson, Technical Institute, Aughton 160
42. Mr. W. Burgess, Bredon Norton, Tewkesbury 160
42. Mr. W. Bygrave, Barkway, Royston, Herts 160
42. Mr. Jos. Poulter, Clayton le Moors, Accrington 160
46. Mr. F. Lazenby, Botanic Gardens, Cambridge 159
47. Mr. S. Barritt, Technical Laboratory, Chelmsford.. 156
47. Mr. J. Kent, Tamworth 156
47. Mr. S. S. Mundy, Tamworth 156
50. Mr. J. Barkham, Longford House Gardens, Haven Street, Ryde 150
50. Mr. L. Farmer, Horticultural College, Swanley 150
50. Mr. W. Godsmark, Great Ayton 150
50. Mr. G. Hallam, Wellingore, Lincoln .. 150
50. Mr. E. F. Jeffrey, Horticultural College, Swanley 150
50. Mr. H. E. Wainright, Tamworth 150

Third Class.

1. Mr. H. Owen, Weddell 145
2. Mr. H. Crawley, Grange Lodge, Kippington, Sevenoaks 140
2. Mr. C. Cundy, Sudbury, Suffolk 140
2. Mr. A. Osborn, Sonning 140
2. Mr. W. Goddard, The Lodge, Knighton Hall, Leicester 140
6. Mr. L. Hales, Horticultural College, Swanley 138
7. Mr. G. Gay, Doncaster 135
7. Mr. J. Prescott, Technical Institute, Aughton 135
9. Mr. R. Hudson, Swaffam, Norfolk .. 130
9. Mr. R. Jones, Technical Institute, Aughton 130
9. Mr. G. M. Stuart, Eden, Banff 130
12. Mr. M. Gravestone, Harris Institute, Preston 125
12. Mr. G. J. Goodall, Streathy, Oxon .. 125
12. Mr. J. Chas. Tate, Bulmer, Welburn, Yorks 125
15. Mr. H. Broadbent, Park Hall, Evesham 120
15. Mr. W. Grantham, Technical Institute, Aughton 120
15. J. H. Jones, Horticultural School, Holmes Chapel, Cheshire 120
15. Mr. Thos. Windle, 9, Turnford Villas, Turnford 120
19. Mr. C. Rhymes, 28, Cottage Grove, Surbiton 117
20. Mr. Th. Cheesman, Fairmile Hatch, Cobham 115
20. Mr. R. Crichton, Sutton House, Baldoyle, Dublin 115
22. Mr. E. R. Christiansen, Cheshunt Street, Cheshunt 110
22. Mr. W. Hind, Technical Institute, Aughton 110
22. Mr. O. Burley, ... 110
25. Mr. G. W. Brookbank, Wimbledon .. 108
25. Mr. G. C. Farrant, The Cottage, Stoke D'Abernon, Cobham 105
25. Mr. C. J. Illsley, The Pitt, Cobham .. 105
28. Mr. T. H. Smith, ... 100

To be Continued.

SOCIETIES.

BEDFORD.—*July 6th.*

THE show held here on the Tuesday of last week was a purely local one in connection with the Bedford Horticultural Improvement Association. It was of a successful character and afforded considerable interest to the many visitors. The principal prizetaker was Mr. H. J. Sheppard, who staged a beautifully arranged group of flowering and foliage plants for which the leading award was made. The same exhibitor also showed well in the class for twenty-four bunches of cut herbaceous flowers. Although the show attracted very few growers yet it has a very useful sphere of action, and we shall look forward to future developments.

TUNBRIDGE WELLS HORTICULTURAL

July 7th.

THE thirty-ninth annual show of this society was held in the Great Hall and the adjacent grounds of the Calverley Hotel, Tunbridge Wells, on the above date. The number of exhibits was up to the average, and whilst in some classes a slight decrease was noticeable, in others the competition was keener than ever.

Mr. J. Howse, gardener to Walter Cobb, Esq., Dulcote, had the best nine Orchids, showing in good form, Laelia tenebrosa, Epidendrum vitellinum majus, Miltonia leucoglossa, the rare Anguloa eburnea, Phajus Humblotii, Cypripedium bellatulum, Cattleya Mendelii and Odontoglossum Pescatorei.

Mr. Mason, gardener to H. J. Wood, Esq., Bidborough, and Mr. S. Pope, gardener to J. Barrow, Esq., Langton, took the leading prizes for stove and greenhouse plants and fine foliage, closely followed by Mr. T. Portnell, gardener to Sir A. Lamb, Battle.

The prizes offered for table decorations were monopolised by Sevenoaks gardeners, Mr. S. Cooke, gardener to de B. Crawshay, Esq., being first for three pieces, a single piece (Roses only), and a wedding bouquet. He was closely followed by Mr. A. Hatton, the Quarry. Mr. F. Webber, Quarry Hill Nursery, Tonbridge, had the best floral design, a beautiful piece of workmanship in way of a chaplet, Cattleya gaskelliana flowers playing a prominent part. The same exhibitor had the best spray and buttonhole bouquet. Mr. J. Charlton had some beautiful designs not for competition; a bouquet composed of dark Carnations and the bright yellow Sweet Sultan took our fancy immensely.

In the fruit classes Mr. C. Earl, gardener to O. E. d'Avigdor Goldsmid, Esq., and Mr. Allan, gardener to G. Field, Esq., were as usual most successful.

Cut blooms of Roses were well shown. In the premier class for forty-eight, distinct, Mr Frank Cant, Colchester, carried off chief honours. Mr. G. Mount, Canterbury, was second, and Mr. T. Durrant Young, Eastbourne, third. In the classes from which nurserymen were excluded Mr. C. J. Salter, gardener to T. B. Haywood, Esq., Reigate, was first for twenty-four blooms, distinct, and Mr. E. M. Bethune second. The National Rose Society's Bronze Medal for the premier Rose was awarded to Mr. G. Mount.

The miscellaneous exhibits included a fine collections of Carnations from Messrs. Cutbush & Sons, Highgate; cut herbaceous flowers, bedding Violas and Roses, from Messrs. John Laing & Sons, Forest Hill; Strawberries from Messrs. Laxton Bros., Bedford; and Water Lilies from Mr. F. Bridge, gardener to Lord de L'Isle and Dudley, Penshurst.

HANLEY HORTICULTURAL SHOW.—*July 7th. and 8th.*

For the first time the above was held on Wednesday and Thursday, in the new park at Hanley; eighty-five acres of what was four years ago a barren swamp has been converted into a beautiful park. There is an extensive lake over five acres. There are terraces, pavilions, and everything necessary for public convenience and enjoyment. Various styles of bedding are carried out in a thoroughly practical manner. Over 200,000 plants of various sorts have been put out in various parts. What astonished us was the magnitude of the place so well kept with its peculiar surroundings.

The flower show was a credit to all concerned, and Mr. Joseph Kent, the superintendent, is to be congratulated upon achieving a wonderful horticultural feature. Everything was well arranged and well studied. Four enormous marquees were erected, a novel feature introduced being the electric light. The plants, fruits, flowers, &c. looked magnificent under this light, while the tents were cool and comfortable. Water was also provided in each tent. In the secretary's tent there was a post office and telephone which proved to be most useful. Glorious weather prevailed, and nearly £500 was taken at the gates on the first day; and on the second at the time of our leaving it looked more encouraging than the first day. The people of this thickly populated neighbourhood owe a debt of gratitude to the promoters for establishing such a fine park for their recreation; and it is to be hoped that all concerned may be rewarded for their labours bestowed. For a maiden show it was one of the best we have seen and we trust it may grow to the expectations of the promoters.

The principal feature of the show was the groups arranged for effect, each covering 300 sq. ft.; there were five entries. Messrs. Jenkinson & Son, of Newcastle, were placed 1st; but in the opinion of many, the 2nd prize group, that shewn by Mr. J. Cypher, of Cheltenham, should have had the premier award. The Duke of St. Albans, Arnold, was third. Orchids were well shown for the time of the year, many novelties being exhibited in fine condition. The first prize for specimen plants was easily taken by Mr. Cypher. Roses, considering the season, were excellent, the competition very keen. Other cut flowers were shown in fine condition. Fruit was well shown, some good collections being staged. Vegetables were in good form, some good examples of cultivation in the various classes being exhibited. The children's section was highly interesting; and the cottagers' classes showed what could be done with limited means. The entries of bees and honey numbered ninety-one, and constituted a show of themselves.

The premier award for a group of Orchids arranged for effect was taken by W. Thompson, Esq. (gardener, Mr. Stevens), Stone, Staffs, who had a showy exhibit, which drew the admiration of crowds of people. He had fine pieces of Odontoglossum, Cochlioda noetzliana, Cattleya gigas, and others. Mr. J. Cypher was second with more valuable plants, though less effective for this kind of work. He took the lead, however, for six specimen plants in flower, eight exotic Orchids and six Palms having fine exhibits in all three classes. Mr. C. H. Wright, Oswestry, had the best exotic Ferns. J. F. Maddock, Esq., Alsager, staged the best twelve Caladiums.

In the class for forty-eight distinct varieties of cut Roses, the leading award was taken by Messrs. A. Dickson & Sons, County Down, Ireland. They were followed by Messrs. Harkness & Sons, Bedale, and Messrs. J. Townsend & Sons, Broadheath, Worcestershire, in the order named. Messrs. Harkness & Sons came to the front for thirty-six distinct varieties; and Messrs. J. Townsend & Sons showed the best twenty-four. These three firms, together with Messrs. Jenkinson & Sons, who had the best decorative arrangement of Roses, practically secured all the prizes for Roses in the open classes. The last named were the champions for floral arrangements, bouquets and cut flowers for table decoration.

Numerous classes were devoted to fruit and vegetables, especially in the open division. The leading award for a collection of nine dishes of fruit was divided between the Earl of Harrington (gardener, Mr. J. H. Goodacre), Elvaston, Derby, and Lord Bagot, Rugeley. The latter was first for Black, and for any other Black Grape, as well as for Muscat of Alexandria. He was beaten, however, by the Earl of Carnarvon for any other White Grape. The Duke of Sutherland (gardener, Mr. P. Blair), Trentham Hall, Staffs, had the best Peaches and Nectarines. There was also good competition for Melons, Cherries, Strawberries, Gooseberries, and Tomatos.

Lady Guest, the Earl of Carnarvon, J. C. Waterhouse, Esq., H. H. France Hayhurst, Esq., W. Nicholson, Esq., and the Duke of Sutherland, were leading prize takers in the classes for vegetables, which were notable for their high quality from a cultivator's point of view, as well as quantity.

Division II. was set apart for gardeners and amateurs within a radius of 25 miles from Hanley Town Hall. H. Hughes, Esq., Newcastle, secured the first award for 36 varieties of Roses. W. Pyatt, Esq., Newcastle, was second but came to the front

for 24 Roses. J. F. Maddock, Esq., staged the best six stove or greenhouse plants in this division. The prizes for six Orchids were taken by W. Thompson, Esq., the Duke of Sutherland and J. C. Waterhouse, Esq., in the order named. C. S. Jones, Esq., Stoke, had the most effectively arranged group of plants. Mr. Gibbs, gardener, to C. S. Jones, Esq., exhibited the best six stove or greenhouse plants. He was also successful in other classes. Altogether the show was a great success and the promoters are to be congratulated upon the excellent results of this first attempt.

LEE AND BLACKHEATH, *July 7th and 8th.*

The thirteenth annual show of the Lee, Blackheath, Lewisham, and West Kent Horticultural Society was held on Wednesday and Thursday, July 7th and 8th, in the grounds of The Cedars, Belmont Hill, Lee, kindly lent for the occasion, as in previous years, by Mrs. Penn. For a considerable number of years this show has been regarded as one of the best local gatherings in the neighbourhood of the metropolis, and this year its reputation was more than sustained, for it was better in all respects than any show of the last few years. Four marquees accommodated the exhibits, and the natural beauty of the grounds made the surroundings especially attractive. Roses were the special feature, for there were numbers of very fine blooms, the foliage also being remarkable for its health and substance. Foliage and flowering plants were good, and the display of fruit was very creditable. Cottagers' exhibits of vegetables turned up in strong force.

Non competitive exhibits, moreover, were by no means lacking. In this section Mr. H. J. Jones, of the Ryecroft Nurseries, Lewisham, had a grand array of tuberous Begonias. These were staged with Palms and Ferns, and were much admired both for the merit of the plants individually, and for their general effect.

Messrs. John Laing & Son, Forest Hill, S.E., had a magnificent display of Roses. Mr. G. Rainbird, Hamden Nursery, Manor Lane, Lee, showed flowering plants, vegetables, and samples of Ichthemic Guano. Messrs. B. Maller & Sons, High Pavement, Lewisham, had an interesting and instructive exhibit in the way of a bouquet arranged with the stiffness usual in 1837, and a graceful shower bouquet of the fashion that is so much in demand at the present day.

The officials of the society, the judges, and a few invited guests lunched together on the Wednesday afternoon, Mr. M. N. Bultanshaw, the hon. treasurer, presiding. In responding to the toasts of "the judges," given by Mr. T. W. Attwood, Mr. George Gordon, of *The Gardeners' Magazine*, spoke of the good work the society had done and was still doing, a fact with which he was well acquainted through his intimate association with the society for twenty-three years. He declared that nowhere could they see a display of Roses to surpass that they saw there. The Crystal Palace show was, of course, a larger one, but it was not a better one.

NEWCASTLE HORTICULTURAL, *July 8th, 9th, and 10th.*

The summer show of the Durham, Northumberland, and Newcastle-on-Tyne Incorporated Botanical and Horticultural Society was opened on Thursday, July 8th, and continued open until Saturday, 10th. The Recreation Ground, North Road, Newcastle, was the scene of the exhibition. The arrangements of those entrusted with the management were excellent, and a large number of entries with material of very high quality rewarded their efforts. The weather, as usual with the Newcastle Show, was threatening, and some rain fell. The judges were Mr. Jas. Douglas, Great Gearies, Ilford, Essex; Mr. James Hudson, Gunnersbury House, Acton, Middlesex: Mr. John Laing, Forest Hill, London, S.E.; Mr. Malcolm McIntyre, The Glen, Innerleithen, Peeblesshire; and Mr. Wm. Cocker, Aberdeen.

In the open classes the best group of miscellaneous plants, arranged to produce artistic effect and occupying about 200 sq. ft. of area, came from Mr. J. McIntyre. Mr. F. Edmundson was second, and Mr. J. Cocker, third. In addition to, and with the first prize of £10, was given the Royal Horticultural Society's Silver Flora Medal. The following exhibitors were placed first in their respective classes:—Mr. F. Nicholson, for six plants in bloom, distinct; Mr. J. McIntyre, for six foliage plants; also for three Crotons and three Dracaenas. Mr. W. J. Boyd, in the absence of other competition, received the second award for single tuberous Begonias.

Cut flowers were well and freely shown. Messrs. Perkins & Sons, of Coventry, won the first prize (£12 in cash and the Gold Medal of the society) for a collection of Roses, arranged for effect with foliage plants, moss, etc., and occuping a space of 40 sq. ft. Messrs. Harkness & Sons occupied the second place, and Mr. F. Edmundson the third. The premier class for cut Roses, consisting of exhibits of seventy-two blooms in thirty-six varieties, was won by Messrs. Harkness & Sons, with a grand lot. Second came Messrs. R. Mack & Son; and third Messrs. D. & W. Troll. The best stands of forty-eight Roses, dissimilar, thirty-six Roses, dissimilar, and twenty-four Roses in triplets were all contributed by Messrs. Harkness & Sons. Messrs. R. Mack & Son led the way for twelve Roses of any sort. Messrs. J. Cocker & Sons exhibited the first prize group of eighteen bunches of cut hardy herbaceous flowers, followed by Mr. F. Edmundson, and Messrs. Harkness & Sons. The first award in the smaller class for twelve bunches went to Mr. M. Campbell. Mr. M. Campbell was also first for forty-eight and twenty-four Fancy Pansies, distinct. Mr. A. Lister had the best stand of twenty-four show Pansies, distinct. Twenty-four sprays of Violas, six blooms to a spray, were best shown by Mr. M. Campbell.

Messrs. Perkins & Sons were heavy winners in the classes for bouquets, sprays, etc., and secured the first awards for a basket of Roses, a bridal bouquet, another bridal bouquet from which Orchids were excluded, and two hand bouquets.

Mr. J. McIndoe was very successful as a competitor among the fruit classes. His collection of eight dishes of fruit was awarded premier honours. With the first prize of £5 went the Royal Horticultural Society's Silver Banksian Medal. Mr. McIndoe headed the list of those competing for four bunches of Grapes, two bunches of white Muscats, two bunches of any white Grape, and two bunches of any black Grape.

Mr. McIndoe also scored another well merited first for a collection of vegetables, consisting of six distinct kinds, two of which were grown from seeds supplied by Messrs. Webb & Sons, of Stourbridge; the prizes being given by that firm.

In the classes from which nurserymen were excluded Mr. F. Nicholson secured first place for four flowering plants, distinct. Mr. C. Callaghan led the way for six Coleuses, and Mr. McIntyre for four foliage plants. The first award for twelve Roses, dissimilar, in triplets, was won by Mr. R. Park, and that for twelve single blooms by Mr. W. Hutchinson. Mr. J. Proudlock had the winning lot of twenty-four fancy Pansies, distinct. The premier exhibit of twelve bunches of hardy herbaceous flowers came from Mr. W. Hutchinson.

Amongst the exhibits labelled not for competition was a very fine display of plants grown with Ichthemic Guano from Mr. William Colchester, Ipswich, for which a First-class Certificate of Merit was voted.

MANCHESTER ROSE SHOW.—*July 10th.*

This annual fixture took place on Saturday in the Botanical Gardens, Manchester, under most enjoyable conditions, the weather being a perfect July day with warmth and a maximum of sunlight, features that are but slightly known to the Rosarians of Cottonopolis. The flowers were as usual arranged in the large show house, the tabling being placed in various forms, which proved far more imposing and interesting than long straight lines. The only disadvantage felt both by visitors and the flowers was the strong glare of the sun, which made the flowers droop even before the judging was completed. Shading in some form would have proved very beneficent to the flowers, and would likewise have been appreciated by the visitors.

The entries were more numerous than usual and the blooms in the leading classes were of high merit, the dark varieties standing out pre-eminently.

NURSERYMEN.

For sixty distinct trusses Mr. B. R. Cant staged the premier lot out of six stands, the best blooms being Gustave Piganeau, Marchioness of Londonderry, Chas. Lefebvre, Sus. Marie Rodocanachi, Horace Vernet, A. K. Williams, Victor Hugo, Marie Baumann, Reynolds Hole, Duke of Wellington, Kaiserin Augusta Victoria, Dupuy Jamain, Jean Soupert, Dr. Sewell, Earl Dufferin, &c. Second came Messrs. Harkness and Son; and third, Mr. Frank Cant.

For thirty-six distinct single trusses there were nine entries, and the first and second places were occupied as in the former class, Messrs. Townsend & Sons being third. For twenty-four Teas or Noisettes, Mr. B. R. Cant was again to the fore, the finest blooms being Madame de Watteville, Bridesmaid, Ernest Metz, Mrs. Pierpont Morgan, and six blooms of Madame Cusin which greatly improved the appearance of the box but considerably detracted the variety. Mr. Geo. Prince was second, his box containing the premier Tea, winning the Society's Silver Medal. Mr. F. Cant took the remaining prize.

For twelve trusses Messrs. Frank Cant, John Matlock, Oxford, and Geo. Prince were placed in the order named. For twelve single trusses of any yellow the Rev. W. H. Jackson, Bedford, was first; H. V. Machin, Esq., Worksop, being second.

For twelve trusses of any light Rose E. B. Lindsell, Esq., was first with Her Majesty; H. V. Machin, Esq., second with Mrs. J. Laing. For twelve dark blooms, Mr. G. Prince won in the nine collections with Reynolds Hole; Mr. B. R. Cant was second with Horace Vernet.

AMATEURS.

For twenty-four distinct single trusses E. B. Lindsell, Esq., Hitchin, took the lead in the seven lots, some of the flowers being superb, including Duke of Wellington, Her Majesty, Mrs. J. Laing, Chas. Lefebvre, Souvenir d' Elise Vardon, and Horace Vernet, which took the Society's Silver Medal for the premier H.P. in the show, being a massive flower of good form and grand in colour. The Rev. J. H. Pemberton, Havering-atte-Bower, and J. V. Machin, Esq., followed. For twelve distinct trusses the same order was followed with eight lots staged.

For eighteen Teas or Noisettes the Rev. W. Jackson led with good flowers, the Rev. H. Pemberton, and Mr. H. V. Machin being second and third. For twelve trusses, E. B. Lindsell, Esq., scored. For twelve yellows the Rev. W. H. Jackson was to the fore. For twelve lights sorts E. B. Lindsell, Esq., secured first honours with Her Majesty and a similar position for darks with Alfred Colomb.

For district grown Roses Mr. Thos. S. Jackson, Ashley, won in the twenty-four. Mr. Chas. Burgess in the twelves and sixes, and for six Teas. For twelve bunches of buttonhole Roses Mr. John Matlock had a good assortment, Messrs. Townsend & Sons being second.

For a display of Roses, several lots were staged, but none showed any special point of taste in arrangement. H. V. Machin, Esq., was accorded first honours with a number of bunches, the base being of natural moss with the flowers lying on the moss. Mr. Geo. Prince was second with tiers covered with velvet; and Messrs. Townsend, with epergnes, took the third place. For a basket of Roses, Messrs. Perkins & Sons were to the fore with a charming arrangement, and also secured premier honours for three bouquets. Mr. Jas. Brown was first for the single bouquet.

The extras were not very numerous, but added to the beauty of the show. Messrs. William Paul & Son were awarded a special first prize for a very fine lot of cut Roses, set up in their well-known style in the form of a large circle, with Palms and foliage plants forming the centre. Certificates of Merit were awarded in this collection for Empress of Russia (Tea), Sylph (Tea), and Queen Mab (China).

Mr. Henry Eckford was highly commended for fifty varieties of Sweet Peas, and the Misses Hopkins, of Knutsford, for hardy cut flowers and Pansies.

Mr. P. Weathers, the curator, may be complimented upon his first venture with the queen of flowers; and Mr. Paul, his assistant, upon his valuable aid. The gardens in a few days will be at their best and well worthy of a visit. The plant houses are gay with a varied assortment of foliage and flowering plants, whilst the bedding promises to fulfil the high traditions of the past.

ROYAL HORTICULTURAL.—*July 13th.*

HARDY herbaceous cut flowers were undoubtedly the principal feature of the meeting on Tuesday last, there being several very large exhibits of them. Of specialities, Roses, Sweet Peas, and Lilies were noteworthy. Orchids are now practically out of season, and were not strongly represented. Gooseberries in pots, both standards, pyramids, vase, and other

methods of training, were a notable feature attracting a considerable amount of attention.

Messrs. J. Veitch & Sons, Ltd., exhibited a small group of hybrid Orchids, including Disa Veitchi in good form, Laeliocattleya Eunomia, L. Zephyra, and L. canhamiana albida. The latter is a magnificent bigeneric hybrid with large flowers, white sepals, and a huge crimson-purple lip. L. Zephyra has creamy-yellow flowers and a purple blotch on the lip.

Messrs. F. Sander & Co., St. Albans, exhibited a small group of Cypripediums, including Svend Bruun, C. Euryale, and C. Mulus. They also had a fine piece of Phaius ashworthianus, having yellow flowers and an orange-brown lip.

E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Cheshire, staged a small collection of cut flowers of Cattleyas, consisting largely of fine varieties of C. Warcewiczii (gigas). He also exhibited C. Eldorado Wallisii, and C. superba alba. The new Dendrobium Victoriae Reginae, the so-called blue Dendrobe, created some amount of interest but not much excitement. The sepals and petals are shaded with a mixture of purple and blue. He also staged Catt-Laelia Mardellii.

Messrs. F. Sander & Co. had a grand batch of the white Watsonia Ardernei. The plants were upwards of 5 ft. in height, and carried huge spikes of the handsome white flowers.

Exotic ferns in considerable quantity were forthcoming from Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton. The plants throughout were in robust health, and were excellent samples of good gardening. Three genera only were represented, but a considerable number of members of each were shown. Aspleniums in variety constituted the bulk of the exhibit, and the style of growth, and cutting of fronds showed a deal of variation. From A. Nidus var. australasicum to such comparative rarities as A. flabellifolium, and such pretty forms as A. praemorsum, A. Mayii, and A. ornatum, a wide difference is manifest. The wealth of the genus Asplenium was well-demonstrated here (Silver Gilt Flora Medal).

Cut hardy flowers were well-shown by Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N. Alstroemeria aurantiaca, Lilium Humboldtii, L. Brownii, and Eryngiums were very showy (Silver Banksian Medal).

A collection of cut hardy flowers, contributed by Mr. John Charlton, Tunbridge Wells, included some good Delphiniums, Aconitum bicolor, Malva moschata alba and Gaillardias. It received a Silver Banksian Medal.

Liliums, Calochorti, and Brodiaeas were shown by Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester. Lilium excelsum, L Parryi, L. Brownii, L. thumbergianum Van Houttei, and L. dalmaticum were all first-class. Brodiaea ixiodes, and B. californica should also be mentioned (Silver Flora Medal).

Messrs. Barr & Son, King Street, Covent Garden, had an imposing array of cut hardy flowers. Eryngiums, Phloxes, and Sweet Peas in variety were good, and some capital blooms of varieties of Iris laevigata were on view (Silver Banksian Medal).

Messrs. A. W. Young & Co., Stevenage, Herts, also showed cut hardy flowers.

Mr. B. Ladhams, Shirley Nurseries, Southampton, had a choice collection of similar material, for which a Silver Flora Medal was voted.

The bunches of Sweet Peas sent by Mr. Henry Eckford, Wem, Shropshire, were of superb quality. Fifty bunches, in as many varieties, were staged, and the range of colour forthcoming was very great. Mars, Countess of Shrewsbury, Coquette, Emily Eckford, Mikado, Mrs. Eckford, Countess of Powis, Blanche Burpee, Eliza Eckford, and Stanley were a few of the finest varieties (Silver Flora Medal).

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, were voted a Silver Gilt Banksian Medal for a large and imposing array of cut hardy flowers that ran the whole length of the hall. Three stands containing 120 blooms of border Carnations were also exhibited by this firm. King Arthur, Voltaire, Eldorado, Eudoxia, Bendigo, Xerxes, The Pasha, and Seagull were some of the best.

Messrs. Frank Cant & Co., Braiswick Nursery, Colchester, received a Silver Flora Medal for some excellent cut Roses. The new varieties Muriel and Mrs. Frank Cant were well shown, as were also such standard varieties as A. K. Williams, S. Marie Rodocanachi, Niphetos, Ethel Brownlow, Medea and Catherine Mermet.

Messrs. Wm. Paul & Son, Waltham Cross, sent a group of cut blooms of new Roses. A basket of the new Tea, Empress Alexandra of Russia, was a conspicuous feature here.

Mr. James Douglas, Great Bookham, Surrey, exhibited blooms of new Carnations and Picotees. There were some magnificent forms observable here. Voltaire, Endymion, Pelegia, Badminton, Perseus, Lancer, Mrs. James Douglas and Miss Violet Douglas were some of the best.

Messrs. H. Cannell & Son, Swanley, Kent, had a nice group of seedling tuberous Begonias. The plants were dwarf and sturdy, and the flowers of good form, and very double. A grand dark crimson form was the most conspicuous (Bronze Banksian Medal).

A Silver Banksian Medal went to Mr. B. R. Davis, Yeovil, Somerset, for five stands of superb flowers of double tuberous Begonias. The Hon. Miss Winn, Mrs. W. H. Fowler, Mrs. Stothert, and Saturn were some of the most noteworthy.

There were but few competitors in the classes for cut hardy flowers.

Mr. C. Herrin, gardener to the Lady Louisa Fortescue, Dropmore, Maidenhead, was the solitary competitor for twelve bunches, and was awarded first prize. He had large and showy bunches of Aconitum bicolor, Spiraea ariaefolia, Galega officinalis, Lathyrus grandiflorus, Alstroemeria aurantiaca, and Achillea Ptarmica the Pearl.

Miss Debenham, St. Peters, St. Albans, was alone in the class for eight bunches and also received first prize. The bunches were smaller than in the preceding exhibit, but were fairly good.

At a meeting of the fruit and vegetable committee Messrs. T. Rivers & Son, Sawbridgeworth, were voted a Silver Gilt Knightian Medal for twenty-three splendid dishes of Cherries. Varieties like Monstreuse de Mezel, Early Rivers, Black Heart, and Bigarreau Napoleon were notable for the huge size of the fruit and its superb finish.

Messrs. J. Veitch & Sons, Ltd., showed a collection of Gooseberries in pots illustrating different methods of training. Standards, fan trained, pyramids, and cup-shaped trees were all on view. All of them were carrying good crops of fruit, about twenty fine varieties being represented. From the same firm came samples of the late Strawberry Veitch's Perfection, the result of a cross between Waterloo and British Queen (Silver Gilt Knightian Medal).

Messrs. W. W. Johnson & Son, Boston, received a Silver Banksian Medal for a collection of Peas that comprised upwards of sixty dishes.

Mr. E. Beckett, gardener to Lord Aldenham, Aldenham House, Elstree, staged a magnificent collection of vegetables for which he received a Gold Medal. It is not often that a collection of such merit is to be seen, for everything composing it was of the best, and Mr. Beckett evidently knows how to gain points by clean and effective staging. Tomatos, Cucumbers, Peas, Carrots, Onions, Beet, Globe Artichokes, Cauliflower, Marrows, Broad and French Beans, Vegetable Marrows and Cabbages were all in first-rate order.

Messrs. Jas. Carter & Co., High Holborn, exhibited a fine lot of Cos and Cabbage Lettuce, some of the curled and fringed varieties being especially good. Some shapely Turnips also came from the same firm (Silver Banksian Medal).

BY TELEGRAPH.

WOLVERHAMPTON.—*July 13th, 14th, & 15th.* The ninth annual floral fête of Wolverhampton was opened Tuesday under the most happy circumstances as regards weather, number and quality of exhibits, excellent arrangements, and in the happy selection of judges, which included Mr. Richard Dean, Mr. Alf. Outram, Mr. Owen Thomas, of Windsor, Rev. J. H. Pemberton, Mr. Cocks, Mr. Coombs, etc.

PLANTS.

The exhibits of plants under this division were far above the average; and it has been characteristic with a good many shows this season that the groups were the leading feature. Mr. J. Cypher, Cheltenham, gained the coveted place with a most beautiful and artistically arranged group of Palms, Crotons, Orchids, etc. Mr. French, Coventry, was awarded second with another splendid group. Mr. Vause, Leamington, was third with a noteworthy group; while Messrs. Tom B. Dobbs & Co., Wolverhampton, were commended.

In the class for groups open to gentlemen's gardeners first came J. A. Kerwick, Esq. (gardener, Mr. Cryer); second, H. Lovatt, Esq. (gardener, R. Sharpe); third, T. Clayton, Esq., Birmingham (gardener, L. Feukes); fourth, Enoch Horton, Esq., Walsall.

ROSES.

The show of cut blooms was excellent; and when such exhibitors as Messrs. Harkness & Sons, of Bedale, and Mr. Ben. R. Cant, of Colchester, came forward, it is sufficient criterion of the quality of the exhibits. The leading honour for seventy-two distinct Roses fell to Messrs. Harkness & Sons, Bedale, and Hitchin, mostly all their blooms being noteworthy, including Comtesse de Nadaillac, Fisher Holmes, Cleopatra, and Horace Vernet. The second place fell to Mr. Ben. R. Cant, who had also a splendid exhibit, noteworthy being Ethel Brownlow, Luciola, and Marchioness Dufferin. Messrs. R. Mack & Son, Cathrick, and Scoton, were third; and the English Fruit and Rose Co., Hereford, were fourth.

In class nine for forty eight Roses, single trusses, Mr. Ben. R. Cant was first; Messrs. Harkness & Sons were second; Messrs. Perkins and Sons, Coventry, third; and Messrs. J. Townsend & Sons, Worcester, were fourth. In class ten for twenty-four Roses Mr. Ben. R. Cant took the lead; second, Messrs. Harkness and Sons; third, Messrs. J. Townsend & Sons; fourth Mr. Chas. Turner, Slough. Most of the other cut bloom classes fell to Messrs. Perkins & Sons, Coventry, who carried off all the leading honours for bridal bouquet, bridesmaids' bouquets and hand bouquets. The second prizes in the same competition were awarded to Messrs. Jenkinson & Son, Newcastle, while the third prize went to Miss H. M. Stevens, Birmingham. For the decorative arrangement of Roses, Messrs. Perkins & Sons also gained first place. Mr. J. Maddock, Oxford, was second.

Several of the non-competitive exhibits were of rare beauty and merit. Messrs. Barr & Sons, 12 and 13, King Street, Covent Garden, London, had a large and varied group of cut blooms and herbaceous plants. Mr. Eckford, of Wem, had an exhibit of almost every variety of Sweet Peas, and of the most exquisite beauty.

Messrs. Dobbie & Co., Rothesay, had another noteworthy group of Violas, etc. Messrs. Clibran & Son, Manchester, had a group of Violas and table plants. Mr. Robert Sydenham, Birmingham, exhibited a choice selection of his rustic table decorations. Messrs. Thomson & Co., Sparkhill, Birmingham, set up a large group of Ferns, Gloxinias, and Carnations; while Messrs. Hewitt & Co., also of Birmingham, had another good group.

Messrs. E. Webb & Sons, Stourbridge, had a striking exhibit of flowers, fruit, and vegetables. Messrs. Edwards & Son, of Nottingham, had a large group of their decorative pottery. The Ichthemic Guano Company, Ipswich, had an exhibit of their speciality.

Fruit was well represented, chief honours going to Earl Harrington (gardener, J. H. Goodacre); Lord Bagot (gardener, T. Bannerman); and Lady Somerset, Ledbury (gardener, F. Harris). The Prize Trophy for the best exhibit in the show was not awarded at the time of sending off the telegram.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Peaches and Nectarines Dropping. – *W. C. G.*; It is, no doubt as you suggest, because of the heavy cropping to which the trees are subjected that the fruits keep dropping. You say that the trees are not dry at the root, and this we can readily give you credit for during the summer months when the trees are growing and bearing a crop of fruit. There is a greater danger of the soil and roots getting dry after the crop has been gathered, the idea amongst a great many gardeners being that the trees should be encouraged to go to rest by withholding water. We do not imply that you pursue this plan, but merely offer it as a suggestion. There are now good cultivators who apply water all through the ripening period, and find that the fruits are the juicier and the better for it. In a state of nature, that is, in the

open air, the trees get much more moisture at the roots in the autumn when the leaves are falling, yet any one would be rash to say that they are injured thereby. Deciduous trees develop a large quantity of useful roots during the autumn and early winter months, and under glass this should be encouraged by keeping the roots sufficiently supplied with moisture. Until your trees regain their vigour again, we should advise you to thin the fruits more, so as to avoid overcropping. You might thoroughly examine the borders in the autumn to see that the roots are not suffering from the other extreme of being too wet, owing to bad drainage. It is only by vigilance like this that you can really determine what is the matter with them.

Converting Vinery into Rose house.—*Roses*. Most of the more useful and serviceable Roses should grow in the house you mention; but any forcing of pot plants that you may require should be done in some other house or houses. All climbing varieties along the front and the back of the house should be planted out, because they will give much greater satisfaction so treated. Gloire de Dijon, salmon and yellow; Marechal Niel, yellow; climbing Devoniensis, white; and Perle des Jardins, yellow, should be planted along the back or on the end walls, as they attain a considerable height, and well repay the space thus accorded them. Along the front you may plant climbing Niphetos, white; Souvenir de S. A. Prince, white, and Souvenir du President Carnot, flesh, fading to white on the outer petals. The latter is new and more expensive than the rest; but it is a fine Rose for early work. By keeping the house rather warm in winter and early spring you will get a good harvest of flowers from the climbing varieties, which may be cut back after the flowers are cut to let the light get at the pot plants. The latter may include Souvenir de S. A. Prince, Souvenir d' un Ami, Niphetos, and various others; but you might state what colours you most prefer.

Grapes Shanking.—*A.C.*: This ailment is very difficult to determine in many cases and can only be traced at times by having an intimate knowledge of the treatment the vines receive. We consider you have done right in lifting and placing the roots near the surface; and we take it for granted that you made the drainage good, with a proper outlet for the water, when lifting the roots. We should recommend that you keep the foliage clean and healthy at all times whether the vines are in fruit or not; that you pinch and prune them in good time, never removing a great deal of foliage at any time; and that you do not overcrop the vines. See that the young wood is properly ripened in autumn even if it is necessary to apply a gentle heat by means of a fire for a fortnight, keeping the atmosphere dry and well ventilated all the time. It may be that the heavy rainfall of your district during winter keeps the roots in a sodden condition, thus preventing their ripening. Under those conditions it might be advisable to cover the outside border during winter, or only a portion of it by way of experiment, carefully noting the results from the covered and uncovered portions. Madresfield Court grape is an early variety and may be forced as such; but it will also answer as a midseason variety. We should have recommended Black Hamburgh as a stock for it rather than Alicante.

Roses flowering a second time.—*A. W.*: The Bourbon varieties of Roses such as Souvenir de la Malmaison usually flower well during September; but a large number will behave much in the same way provided the summer is favourable to their making a good growth during the end of July and the whole of August. Mrs. J. Laing frequently flowers very profusely in September. After the blooms are out of season you may cut back the stems to a good bud. If you can spare some stable manure you might loosen up the surface of the soil, give the ground a mulching, then give the bushes a good watering, using the hose if you can command a supply of water for the purpose. You may then await the results; and if a fair amount of rain falls you may count upon a supply of Roses from the young shoots or secondary growths. If the weather proves dry repeat the watering at short intervals to stimulate the roots to activity. Provided the rainfall is sufficient the labour of watering may be entirely dispensed with.

Tomatos with deformed flowers.—*Bulbs*: It is no uncommon occurrence for the first flower of each truss of Tomato flowers to be large, double and thereby deformed. Fruits arising from such flowers are mostly very much ribbed and their appearance greatly spoiled, especially those fruits which are ragged on the top. Many varieties are liable to this deformity, which is generally the result of great vigour, and not unhealthiness in any way. Large fruiting varieties are more liable to the defect than those bearing small fruits; and the evil is more prevalent when the Tomatos are planted out, particularly in the open ground, than when grown in pots, boxes, or in limited quantities of soil on benches. We should advise you to cut off the double flowers, as, unless they are very numerous, their loss will be little felt, especially if you cut them off at once. In future, those varieties which are liable to this malformation may be grown in pots, boxes, or in borders where the root run is relatively limited so as to repress their excessive vigour. In onr experience, plants in the open air are more liable to behave in this way than those under glass whether planted out or otherwise.

Names of Plants.—*A. Hendrey*: 1, Sidalcea oregana; 2, Sidalcea malvaeflora; 3, Lathyrus latifolius albus; 4, Achillea Ptarmica flore pleno; 5, Campanula rhomboidalis; 9, Campanula rotundifolia Hostii alba.—*James Alexander*: 1, Odontoglossum crispum, a fairly good variety; 2, Oncidium sphacelatum; 3, Dendrobium nobile, a good variety but not D. n. nobilius; 4, Stanhopea Wardii; 5, Odontoglossum Rossii majus.—*R. D.*: 1, Cupressus pisifera plumosa aurea; 2, Cupressus obtusa; 3, Salix purpurea pendula; 4, Salix Caprea pendula; 5, Picea excelsa clanbrasiliana.—*T. B.*: 1, Sibthorpia europaea variegata; 2, Senecio Kaempferi aurea maculata; 3, Oncidium pumilum; 4, Rodriguezia secunda.—*J. L.*: Rosa spinosissima fl. pl. The garden name we do not know. The Scotch Roses have been neglected and many of them lost. More is the pity for yours was delightfully scented.—*Sigma*: Epilobium palustre?; Fagopyrum esculentum (the Buckwheat).

Communications received—O. H.—A. H. Smee.—W. H.—T. Walls.—J. Mayne.—Omega.—A. E. Stubbs.—Salen—T. W.—R. Mins—Joseph K.—T. Pestridge—Amateur—F. Ames—L. L. R.—Walter Soper—Chas. Nash.

TRADE CATALOGUE RECEIVED.

Herb & Wulle, Bulb and Seed Growers, Naples, Italy.—General Catalogue of Bulbs and Plants.

Queer Prizes.—The list of prizes for vegetables grown on the borough allotments at Richmond includes a pair of corsets, and several superfine shoes for ladies. If public presentation of these prizes is made it will possibly cause some merriment on the part of the spectators and some slight confusion on the part of the lucky recipients.

COVENT GARDEN MARKET.

July 14th, 1897.

Fruit.—Average Wholesale Prices.

	s. d	s. d.		s. d.	s. d
Apples.....per bushel			Grapes, per lb	2 0	3 6
Black Currants ½ sieve			Pine-apples		
Red " ½ sieve			—St. Michael's each	2 6	6 0
Cherries half sieve...			Plums per ½ sieve.....		
Nova Scotia Apples per barrel			Strawberries, per lb.	1 6	2
Cob Nuts per 100 lbs.			Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.		s. d.	. d.
ArtichokesGlobe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus,per bundle	2 6	3 0	Horse Radish, bundle	2 0	4 0
Beans, French, per pound	1 0	1 3	Lettuces ...per dozen	1 3	
Beet..... per dozen		2 0	Mushrooms, p. basket	1 0	
Brussel Sprouts, per half sieve			Onions.....per bunch	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunch	0 3	
Carrots ... per bunch	0 3		Radishes... per dozen	1 6	1 3
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket	1 0	1 3
Celery.....per bundle	1 0	1 6	Small salad, punnet	0 4	
Cucumbers per doz.	2 6	3 0	Spinach per bushel	3 0	4 0
Endive, French, doz.	1 6	2 0	Tomatos..... per lb.	0 6	1 0
			Turnips ..... per bun.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d		s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0	Paeonies, French doz. bun.	5 0	9 0
Asparagus Feru, bun.	2 0	3 0	Pansies 12 bun.	1 6	2 0
Bouvardias, per bun.	0 4	0 6	Primula, double, doz sprays	0 6	0 6
Carnations doz.blms.	1 0	3 0	Pelargoniums,12 bun.	4 0	6 0
Cornflower, doz. bun.	1 6	3 0	Poppy, various, doz. bunches	1 0	3 0
Eucharis ...per doz	3 0	4 0	Pyrethrum doz. bun.	1 6	3 0
Gardenias ...per doz.	2 0	4 0	Roses (Indoor), doz.	6	1 0
Geranium, scarlet, doz. bunches	4 0	6 0	" Tea,white, doz.	1 0	2 6
Lilium candidum, doz. bun.	9	18 0	" Niels	1 6	4 0
Lilium longiflorum per doz.	3 0	4 0	" Safrano	1 0	2 0
Lily of the Valley doz. sprays	1 0	2 0	" (English),		
Marguerites, 12 bun.	2 0	4 0	Red Roses, doz. 2	0	4 0
MaidenhairFern,12bs.	4 0	8 0	Pink Roses, doz.	3 0	5 0
Orchids, doz. blooms	1 6	12 0	Smilax, per bunch ...	2 0	4 0
			Tuberoses, doz. blooms	1 0	1 6

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.		s. d	s. d.
Arbor Vitae per doz.	12 0	36 0	Ivy-leavedGeranium, per doz.	4 0	8 0
Aspidistra, doz.....	18 0	36 0	Lilium Harrissii, per pot	1 6	3 0
" specimen	5 0	10 0	Lycopodiums, doz.	3 0	4 0
Dracaena, various, per doz.	12 0	30 0	Lobelia .....per doz.	3 0	5 0
Dracaena viridis,doz.	9 0	18 0	Marguerite Daisy doz.	6 0	10 0
Euonymus, var. doz.	6 0	18 0	Marguerite Yellow, per doz.	5 0	9 0
Evergreens.luvar.doz	6 0	24 0	Myrtles, doz.	6 0	9 0
Erica, various, per doz.....	9 0	18 0	Palms in variety,each	1 0	15 0
Ferns, invar..per doz.	4 0	12 0	Palms, Specimen ...21	0	63 0
Ferns, small, per 100	4 0	6 0	Pelargoniums ...doz.	8 0	12 0
Ficus elastica, each	1 0	5 0	Spiraea ...per doz. ...	8 0	10 0
Foliage Plants, var., each	1 0	5 0	Scarlets .....per doz.	2 6	5 0
Heliotrope...per doz.	4 0	6 0	Roots and bedding out plants plentiful and great variety.		
Hydrangeas per doz.	9 0	12 0			

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 24th, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, July 27th.—Royal Horticultural Society: Meeting of Committees at 12 o'clock.
Tibshelf Rose Show.

WEDNESDAY, July 28th.—Beckenham Show.
Chester Fête (two days).

THURSDAY, July 29th.—Kempton Show.

SATURDAY, July 31st.—R.H.S. of Southampton (two days show).
Liverpool Show (two days).

VEITCH MEDALLISTS OF 1897.—The following awards of Medals of Honour have been made by the Veitch Trustees. Circumstances have this year prevented the attendance of the recipients in person, and the Medals have accordingly been sent to them.

NORMAN C. COOKSON in recognition of his great success in the hybridisation of Orchids. Among the earlier acquisitions, mention may be made of Cypripedium Io, C. godseffianum, C. nitidissimum, and C. Sanderae superbiens, still highly appreciated. Besides these, some of the finest hybrid Cypripediums obtained by other operators as C. Calypso, C. Morganiae, C. cardinale, C. Niobe, have been raised by him from the same pairs of species, and have very properly received the same names. In other genera he has obtained Calanthe Cooksoni, Cattleya William Murray, Laeliocattleya Phoebe, Dendrobium Venus, D. owenianum, Masdevallia courtauldiana, all hybrids of great merit. With these may be grouped Phaius Cooksoni, a plant of exceptional interest, on account of its being the first hybrid Phaius in which the remarkable Madagascar species P. tuberculatus has participated in the parentage. Among later acquisitions Cypripedium Bryani, Laeliocattleya Doris, Dendrobium Sybil, and Phaius Cooksoniae, are beautiful hybrids; but especial prominence must be given to Odontoglossum crispo Halli, one of the most remarkable of artificially-raised Odontoglots; and scarcely less interesting is the confirmation of the supposed parentage of Cattleya hardyana. The hybrids raised by Mr. Cookson include a large range of subjects, and will bear enduring testimony of his horticultural skill.

MARTIN R. SMITH, in recognition of his great success in improving the garden Carnation. This success is the more remarkable from the fact that when Mr. Smith took up the subject he began to work in a field in which great results had been already obtained, especially by the late Charles Turner and Ephraim Dodwell, besides other cultivators of this popular flower, when further improvement seemed well nigh unattainable. It is well known among amateurs of the Carnation, that of the numerous seedlings raised annually, very few retain a permanent place in collections. A glance through the groups into which florists have distributed the different forms and colours, shows that some of Mr. Smith's seedlings possess qualities that will make them exceptions to the general rule, especially in the group known as Malmaison Carnations. In this group Mr. Smith's acquisitions are particularly valuable, not only to amateurs, but to horticulturists generally.

CHARLES NAUDIN, for distinguished services to botany and horticulture. He is one of the most eminent French botanists of the present time, and has been for upwards of thirty years a member of the Académie des Sciences, the most important scientific body in France. He began his scientific career in the Jardin des Plantes, where he soon gained distinction by his accurate investigation of the subjects submitted to him. Among these were numerous experiments to determine the nature and validity of species, including the determination of the many cultivated varieties of the Gourd and Pumpkin. By carefully growing the numerous kinds side by side, by comparing one with the other, and by crossing or attempting to cross one with the other, he eventually succeded in tracing all the edible and most of the ornamental forms to Cucurbita Pepo, C. maxima, and C. moschata. While connected with the Jardin des Plantes, he collaborated with Professor Decaisne a general treatise on horticulture, entitled *Manuel de l'Amateur des Jardins*, still the most scientific and best illustrated work on gardening in the French language. Failing health obliging him to leave the Jardin des Plantes about the year 1870, after passing some years in experimental horticulture at Collioures, he accepted the directorship of the Villa Thuret garden, established by M. Gustav Thuret and Dr. Bornet at Antibes, as a botanic garden for experiments in the acclimatisation of subtropical plants. The villa and garden are now the property of the French government, and form a sort of southern branch of the Jardin des Plantes under the direction of M. Naudin, in which are cultiuated Australian, South African, and many other subtropical plants, for distribution among the French colonies, and for the use of the Universities of France. Since his instalment at the Villa Thuret, M. Naudin has published a valuable *Manuel de l'Acclimateur*, in which the author's extensive knowledge of the large and difficult genera Acacia and Eucalyptus is conspicuously shown.

MAX. LEICHTLIN, in recognition of eminent services to horticulture, especially the introduction of many new and beautiful plants. Max. Leichtlin occupies a unique place among the horticulturists of the present day. Apprenticed to a gardener in his youth, he subsequently held situations in several places, but finally settled down at Baden-Baden, where he founded a private Botanic Garden, which has since become a household word wherever rare and beautiful species of bulbous and perennial herbaceous plants are prized. In this remarkable garden, scarcely half an acre in extent, Max. Leichtlin has worked for upwards of forty years, with the assistance of only one or two skilled labourers. During this period,

remote corners of the earth have been searched for plant rarities; and when once these treasures have found a home in the little garden at Baden-Baden, the skill of the owner has rarely failed to make them available for the gardens of Europe.

To enumerate the many plants introduced by Max. Leichtlin would require a very large page of letter-press; but to show how cosmopolitan his operations have been, a few representative instances should be noted. Thus among his introductions we have Anemone blanda from Armenia, Colchicum Szwowitzii from Persia, Bomaria oligantha from Colombia (S. America), Calochortus Leichtlini from California, Eremurus robustus and Ostrowskya magnifica from Central Asia, this last the grandest of all Bell-flowers; Galanthus Reginae Olgae from Greece, Gladiolus platyphyllus and other species of Gladiolus from South Africa, Kniphofia comosa from Abyssinia, Leucocoryne purpurea from Chili, Meconopsis racemosa from China, Olearia insignis from New Zealand, Tigridia Van Houttei from Mexico, and many more, forming a surprising record for one man. Besides all these, many beautiful forms have been raised in the Baden-Baden garden by hybridisation and selection, as the Kniphofia hybrids, Paeonia Moutan varieties, Clematis coccinea major, Crocosmia aurea imperialis, Aubrietia deltoidea Leichtlini and many more.

The plan adopted for the cultivation of so large a number of species within so small a space is a very simple one. As soon as new plants and bulbs have been proved and multiplied, they are distributed among the gardens of the world, and room is made for new introductions. Novelty and change are the predominant features of the Baden-Baden garden; the occupants of it at one epoch disappear within a short period afterwards.

Professor L. H. Bailey. for eminent services to horticulture. As Professor of Horticulture in the Cornell University in the State of New York, Mr. Bailey has laboured earnestly to promote the science and practice of horticulture in the United States in various directions. This he has done primarily by lectures in which he has brought before his audiences, usually consisting of farmers and others engaged in the manual work of cultivation, the more important facts in plant physiology, which are apt to be overlooked by ordinary workers, besides other illustrations of plant life, some knowledge of which is indispensable to those engaged in gardening and agriculture. He has done essentially good work in teaching and illustrating the use of insecticides, in investigating the origin of plant diseases, and experimenting on the means of arresting them, especially in fruit trees, in which he has rendered valuable service to the fruit growers of America. He is one of the most prolific writers on applied botany in the United States; the numerous year books on horticulture, and the useful *bulletins* issued by the Agricultural Station connected with the Cornell University, bear ample testimony to his great activity in disseminating useful knowledge, whether derived immediately from his own observations and experiments, or from the publications of others. He has published several important scientific works, among the latest of which is one entitled *The Survival of the Unlike*, a collection of evolution essays, suggested by the study of domesticated plants.

A kind of Wine made from grapes and seasoned with honey and spices is used on New Year's Day in Silesia.

Yucca filamentosa in full bloom is the conspicuous feature in Mr. Richardson's garden at Ferndale Road, Leyton. The specimen is a remarkably fine one.

Royal Horticultural Society.—The next meeting of the R.H.S. Committees takes place on Tuesday, July 27th, in the Drill Hall, James' Street, Victoria Street, at 12. At this meeting a Silver Flora Medal is offered for competition (Amateurs) for the best collection of Cactaceous plants. At 3 p.m. Mr. W. D. Drury will give a paper on "Familiar Garden Insects, Friends and Foes."

Fine Strawberries.—A promising young man was treated to a large dish of luscious Strawberries when there was a glut of them and likely to be wasted. He ate, and ate, and shook himself up now and again as one would a sack being filled. At last, while the heap was still formidable, he gave it up and said he could not eat another berry, and yet, and yet, he was loth to see them wasted. After a pause: "Well, here goes; I'll eat them even if I die!" He lived to tell the tale, so they must have been good.—*Snaggs.*

Heating and Ventilation was discoursed upon at a late meeting of the Paxton Society at Wakefield by Mr. J. Thomas, gardener to the Lord Bishop of Wakefield (Dr. Walsham How). The essayist imparted a deal of useful information upon this subject. He advised the gentlemen who were present to ventilate their greenhouses early in the morning, and from the top of the house; also to admit the air in judicious quantities on dull days as well as on fine ones, and to be particularly careful to avoid draughts.

East End Floral Show.—The fourth annual summer show was opened in the Queen's Hall of the People's Palace, Mile End Road, on Thursday, July 15th, by the Duchess of Albany. On the Duchess taking her seat in the hall the Duke of Fife, as president of the society, offered her a hearty welcome. After the royal visitor had declared the show open Mr. C. E. Shea, chairman of committee, proposed a vote of thanks to Her Royal Highness. Exhibits, not for competition, were contributed by the Duke of Fife, Lord Rothschild and others. The amateur horticulturists of Stepney, Poplar, Cubitt Town, Mile-end and other congested districts made a brave show, and considering the conveniences, or rather lack of conveniences, at the command of the exhibitors the results achieved were very gratifying. In the whole of the fifty-three classes the exhibits were numerous, and the competition keen, so that the judge's office was no sinecure.

Woodbridge Show was held on July 8th, when the number of entries was about the same as last year, and were distributed over 176 classes. In the open class for Roses the twenty-five guinea Challenge Cup for the best twenty-four blooms was won for the second time by Messrs. Frank Cant & Co., of Colchester, who had some grand samples of Duchesse de Morny, Le Havre and Horace Vernet. In the class for thirty-six blooms, distinct, Mr. B. R. Cant was first, and Messrs. Frank Cant & Co., second. Messrs. Prior & Son, also of Colchester, obtained the third awards in both classes. The twelve guinea Challenge Cup in the amateur's class for the premier twenty-four blooms was carried off by the Rev. J. H. Pemberton, Havering-atte-Bower, Essex, who also secured the Silver Medal of the National Rose Society for the best H.P. in the show with Marshall Wilder. The medal for the best Tea or Noisette went to Mr. O. G. Orpen, West Bergholt, for Madame Cochet. Mr. R. C. Notcutt and Mr. C. Jacobi again met in competition, the prize going to the former. Mr. W. Chettleburgh, of Worstead House, Norwich, was the only exhibitor of twenty-four bunches of hardy flowers, for which he was awarded the first prize. A very interesting feature was the table decorations. A general complaint was heard that the tables were too small—6 ft. by 3 ft. 4 in., as compared with 8 ft. by 4 ft. at Ipswich. In a class open to all subscribers the first award fell to the lot of Mrs. Orpen for a light and tasteful arrangement of Roses, relieved by Gypsophylla paniculata and various grasses. As local agent of the Ichthemic Guano Company Mr. Smith exhibited samples of that celebrated fertiliser. Mr. R. C. Notcutt and Messrs. R. Wallace & Son brightened the tent with hardy flowers. Vegetables in both sections were remarkably good.

Orchids at the Sale Rooms.—On Friday the 16th inst. a fine piece of Sobralia leucoxantha was sold in the Central Sale Rooms of Messrs. Protheroe and Morris, Cheapside, for eight guineas. The sepals and petals were white, as well as the lip, with the exception of a large lemon blotch in the throat, deepening to almost gold lower down the tube. A smaller piece of Sobralia xantholeuca went for five guineas. The flowers were of a beautiful clear yellow and of large size. A fine variety of the rare Cattleya Rex was secured for five guineas. The sepals and petals were creamy white and the pale purple lip margined with white at the crisped edges. The tube and side lobes were clear yellow, while the throat was lined with crimson and gold.

Formby Show.—The summer exhibition of this society was held in the grounds of Briars Hey by kind permission of F. A. Rockliff, Esq. The exhibition was an improvement, the entries being more than ninety over last year. Mr. Rockliff secured the coveted award for the circular group. The five silver cups for Roses were won by Mr. Jas. Rimmer for twelve, six, six light, and six dark varieties. Mr. B. Kennedy won the cups for six Teas or Noisettes, and the special prize for the best bloom in the show, with Maman Cochet. Mr. Ashton staged the best stove and greenhouse plants. Mr. John Formby had the best Ferns. Table decorations were a new feature, Miss Hacking winning with a very pretty arrangement. Miss M. A. Rimmer took the lead with the basket of flowers and spray.

Battersea Park.—The London Council will shortly consider a scheme for the building of an embankment along the entire river frontage of Battersea Park. The present river wall is very frail, and much of it is in a precarious condition. An annual outlay of some £400 or £500 has been necessary of late years for patching purposes. An enquiry was instituted and a report made in 1895. The council's engineer then stated that the cost of putting the wall into a thorough state of repair would be £6,000, and to this would have to be added £200 yearly for maintenance. The length of the river frontage of the park is about three-quarters of a mile, and the engineer has reported that a granite-faced wall can be built for £43,500. Taking into account the large annually recurring charge for maintenance, and the improvement in the appearance of Battersea Park the council are strongly recommended to adopt the proposal.

Grass Growing Experiments at Hawkshead.—A demonstration on grass growing took place on Monday, July 12th, at Esthwaite Hall Farm, under the auspices of the Lancashire County Council Technical Instruction Committee The ground upon which the experiments were conducted was divided into nineteen lots. Each plot is the twentieth part of an acre, and each received the same treatment as last year with the exception of lot nineteen to which was applied lime at the rate of five tons per acre. The following is the synopsis of the manure applied to each lot, and the cost:—Plot 1: farmyard manure, 15 tons, cost per acre, £3 15s.; Plot 2: farmyard manure, 10 tons, cost £2 10s.; Plot 3: farmyard manure, 10 tons, basic slag, 5 cwts., nitrate of soda, 1 cwt, cost £3 13s.; Plot 4: farmyard manure, 10 tons, superphosphate, 4 cwts., nitrate of soda, 1 cwt., cost £3 12s.; Plot 5: farmyard manure, 10 tons, basic slag, 5 cwts., kainit, 2 cwts., nitrate of soda, 1 cwt., cost £3 19s.; Plot 6: farmyard manure, 10 tons superphosphate, 4 cwts., kainit, 2 cwts., nitrate of soda, 1 cwt., cost £3 18s.; Plot 7: superphosphate 5 cwts., kainit, 3 cwts., nitrate of soda, 1½ cwt., cost £3 3s.; Plot 8: basic slag, 8 cwts, kainit, 3 cwts, nitrate of soda, 1½ cwt., cost £2 6s.; Plot 9: pure raw bone-meal, 6 cwts., kainit, 3 cwts., nitrate of soda, 1½ cwt., cost £2 14s.; Plot 10: unmanured; Plot 11: pure raw bone-meal, 6 cwts., nitrate of soda, 1½ cwt., cost £2 11s.; Plot 12: basic slag, 8 cwts., nitrate of soda, 1½ cwt., cost £1 17s.; Plot 13: superphosphate, 5 cwts., nitrate of soda, 1½ cwt., cost £1, 10s.; Plot 14: superphosphate, 5 cwts., cost 15s.; Plot 15: basic slag, 8 cwts., cost £1 4s.; Plot 16: pure raw bone-meal, 6 cwts., cost £1 16s.; Plot 17: nitrate of soda, 1½ cwts., cost 15s.; Plot 18: kainit, 3 cwts., cost 9s. It was generally conceded that plot 2 was equal to plot 1, and there was little difference between plots 4, 5 and 6, the last named being the heaviest crop of the lot.

A Slice of Tomato is a good thing for removing stains from the hand.

The Leytonstone and Wanstead Floricultural Society is to he congratulated on the successful exhibition recently held in the grounds of Snaresbrook House, Leytonstone. The entries were more numerous than ever, and the quality of the exhibits reached a high standard.

Lambeth Flower Show was inaugurated about twenty years ago, and the 1897 fixture took place hy kind permission of the Archbishop of Canterbury, in the grounds at Lambeth Palace. The show is managed by a committee of gentlemen helonging to the various places of worship in the district.

Wolverhampton Floral Fete.—This annual exhibition, of which we gave a short account last week, was a great success, heating all previous records. Unfortunately Mr. W. A. Green, the hon. secretary, was taken ill on Monday night previous to the opening day on Tuesday. Notwithstanding this he did his duties to the satisfaction of everybody.

Battle of Flowers at Skegness.—A battle of flowers, recently held at this well-known Lincolnshire seaside resort, was a great success. A procession started from the cricket ground in the centre of the town and marched through the principal streets of the town to the North Parade, where the battle took place. Mr. S. G. Randall received a prize for the best decorated premises in the town, and the Misses Selby also were awarded a prize for a decorated allegorical car.

Trees struck by Lightning.—During the recent severe thunderstorm which passed over the country, an old Oak tree in Richmond Park, Surrey, was struck by lightning, which tore out a piece of wood from a large limb, carrying it for some distance, and passing downwards tore off great pieces of hark and split the trunk Into shivers. Half of the tree is now dead and the leaves brown. During the same storm, an Oak on the estate of E. M. Nelson, Esq., Hanger Hill, Ealing, was struck, and the trunk splintered into thin laths.

Woolton Gardeners' Mutual Improvement Society.—I have the pleasure to inform you that the committee of the Liverpool Horticultural Association have kindly granted permission to the above society to arrange a sale stall at their forthcoming exhibition, to be held in Sefton Park, on July 31st and August 2nd, the proceeds to be devoted to the Victorian Era Fund of the Gardeners' Royal Benevolent Institution. May I therefore, on behalf of the above society, beg the favour of your kind assistance and co-operation on this occasion by gifts of cash, flowers, fruits, plants, vegetables and horticultural requisites ; also of your kind patronage at the stall, so that the society may have the pleasure of transmitting to Mr. Harry J. Veitch (treasurer of the V.E.F.), a goodly sum, as the general help of Liverpool and district.—*R. G. Waterman, Hon. Secretary and Treasurer.*

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting was held on Monday, the 19th inst., at the Parish Room, Shirley, Southampton, Mr. B. Ladhams presiding over a good attendance of the members. The subject for the evening was a Rose Show and discussion on the exhibits, but owing to the late date of the meeting, and the exceptionally hot, dry period, Roses in the district are nearly over and there was a small number of exhibits. Rev. W. J. Rudge (gardener, Mr. J. Hallet) was awarded first prize and Certificate for the best Rose in the show and Mr. W. F. G. Spranger (gardener, Mr. Curtis) was awarded second prize. There were good collections of Roses not for competition exhibited hy Mr. W. H. Rogers, Red Lodge Nursery, and Mr. B. Ladhams, Shirley Nurseries ; and a collection of buttonhole Roses, Teas, by Mr. T. M. Lord (gardener, Mr. W. Knapp). Mr. Allen sent fruit, Mr. Curtis, Tomatos ; Mr. Jeffrey, Sweet Peas ; and Mr. Ladhams a big show of hardy plants. The discussion was joined in hy a number of the members and was of an interesting and useful character. A vote of thanks to the exhibitors and the chairman closed the meeting.

Gardeners Royal Benevolent Institution.—The Merchant Taylors' Company, and the Skinners Company have each contributed the sum of £10 10s. to the funds of this Institution.

Axminster Gardeners' Society.—On the evening of Monday, July 12th a meeting of the Axminster District Gardeners' Mutual Improvement Society took place. Dr. Langran, of Axminster, obtained the premier prize in the amateurs' class, whilst Mr. J. Bull, also of Axminster, was similarly rewarded in the cottagers' section. The chairman, Mr. Catford, afterwards gave a lecture on leguminous plants, which was listened to with much attention.

Bath Rose Show.—In spite of the fact that Rose shows were being held elsewhere, and as close as at Gloucester a fine display of blooms turned up at the annual fixture held in the Sydney Gardens, Bath, on July 8th. Although some Rose growers that are usually in evidence at Bath were absent, the competition was keen throughout. Messrs. Cooling & Sons, Bath, secured a very creditable win over the Messrs. Paul in the premier class for seventy-two blooms, distinct, whilst they had no opposers in the following class for triples. The Messrs. Cooling were again first in the class for any new Rose of 1895-96, showing fine samples of Lawrence Allen. Mr. Hill Gray was to the front for Teas and Noisettes, and the Rev. J. H. Pemberton, Havering-atte-Bower, Essex, was very successful among the amateur competitors. Groups of plants, bowers of garden Roses, and tastefully bedecked floral dinner tables were all capitally represented, and added materially to the attraction of the show.

Fruit and Vegetables for Manchester.—The source of supply of the various fruits and vegetables for this industrial centre would apply very largely to other towns in that neighbourhood as well as the north. For Manchester the earliest Cabbages are obtained from Evesham, and later on from Lincolnshire and Cheshire. Bedfordshire supplies most of the home-grown Onions ; but foreign produce competes keenly with this article. France and then Holland supplies the earliest Carrots, to be succeeded in due time by consignments from Bedfordshire, Lincolnshire and Huntingdon. Mushrooms are furnished by Kent, and the growers around London. Ashton-under-Lyne sends Celery. The Canary Islands send the first supply of New Potatos about Christmas ; and France and Cornwall also contribute largely about that time. The supply from the Channel Islands later on keeps the market furnished till Bedford, Cambridge and Cheshire in succession are able to send consignments of the noble tuber.

CHEMICAL PROCESSES IN AN ORCHID.

Dear Mr. Veitch,

At your suggestion I have jotted down some few remarks to further elucidate what I believe are the chemical processes which take place in the Orchid.

Orchids take up through their leaves carbonic acid, free ammonia, and water in the form of watery vapour, but I believe the alkalies and earthy salts are taken up through the roots. I consider that chlorophyll is built up on an ammonia type. Ammonia, NH_3, may be regarded as $N\left\{\begin{matrix}H\\H\\H\end{matrix}\right.$ but in the case of the tertiary nitrides, each equivalent of the hydrogen may be replaced by an organic radical ($C_n H_{n+1}$). If the radical methyl C_2H_3 (the alcohol of which, $C_2H_4O_2$, is wood spirit, derived from the destructive distillation of wood) replaces each of the equivalents of hydrogen, we get a substance with the formula $N\left\{\begin{matrix}C_2H_3\\C_2H_3\\C_2H_3\end{matrix}\right.$; if three equivalents of carbonic acid $3\,(CO_2)$ are then absorbed, a product would be the result with the formula $NC_9H_9O_6$, which under light, gives up two equivalents of oxygen ; chlorophyll is formed $C_9H_9NO_4$, and 2 equivalents of oxygen are given off. It is a well known fact that plants differ from animals hy absorbing carbonic acid, and giving off through their leaves oxygen. This is just the reverse process to that which takes place in the animal economy.

I have found that by making an infusion of ordinary meadow grass, hy pounding it up in fifteen times its weight of water, filtering the fluid, examining it as in water analysis, and comparing an infusion from the same quantity of grass which had recently been irrigated with sewage, the yield of

	In Meadow Grass.	In Sewage-fed Grass.
Nitrogen as ammoniacal salts was	2·8	8·4
Organic matter	0·7	1·4
Albuminoid ammonia ..	5·6	12·6
	9·1	22·6

I also observed that the quantity of free ammonia and albuminoid ammonia in the sewage grass after two or three weeks growth, diminished in quantity, and more closely corresponded with the ordinary meadow grass, proving that the ammoniacal salts had become absorbed and converted in the tissues of the grass. Watercress grown in the effluent from a sewage farm contained more free and albuminoid ammonia than Watercress grown in spring water.

I think it is prohable that when the plant has nearly finished its growth it is the period when the mineral salts are taken up through the roots, and that two equivalents of chlorophyll $\left\{\begin{matrix}C_9H_9NO_4\\C_9H_9NO_4\end{matrix}\right.$ take up an equivalent of carbonate of lime, $C_a\,O\,CO_2$, which is decomposed by some process which is not quite clear, into $C_{19}H_{18}NO_5 + C_a\,O\,NO_5$ nitrate of lime ; this is stored up in the pseudobulh. It is probable that many of the Orchids which grow in their native habitats derive their earthy salts from the bark of the trees on which they grow by a process of dialysing the earthy salts from the tree and absorbing them through the root of the Orchid.

It is well known that crystalisable salts mixed with gelatine, gum, or other colloidal substance placed on a memhrane upon water, the salts will dialise, that is, pass freely through the membrane into the water, whilst the colloids will remain hehind on the membrane.

From the researches of Hornberger it has been shown that if the increased growth of trees when thinned is due to the effect of light on the soil, resulting in the more rapid decomposition of the humus, rather than to the direct action of the light on the crowns of the trees, the wood of trees which have been thinned should he richer in ash constituents and nitrogen than that of trees which have not been thinned. It has frequently heen shown that the outer wood is richer in minerals than the inner wood. He compared the composition of (1) the outer, (2) the intermediate, and (3) the inner wood of two heech trees over 100 years old, one of which (A) had, for thirteen years, the advantage of increased light, the other (B) not. The numbers show the average results per thousand in the dry wood :

		KO.	CaO.	MgO.	Mn_2O_3.	PO_5.	SO_3.	Totl.
A	Inner wood	2·25	1·23	0·33	0·24	0·38	0·15	4 58
	Intrmd. ,,	1·94	1·50	0·47	0·33	0·24	0·21	4·69
	Outer ,,	1·51	1·59	0·48	0·33	0·28	0·20	4·39
B	Inner ,,	1·09	1·28	0·46	0·24	0·23	0·15	3·45
	Intrmd. ,,	2·33	1·08	0·35	0·17	0·42	—	4·35
	Outer ,,	1·35	0·84	0 21	0·15	0·27	0·23	3·05

Comparing the outer wood of the two trees, there is a greater amount of each constituent, except phosphoric and sulphuric acids, in A than in B. When the amounts of ash constituents of the outer wood are divided hy the corresponding arithmetical means of those of the intermediate and inner wood, the quotients for A, except in the case of potash, are greater than in B. The difference is still more distinct if the outer and intermediate wood alone are considered. Under the influence of increased light, there was thus a greater percentage of mineral matter in the wood, notwithstanding that the production of wood was increased. There was also an increase in the amount of nitrogenous matter.

(*To be continued.*)

FLOWER GARDENING IN SCOTLAND.

The growing of flowers, whether for cutting or the decoration of the parterre, and flower gardens in general, has always held a foremost position in Scottish Gardens ; hut at no time have the more useful species heen more popular than at present, and the taste for them seems to be increasing yearly. Thirty years ago, or more, the rage for bedding plants crowded out many of the finest collections of herbaceous plants in the country. Many a cultivator of these, who had arranged them with consummate care, and to whom the names of them were as familiar as A, B, C, had to ohey the mandate of prevailing fashion and clear off his pets to make way for gorgeous beds of Pelargoniums, Verbenas, Calceolarias and

many others favourites, which by far too much monopolised all available space. Even vegetable gardening had to suffer for the same reason. Early borders (and not a few) were year by year crowded with gay flowers which were often swept out of existence by an early frost or rendered so shabby that their entire absence would have been a relief. Other cultivators, and proprietors too, preferred a wiser course, and while they did not discard their useful classes of hardy plants, they maintained their flower gardens as they should be; and their supplies of cut flowers and interesting plants were not reduced. The increase of Carnations, Paeonies, single and Cactus Dahlias, Sweet Peas, Stocks and some other flowers may be seen in almost every well appointed garden, and we think this is as it should be.

Carpet bedding never took a leading position in the North. At one time it was spoken against and written against, and the fine designs seen in the carpet factories at Kidderminister, Exminster &c., were not in evidence in Scottish parterres.

It is questionable if bedding has improved much in the North during the last thirty years. Even in borders some beautiful work was seen in those days. Take as examples—a long wide border at Dalkeith with many thousands of Lobelia as a ground work, and in the centre all along the border, placed 8 feet apart or thereby, were single plants of Centaurea candidissima; a band of Cerastium tomentosum formed an edging. Everyone who saw that border admired it. At Archerfield there was a long border backed with Humea elegans, then in, a broad band of Verbena venosa, about every 8 feet was placed along the centre a seakale pot with plants in each of Centaurea, keeping them clear of the Verbenas. A band of variegated Jacob's-ladder ran along the front, then an edging of dwarf, golden or bronze Pelargoniums completed a picture as fresh in my mind now as it was thirty years ago. Another picture, out of scores, was at Dysart House, which was simply a long border of snowy white Cerastium with circles in the centre, equidistant, in which were planted pink Pelargoniums, which bloomed profusely. A band of fine dwarf blue Lobelia edged with variegated Pelargoniums formed another picture, which was in my opinion exquisite. No one attempted to charge the designers of these immense borders with taking their designs from carpets or drapery of any kind, as often has been the case with many promoters of "carpeting" with flowers. I could, however, describe many beautiful pictures in carpet-bedding, neither formal nor unnatural looking.—*M. Temple, Carron, N.B.*

THE BEST TWELVE ORCHIDS FOR BEGINNERS.

Having arrived at the end of my task of putting before the readers of The Gardening World what I consider to be the best twelve for those intending taking up the culture of this most fascinating family of plants as a pleasing and, when well grown, a profitable pastime, I almost wish I had taken a wider scope, say twenty-four kinds. We could then have included others equally as easy to grow, as cheap to buy, and as beautiful when in flower. If, however, I have by the cultural hints given been the means of helping anyone in the slightest degree I shall be well pleased.

For my final effort I shall take the Genus Zygopetalum. There is a good number of this family worthy of a place in any collection. Some of them have creeping rhizomes such as Z. Gauteri and Z. rostratum, and should be treated as purely epiphytical plants by fixing them them to pieces of Tree Fern, or to rafts of teak wood, with some very rough fibrous material for the roots to run in. The one which I shall select for the last article is Z. Mackayi. This species is so accommodating that it is found growing very well indeed under all kinds of conditions. Being a native of Brazil it naturally requires a fair amount of heat, and is always found doing best when grown with a mixed collection of stove and warm greenhouse plants. Here it gets a little more light than is generally afforded plants when growing in the Orchid house proper; and besides this it gets an occasional dose of manure water when the other occupants are being fed.

It makes a great quantity of roots, and must therefore be given plenty of rooting room, and should be treated as a terrestrial subject.

The compost we find best suited to this species consists of lumps of peat, fibrous loam and chopped Sphagnum moss in about equal parts. To this add some coarse river sand or, better still, some small bits of crocks; this keeps everything open and porous.

The plants being strong growers pot culture is best for them. Always afford a fair amount of drainage, but not so much but that there is room for a good layer of the compost for the base of the plant to be potted to rest on. When finished the rhizome of the plants should be just above the rim of the pot.

Watering.—Newly-potted plants, no matter what, should always be watered with great caution; for although they may appear to the eye to be dry, it is only just on the surface. If the plants shrivel a little it will do no harm. Keeping the atmosphere about then fairly moist will obviate this.—*C.*

LOBELIA CARDINALIS.

"What! that a Lobelia?" is a remark frequently, made by those who are familar with the dwarf bedding varieties, when their attention is drawn to it, being so unlike them in its habit of growth. It is one of the most striking and beautiful late summer and autumn flowering plants we have, sending up its spikes of flowers ranging from 2 to 3 ft. in height. The foliage is of a bright bronzy purple setting off the large rich scarlet flowers to great advantage. When used in a bedding out arrangement it should be planted on a carpet of other things, as for instance Centaurea candidissima, and Mesembryanthemum cordifolium variegatum. Another beautiful combination is made by planting it with Chrysanthemum frutescens. It makes a fine plant grown in pots for greenhouse and conservatory decoration, but should be kept outside till nearly in bloom. It requires good rich soil and abundance of water during the growing period. Although generally classed as a hardy plant it proves oftentimes anything but that; and in order to preserve it through the winter the stools should be lifted and planted in boxes, using leaf mould principally, and kept just sufficiently moist through the winter. Early in the season they may be split up into single crowns, and potted into large thumbs and finally planted out in their summer quarters during April or May. A good stock by this method may be reared in a season or two from very small beginnings. This is one of those things which ought to find a place in every garden and is well worth the little attention needed to keep it; yet from what I see of it how frequently it is allowed to die out.—*W. B. G.*

PLANTS RECENTLY CERTIFICATED.

The following awards were accorded by the Royal Horticultural Society on the 13th inst.:—

Orchid Committee.

Laeliocattleya canhamiana albida. *Nov. var.*—The sepals and petals of this variety are white and the flowers very large. The lip is also of great size, with a bold, orbicular, bifid, and crisped lamina of an intense crimson-purple, and having a narrow, lilac margin. There is a small golden blotch in the throat lined with golden veins, and crimson towards the base. The outer face of the tube varies from white, tinted with lilac, to purple and dark purple in different individuals. It is a very fine variety of a magnificent bigeneric hybrid. Award of Merit. Messrs. J. Veitch & Sons, Ltd., Chelsea.

Phaius ashworthianus. *Nov. hyb.*—The parents of this distinct subject were P. Mannii and P. maculatus. The leaves are lanceolate and plaited with long petioles. The sepals and petals are golden yellow, slightly tinted with bronze. The middle and side lobes of the lip are lined and marked with a dark orange brown, the rest being yellow. In these particulars the hybrid takes largely after P. maculatus. Award of Merit Messrs. F. Sander & Co., St. Albans.

Floral Committee.

Nymphaea marliacea albida.—The flowers of this Water Lily are of magnificent appearance, measuring 9 in. in diameter. The petals are broad and purer white than the original N. m. alba, with the exception of a pink tint towards the base of the outer petals. A golden mass of stamens occupies the centre. First-class Certificate. Leopold de Rothschild, Esq. (gardener, Mr. J. Hudson), Gunnersbury House, Acton.

Nymphaea elliottiana.—Here the flowers are very much smaller, measuring only 3½ in. across; but their intensity of colour makes up for size. The outer petals are rosy-purple, but the inner ones are dark purple, red or claret; and the stamens are orange red. Altogether it is a distinct and beautiful Water Lily. Award of Merit. Leopold de Rothschild, Esq.

Platanus orientalis acerifolia argenteo-variegata.—The older leaves of this boldly variegated variety of the London Plane are splashed and blotched with silvery white; but many of the young leaves of the growing shoots are mostly or wholly white giving the tree a striking appearance at least while the leaves are young and fresh. First-class Certificate. Mr. John Russell, Richmond, Surrey, Haverstock Hill, N.W., and Brentwood, Essex.

Salvia bicolor.—The stems of this Salvia attain a height of 4 ft. and produce branching stems, terminating in long racemes of large, bold and bicoloured flowers. The upper lip is light blue as well as the side lobes of the lower lip; the middle lobe of the latter is deeply concave, forming a pouch, and white. The leaves are large, irregularly pinnatifid and dark green. Altogether it is a very showy, hardy plant, and comes from Morocco. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain).

Begonia Miss Griffiths.—The flowers of this tuberous variety are of huge size, with regularly imbricate, and beautifully goffered and crimped petals, that are white and more or less decidedly tinted with flesh. The flowers are borne on short, stout, upright stalks, and when well grown have a magnificent appearance. It was raised by the Rev. Edwin Lascelles, Newton St. Loe, but was exhibited by Mr. B. R. Davis, Yeovil. Award of Merit.

Calochortus Plummerae aureus.—The outer segments are usually large and yellow, with two brown blotches on the face. The inner segments are golden yellow, obovate, covered across the middle with a heavy beard of club-shaped hairs, culminating in a dense mass of the same in the centre. They also have a brown band across the centre. The plant grows 2½ ft. to 3 ft. high, and is very handsome. Award of Merit. Messrs. R. Wallace & Co., Colchester.

Carnation Miss Violet Douglas (Douglas).—This is a fancy yellow ground, of a soft yellow, closely and finely lined and striped with scarlet and rose. Award of Merit. Mr. J. Douglas, Eden Side, Great Bookham, Surrey.

Carnation Badminton (Martin R. Smith).—Here also we have a fancy yellow ground, with a narrow edge of soft and short red lines, and a few longer ones. The petals are entire, and the flowers of great size. Award of Merit. Mr. J. Douglas.

Carnation Pelegia (Douglas).—The large flowers of this fancy Carnation are heliotrope, striped and flaked with soft scarlet. The petals are entire at the edges. Award of Merit. Mr. J. Donglas.

Carnation Sir Henry Irving (Douglas).—In this we have a dark, velvety, maroon self. The petals are entire, but more or less incurved at the edges. This, as well as the previous three, are border varieties. Award of Merit. Mr. James Douglas.

Rose Sylph.—The flowers of this Tea Rose are of a soft rosy-pink overlying cream, and ultimately, the outer petals at least, fade to cream. The buds are conical with a few spreading and revolute petals, and gradually become very much expanded. The flowers are deliciously fragrant. Messrs. William Paul & Son, Waltham Cross.

Lobelia tenuior grandiflora.—The leaves on the lower part of the stem of this plant are tripartite, with the segments trifid. The stems are about 15 ins. to 18 ins. high, hairy, and terminate in a raceme of large blue flowers with a white eye. The lower lip is large and the upper one remarkably small for such a large flower. Award of Merit. Mr. B. Ladhams, The Shirley Nurseries, Southampton.

Aristolochia brasiliensis.—The huge inflated tube of this species is marbled with blackish-purple on a white ground. The lip is of great size, bifid, silvery-gray, marbled and netted with dull purple. The plant is a climber, suitable for a tall Palm stove or a warm conservatory. Botanical Certificate. A. Kingsmith, Esq., Harrow Weald.

A meeting of the Floral Committee of the Royal Horticultural Society was held at Chiswick on Wednesday, July 14th, W. Marshall, Esq., being in the chair, and ten members present. The following subjects received Awards of Merit.

SWEET PEA PRINCE OF WALES.—A fine variety with flowers of a bright rose hue. Mr. Henry Eckford, Wem, Shropshire.

SWEET PEA COUNTESS CADOGAN.—A grand bright blue variety with flowers of great size. Mr. Henry Eckford.

LANTANA DRAP D'OR.—This pretty Lantana is of compact habit, and grows to 10 in. or 1 ft. in height when grown in pots. In the open ground it is even dwarfer, and is from 4 in. to 6 in. in height, making a dwarf and effectual bedding plant. The flowers are produced in relatively large, semi-globular umbels. The flowers are golden-yellow in colour with an orange eye. The leaves are variable in shape, and range from ovate to ovate-lanceolate. They are deep green in hue, and have acute apices with serrate margins. Both surfaces are coarsely hispid.

LANTANA HYBRIDA.—This Lantana is taller and of more straggling habit than the last named, and reaches a height of some fifteen inches. Both as a pot subject and a bedder, this is a most useful and ornamental plant. The flowers are produced in umbels, and are orange-crimson in colour with a few orange flowers in the centre of the umbel. The leaves vary from ovate to ovate-elliptic, with serrated margins. As in Lantana Drap d'Or, both surfaces of the leaves are hispid.

Pentstemons and Antirrhinums were also examined by the committee, but no awards were made.

A trial of fifty-three varieties of culinary Peas has been conducted at Chiswick this year, and at a meeting of the Fruit and Vegetable Committee on July 14th the undermentioned varieties received Awards of Merit.

PERFECTION.—This is the true and original Perfection, a variety of some forty years standing, and therefore, not to be confused with another more modern variety. The haulms and pods are grass green in colour. The pods are straight, usually borne in pairs, and contain, on an average six wrinkled peas in a pod; height 3½ ft.; cropping qualities good; fit for use July 14th. Messrs. R. Veitch & Son, Exeter.

MAJESTIC.—Here the haulm and pods are deep green, and the pods, carried in pairs, contain an average of seven large wrinkled Peas. The flavour is excellent, and the crop very heavy. Fit for use July 14th; height 2½ ft. Messrs. Watkins & Simpson.

CAPTAIN CUTTLE.—This is a taller variety with a height of 5 ft. in an ordinary season. The haulm is dark green, and the pods paler green, straight, and containing six wrinkled peas on the average. This is a heavy cropping variety, and was ready for use July 14th. Messrs. Hurst & Son.

In addition to the foregoing Awards of Merit, three sorts obtained a verdict of "Commended," represented by XX. They were,—

HARBINGER.—A very heavy cropper, and good market variety which comes in very early, and reaches a height of 4 ft. The pods are in pairs, and yield six peas each. Messrs. Dicksons, Limited, Chester.

SACCHARINE.—Here the haulm and pods are dark green, the pods averaging seven large peas of the same hue. The crop is a heavy one, and was fit for use on June 29th; height 5 ft. Mr. Sim, Aberdeen.

SANS PARCHEMIN.—A fine variety of the butler or edible podded Pea. The flavour is very sweet and good. Ready for use July 1st; height 3 ft. M. M. Vilmorin-Andrieux & Co., 4, Quai de la Megisserie, Paris.

First-class Certificates were accorded to the undermentioned Pansy and Violas by the National Viola Society at Regent's Park on the 17th inst.

VIOLA JAMES P. ROBERTSON.—The flowers of this Viola are of large size and rich purple, with a black centre, shaded with violet. They are also circular in outline, bold and striking. Mr. John Forbes, Hawick, Scotland.

PANSY JOHN MENZIES.—This is one of the most handsome fancy Pansies that has recently been added to this class. The three lower petals are each largely covered with an intense, blackish-violet blotch, margined with white. The top petals are nearly white, veined and shaded with violet. It is circular in outline and otherwise very perfect. Mr. M. Campbell, High Blantyre, Lanarkshire.

VIOLA ENDYMION.—The flowers of this beautiful variety are circular and clear yellow, with a large golden eye and a few short rays on the three lower petals. It is a neat and very refined flower. Mr. W. Baxter, Woking.

THE PLANT HOUSES.

The Stove.

IF the instructions with regard to the ventilation of the stove given in the last calendar have been carried out the plants should now be pretty hardy, and capable of standing a good deal of knocking about. Advantage may be taken of this at once to put in hand any necessary repairs to the heating apparatus. At this season of the year the solar heat may usually be made to serve all purposes if needs be, and with their firm tissues the plants can very well put up with a drop in the temperature. No matter how well pipe joints are packed there will be a leak now and again. Fire bars, too, have an awkward knack of getting burnt through, and it is well to remedy these deficiencies while the opportunity is here.

The resources of the stove are usually drawn upon to furnish plants for the decoration of dwelling rooms, corridors, etc., and although this experience is not so trying to the plants as it is during the winter months it is yet sufficiently injurious. Many nooks and corners in the mansion that it is expected should be kept furnished with plants are dark and gloomy, added to which there is not infrequently a difficulty in giving sufficient water. In order to make the best of things, therefore, it is needful to have a good stock of suitable plants to draw upon, and to make frequent changes, so that no plant is allowed to remain under the trying conditions long enough to sustain serious injury. To say the least of it, it is annoying to send a lot of good healthy plants, and to receive them back again in a crippled condition. With Dracaenas that have been much knocked about it is often the best plan to take off the tops and insert them as cuttings, and use the remainder of the old stems for propagating. If the plants were allowed to remain, and an attempt were made to grow them on they would be a considerable time before they pulled round, and would never be as good as they were before the crippling, the loss of the lower leaves giving them a lanky appearance. It will be well to take all such enfeebled plants to a close pit or smaller house where they will pick up much quicker than they would in the larger stove.

CROTONS IN SMALL POTS.—A mistake made by many gardeners in growing Crotons is that of overpotting. True the plants may appear to need the room, and may even fill these larger pots fairly well with roots, but the plants have not that hardy constitution, neither have they the brilliantly coloured foliage of others whose root run is more restricted. For table decoration a thirty-two sized pot is quite large enough, unless for a large table. Now in a pot of this size it is possible to have symmetrical plants with leaves right to the base. Such varieties as C. Queen Victoria, C. Weismannii, C. Warrenii and C. angustifolius all answer well to this kind of treatment, and all are elegant and useful for the purpose. Firm potting is of course an essential to success, inasmuch as it conduces to the production of firm and short jointed growth. Once the pots have become well filled with roots feeding must be liberally done, for in their confined quarters the plants will require a good deal.

ARISTOLOCHIAS.—When properly grown there are no plants more conspicuous in the stove during the summer months than the Aristolochias. The main stems may be trained evenly to wires on the roof, but the young flowering growths should be allowed to hang their whole length. The peculiar form and weird appearance of the flowers is strangely attractive, although the foetid odour of such a form as A. gigas Sturtevantii is sufficiently pungent. A. ornithocephala, A. elegans, and A. brasiliensis are all handsome climbers and well worthy attention. The shrubby little A. tricaudata is also a pretty plant about 3 ft. in height. At the present time these Aristolochias will require an abundance of water, and an occasional regulation of the growths by means of the knife will not be amiss, particularly with such strong growers as A. ornithocephala, and A. brasiliensis.

Cool Conservatory.

Here there should be no lack of material for many plants that require an intermediate stove during the winter will do through the summer in the conservatory. Then besides these there are the usual relays of summer flowering plants.

FUCHSIAS in themselves are a host. No matter whether grown cordon fashion as roof plants or in pots in the ordinary way they always give a good account of themselves. Large well-flowered specimens are not so frequently seen as they used to be, chiefly because the rage for large trained plants has greatly abated, but still they are to be seen now and again, and the system suits Fuchsias admirably. Bearing in mind what a heavy strain is upon the plants manurial stimulant must be freely given. Thrips are the only insect pest to be greatly feared, but a close watch will have to be kept upon them, for they soon disfigure the leaves, and thus spoil the appearance and cripple the constitution of the plants.

GLOXINIAS throughout the months of June and July may be had in abundance in the conservatory, and very handsome they look when arranged with the cool green of Maidenhair Fern. Their own foliage too is handsome, and when well curled over well-nigh hides the pots from view. As the plants get past their best and become shabby they should be removed to a frame where they may be allowed to finish their growth at their leisure, and also to ripen any seed that it may be desired to save. Unless seed is required the seed pods may as well be cut off at once. The plants will still need to be shaded from the hot sun which scorches up the foliage at a great rate.

SHOW AND REGAL PELARGONIUMS.—The later plants are now following the earlier ones, and their flowering season is to all intents and purposes over. A few of them may be kept a little longer by dint of a good picking over, but they will not last long. The next place for them is a sunny corner in the frame yard where they can ripen up their wood in readiness for the application of the knife.

TUBEROUS BEGONIAS, whether grouped by themselves or set up with ferns or other foliage plants, are the most useful of all. Naturally the plants are now past their first flush of bloom, and the ever-lengthening stems render them increasingly unstable, and thus plants which require no support in the earlier part of the season will now need to be looked after in this respect. The insertion of the stakes must be carefully performed, otherwise the tuber will run a risk of injury. The single forms seem to have reached very near to their limit of perfection, but the doubles are not only being improved year by year, but are also grown in increasing quantities every season. A few crosses between extra good plants may well be tried, if only for the sake of amusement. There is a charm attached to the raising of new varieties from home-grown seed that is not associated with other seed. Basket plants are just now in the height of their glory, and if only plants of suitable habit are chosen for the purpose such baskets are among the most effective that can be obtained for suspension in the conservatory. Any plants of suitable habit that are now in pots should be marked for next year.

BALSAMS in 6 in. and 8 in. pots are very bright and showy, and as there are now so many colours obtainable succession batches should be grown on through the summer. As soon as the buds begin to form give plenty of stimulant.

ACHIMENES, too, can scarcely be overpraised. The earlier plants, of course, are grown on in heat, but those now in flower have been grown on slowly in cold frames. Such plants are invariably dwarfer and sturdier, and the flowers being of greater substance last longer. Flowering over, these plants, too, must be transferred to a cold frame to finish up, but not, as is frequently the case, neglected entirely for water.

SCHIZANTHUS PINNATUS is a hardy annual that is first-class for conservatory decoration. Seed sown in March produces plants that flower abundantly through the summer. S. Priestii, the white flowered form, is also good. S. retusus, with its bright rose-coloured flowers, answers equally well for pot culture, although it is not quite so hardy as S. pinnatus, which will grow and flower freely out of doors.—*A. S. G.*

HINTS FOR AMATEURS.

Strawberries.—The greater part of the labour that it is necessary to bestow upon the Strawberry has to be got through within a comparatively small time limit. Scarcely have the last fruits been gathered from the plants than propagation has to be paid attention to. It is not a good plan to keep the old plants growing on year after year, because the fruit they yield gradually becomes very inferior in size and quality as well as quantity, and this for two reasons. First of all the plants themselves are seriously handicapped by the weakness of old age. Then the soil become impoverised to a considerable extent, and although manures of various sorts may be applied this does not quite obviate the difficulty. Any soil which is to grow good Strawberries must of necessity contain liberal supplies of suitable plant food, and, moreover, must yield up these supplies freely and readily. The Strawberry requires a great deal of food within a comparatively short time, and although it does not take much out of the soil for the greater part of the year its requirements during the flowering and fruiting periods are very great.

As a rule, from three to four years is quite long enough for a Strawberry plantation to be allowed to remain. After the lapse of that length of time the fruit is distinctly second rate in quality and yield. Some growers, indeed, and their numbers seem to be on the increase rather than otherwise, prefer to treat the plant as an annual, *i.e.*, raising and fruiting it within the year. Now while there is a good deal to be said for the practice in cases where only the finest fruit is in demand, it would entail a good deal of unnecessary labour in the case of the majority of amateur growers, who want plenty of fruit of fair quality, with the minimum of trouble and expense. There are other growers who go to the other extreme and work their plantations to death, and instances are forthcoming of cases where beds have been in existence for eight, nine, and ten years. This must be regarded as exceedingly bad gardening, however.

In a garden where three or four plots of Strawberries are grown it is a good plan to destroy the oldest bed each year, and make a new one to take its place. Thus it is necessary to raise a quantity of young plants each year in addition to those required for forcing, where the latter is carried on. Every healthy Strawberry plant throws out from its centre a number of runners. These take root in the ground naturally, and produce young plants connected with the parent by long, slender, creeping stems. The gardener takes advantage of this habit on the part of the Strawberry to increase his stock as he wishes. Once the young plants have struck root, and this they do very expeditiously, the connection between them and the parent is of no importance, as they are perfectly able to support themselves, and lead an independent existence.

As soon as the fruit is gathered off must come the nets from the beds and "layering," that is pegging down the young runners, must commence. If left alone these runners would root into the vacant ground lying between the rows. Some cultivators allow them to do this, and leave the beds just as they are until the runners have made sufficient roots to warrant shifting. They are then planted straight away in their fruiting quarters. The system generally adopted, however, is to layer into small pots filled with soil. Small 60-sized pots will be found very handy, and quite large enough for all purposes, as the layer should not be allowed to stay in them for long. In preparing the pots put one crock only in th bottom, and fill up with any soil that may be obtainable. Some which has been used previously for Fuchsias, Pelargoniums, or other pot plants, will answer admirably. Make this soil fairly firm. A quantity of fairly stout wooden pegs will also be required. These should be about 3 in. in length, and have a good hook at the end.

In layering, choose the strongest runners bearing vigorous little buds or plants with three or four leaves to each. Scrape a little hole in the soil in the pot so as to receive the base of the bud, and keep the young plant in its place by pegging it firmly down with one of the pegs previously referred to. This is really all there is to do, as far as layering itself goes. All that remains is to keep the plants well supplied with water daily. In a few weeks they may be severed from the old plants, and shifted out of the way so as to admit of the old plants being trimmed over, and the bed put ship-shape again.

Violets.—Young plants of Neapolitan, Marie Louise, Comte de Brazza, and other double Violets resulting from division of the old plants in May will want a little attention now, for the weather has been very trying of late. The best place for them throughout the summer is a cool border facing either to the north or to the east. Here they are not distressed by the fierce rays of the sun; although the dry weather is bound to have a weakening effect upon them. If good strong plants are required for the filling of frames, or for pot work, by the end of September they must be assisted now by every possible means. They are given to making a lot of runners, which weaken them to no purpose. They should be gone over occasionally, therefore, and all the runners cut back. Weeds must be kept down, and the surface soil between the plants should be stirred now and again by means of the Dutch hoe. A few good soakings of clear water also will do them all the good in the world.

Carnations.—Just now the Carnations are the most conspicuous flowers in the flower garden, although the bright weather has been trying them sadly. The sun is sure to take the colour from many of the flowers, particularly the rose-coloured ones. This shows how necessary it is to grow a few plants under glass where they can be shaded, when flowers are required for show purposes. For conservatory decoration, moreover, a few pot of Carnations are no bad stock. If it is desired to keep the collection up to a good standard notes should be taken of any flake or bizarre forms in which the colours have run. These sections are very fond of this behaviour, and it is oftentimes a matter of difficulty to keep the class markings true for very long. A bizarre or flake that has gone wrong is usually a very poor object, and may as well be marked for destruction at once.

Seedling Carnations.—The raising of Carnations from seed is a most interesting occupation, and provided the seed is obtained from a reliable course, is not an unprofitable one. Every little plant is a store of possibilities of great things, and if the greater part of them prove to be worthless it makes the pleasure of finding a good thing all the sweeter when it does come. Naturally among a batch of seedlings there will be many weedy and worthless varieties, and the flowers will show all stages from single to double with a wondrous variety of colours. The flowers of most of them, if of no great merit, as judged from the florist's high standard, yet come in very useful for cutting, and give a blaze of colour in the garden. It will go against the grain, therefore, to pull them out now, but the good varieties must be marked in order that they may be cared for and propagated presently.

Spiraea ariaefolia.—This, the white beam-leaved Spiraea, is one of the best of the members of the hard-wooded section of the genus, and one of the handsomest shrubs in the flower garden during July. In appearance, of course, it is altogether different to the plant which is popularly known as Spiraea japonica, and which is not a Spiraea at all but an Astilbe. It is an erect bushy shrub growing to a height of from 6 ft. to 8 ft. It takes on a very symmetrical appearance, and is admirably adapted for planting to form specimens in small beds near the house. In such a position its elegance and beauty are much better displayed than when the plant is cramped away in a shrubbery amongst other subjects. It is perfectly hardy, and will grow in almost any soil, although it prefers a rich, deep, and well worked medium to root in. Given such conditions it grows vigorously, and flowers freely each year. The flowers are produced in large drooping panicles, and are of a rather dirty white shade of colour. It is a native of America, where it is most abundant on the north-western coast, and from whence it was introduced in 1827. It has thus had plenty of time to make its merits known, but up to the present it can scarcely be claimed that its value has been fully recognised. For amateurs' gardens it can scarcely be too highly praised. It resists the smoke fairly well, but, as may be expected, does better in the country than in the town.—*Rex.*

The Cinnamon Gardens of Ceylon are said to yield from 250 lbs. to 500 lbs. of Cinnamon per acre.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Gloire de Dijon Rose.—*S. Craig*: The plant has evidently been greatly neglected, and has possibly not seen a pruning knife for a considerable number of years. The dead wood may, of course, be cut out at any time: there is no necessity to wait for winter to do that. The remainder of the pruning, however, must be left until the latter season. For the present, after cutting the dead branches clean out it will be well to drive in a few nails, tie up the larger branches roughly so as to prevent them from being broken by autumn gales. After growth is over you may make an effort to properly prune and train the tree. We shall be pleased to give further particulars if you require them.

Strawberry Plantations.—*David N.*: Three years is a good time to allow Strawberry plantations to stand. Some growers plant each year, and claim that they get finer fruit thereby, which is doubtless true. At the same time excellent fruit and plenty of it is borne by the plants in the second and third years. After then, the size and quantity decrease materially.

Manures for Calanthes.—You will find liquid cow manure a capital stimulant for the Calanthes, *Dodo*. You may give it at alternate waterings with excellent results. Strive to get the liquid without any of the solid matter. It may be necessary to strain it through a piece of coarse canvas in order to get it sufficiently clear.

Ringing a Dracaena.—*W. L. T.* has a tall plant of Dracaena congesta which is too large for him. Accordingly, he wishes to take off the top and obtain a young plant from it. A friend advised him to "ring" the top of the plant, as this is safer than cutting it off and putting it in as a cutting. He writes to ask for instructions as to how to do the "ringing."

Take a sharp knife and make two circular cuts round the stem through the bark, about one-third of an inch apart. The zone of bark may then be removed. Bind up the wound with a little damp sphagnum moss, keeping the latter in place by means of strings of raffia bound firmly round. This moss must be kept damp by means of syringing. Roots will then be made in the moss and in a few weeks time sufficient roots will have been made to warrant the severance of the top from the main stem It may then be potted up in ordinary soil.

Croton Queen Victoria.—I have a plant of this Croton in a 6-in. pot. It is about 18 in. in height but has not been doing at all well of late. The soil appears to be full of roots. Would you advise repotting.—*D. Garson.*

The probability is that your Croton has not sufficient nutriment, but we would not advise you to pot it now. A 6-in. pot should be quite large enough for a plant of the size. You must feed it therefore with manures. Try some liquid cow manure prepared in the same way as that recommended to *Dodo*. To this add a little clear soot water, and give enough of the stimulant to nicely colour the water that you use for watering. If root action is pretty vigorous this stimulant may be given about once a day.

Tomatos.—About the middle of June I had a misfortune with one of my Tomato plants and broke it in two about half way down the stem. I carefully adjusted the two pieces and tied them firmly together. I notice now that a complete union has been formed, and the former wound is only marked by a slight swelling. Is this an uncommon occurence?—*J., Reading.*

Possibly not so common as it would be were it not for the fact that few people who break a Tomato in such a manner take the trouble to bind up the pieces in the way you have done. There is nothing extraordinary, however, about the two pieces growing together. They probably would, in nine cases out of ten, if the binding up was well done.

Dictamnus Fraxinella.—Please tell me how to propagate this pretty herbaceous plant. Will it come from seed?—*Amateur.*

The plant may be raised easily from seed which should be sown, to copy Nature, as soon as it is ripe. Divisions of the roots made in spring will also grow freely, and will soon make plants, and most growers prefer the division system to the seed sowing, as yielding quicker results.

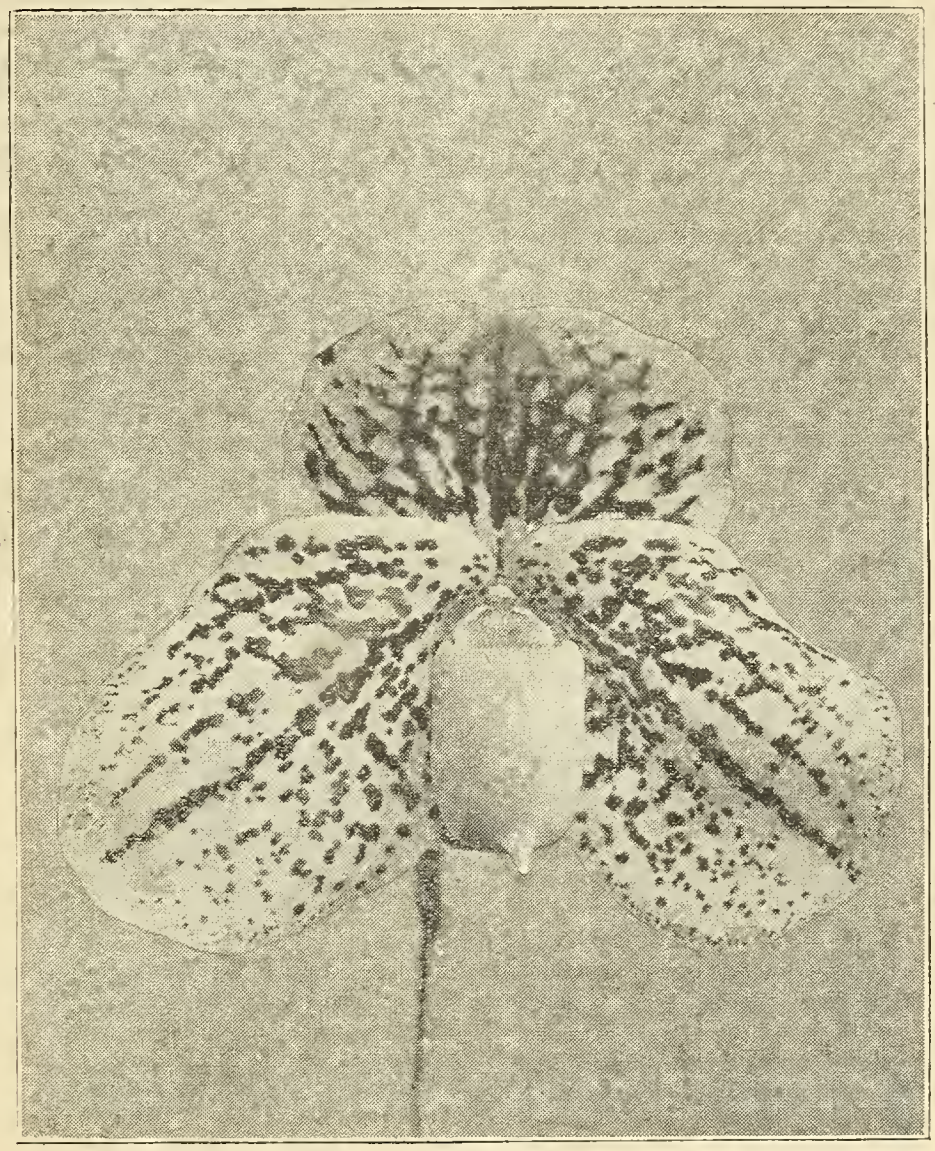
Poinsettias.—Please tell me if Poinsettias will grow in a cold frame for the remainder of the summer.—*Reader.*

If the plants are fairly vigorous and well advanced, a frame will do for them until autumn, providing, of course, that it is deep enough. Poinsettias are apt to get "leggy" and the frame will have to be a deep one to contain them for long. If the plants are backward it will be advisable to keep them growing on in a warmer house until the beginning of August, when they may be transferred to the frame if desired.

CYPRIPEDIUM GODEFROYAE LEUCOCHILUM GRANDIFLORUM.

Some time ago three cases of Cypripedium Godefroyae were imported and divided between R. I. Measures, Esq., of Cambridge Lodge, Camberwell, and R. H. Measures, Esq., The Woodlands, Streatham. When the plants had been established and flowered some grand varieties turned up amongst them, including specimens of the beautiful white-lipped C. G. leucochilum. Some time ago we mentioned one that was quoted at a very high price. That under notice turned up in the collection of R. I. Measures, Esq., and is notable for the great size of its flowers as the name would imply, as well as for the beauty of its markings. It is both choice, select, beautiful, and would command a high price if put upon the market. What is good to sell is also good to keep, and we have no doubt that the owner is proud of it, as well he might be.

The flower measures 3½ ins. across the petals, and each of the latter is 1¾ ins. in diameter, thus testifying to the magnificence of the flower. The dorsal sepal is white, lined or banded longitudinally with blackish-crimson veins; these are united in a network by means of numerous transverse bands on the lower portion. The declinate petals are broadly oblong and heavily netted with blackish-crimson on a white ground. The lip is pure white, and smooth, contrasting markedly with the rich markings of the sepals and petals. The accompanying illustration prepared from a photograph sent us by R. I. Measures, Esq., shows a peculiar pointed development on the front of the lip, but this is merely an accidental freak, not likely to turn up again. We have seen a similar freak in another species. The grand variety under notice was recently shown by the gardener, Mr. H. J. Chapman, at a meeting of the Royal Horticultural Society and the lip was perfect.



Cypripedium Godefroyae Leucochilum Grandiflorum.

TURNFORD HALL NURSERIES NEAR BROXBOURNE.

The owner of this wonderful and gigantic establishment is Mr. Thomas Rochford. Miles of glass, tons of fruit and millions of plants are here to be seen in the best possible condition, a sight in horticulture that no one interested ought to miss seeing. It is educational to visit such establishments in many ways, and gives one an idea what is required for market purposes more particularly.

This place is well kept, and a model of cleanliness. Good order is in strong evidence in every department; not only good order, but everything is as well done as it is possible to do it. There are Palms of all the leading varieties by the thousand, from the tiny seedling to gigantic specimens 20 ft. high, and of all intermediate sizes. Every plant is a plant in the true sense of the word, not drawn up and spindly, but nice, compact, healthy, clean, well grown and fit for any kind of purpose for which it is required. Of course Kentias are the favourites. K. fosteriana, K. australis, K. belmoreana, and K. canterburyana are here to be seen in their thousand in various sizes. The same may be said of Latania borbonica, Areca lutescens, A. Baueri, Corypha australis, Cocos weddeliana, and C. plumosa, Phoenix in variety, Rhapis, Seaforthia elegans, &c. Noticeable is a fine batch of half specimen Pritchardia grandis (Licuala grandis) perfect in shape and form. Palms here occupy many dozens of houses. In addition to their being so well done, they are splendidly arranged which greatly adds to their appearance. The requirements for their well being has well been studied by the owner, for better houses could not be built for their practical accommadation.

Ferns.

These are grown by hundreds of thousands, dozens of houses being devoted to their culture. Kinds only are grown suitable for decorative purposes. Various Adiantums, Aspleniums, Cyrtomiums, Lomarias, Nephrolepis, Phlebodium, Pteris in many stages, are here to be seen to perfection—from the tiny spores just germinating to fine specimens. All the leading sorts of those enumerated, like the other stock, is everything one can desire.

Foliage Plants.

Aralia, Araucaria, Aspidistra, green and variegated, Crotons, all the leading sorts, Cyperus, Dracaenas, beautifully coloured, Ficus elastica, and Pandanus Veitchii, a magnificent stock well coloured, are grown. Heliconia illustris is also splendidly grown and well coloured. Nepenthes also receive attention, as suspended from the roofs of some of the houses are some well-grown specimens, splendidly pitchered. Such sorts as N. Courtii, N. Curtisii, N. hookeriana, N. Rafflesiana, N. Burkei, N. mastersiana, N. mixta, and N. Morganiae are cultivated. The pitchers are large and well coloured. Other foliage plants such as Caladiums, Asparagus, &c. are likewise grown in large quantities.

Flowering Plants and Orchids.

Several new houses have recently been erected for the cultivation of Orchids, not a general collection, but those most suitable for cutting purposes. It is about two years since the worthy owner commenced purchasing Orchids. Since then he has bought thousands of Cattleyas, Laelias, Cypripediums, Dendrobes, Oncids, Odontoglots, Coelogynes, &c., and other popular kinds are here by the thousand. They are doing remarkably well; also the houses are well adapted for the purpose, and under the fostering care they are receiving will, I am sure, give a good account of themselves. Many fine forms of Cattleyas and Odontoglots from imported plants were in flower at the time of my visit. Good things are always cropping up in importations, and from what I saw, the owner is sure to find something good and new. I trust many will reward him for his spirited venture.

Chrysanthemums, Hydrangeas, Azalea mollis, Lilacs, &c., are grown. Over 72,000 Chrysanthemums have been potted up and look most promising; they, like his other stock, are of the best.

Bulbs.—Last season six millions of single crowns of Lily of the Valley, one million Tulips of various sorts, forty thousand Hyacinths; sixty thousand Narcissus, and other bulbs were grown for market purposes, besides thousands of Liliums. At the present time the stock of Tuberoses potted is upwards of sixty-five thousand. I am giving you low figures when I state the quantity.

Grapes.

These are grown by the ton. Large spacious Vineries carrying enormous crops of fruit are here by the dozen. Vines are in splendid condition, the foliage grand, and the fruit better if possible. Useful sized bunches for market purposes are required, and here they are by thousands. Gros Colman is the leading sort. Black Hamburgh, Alicante, Lady Downes, and Muscats are the other favourite kinds. I question if ever finer crops of well-developed bunches could be produced. They have the appearance at the present time of being everything that could be desired, and look like finishing A 1.

Tomatos.

Dozens of houses are devoted to their culture; some are planted out, others being in boxes and pots. All alie are doing well, producing fine crops of good shaped well coloured and highly flavoured fruit, each plant producing dozens, for the variety is most prolific. It is Mr. Rochford's own raising. He can find nothing to equal it for his purpose and like a sensible man, will stick to it till he finds a better. Hundreds of pounds of fine fruits are cut daily, and have been for some time past, and a succession will be kept up through the season.

Cucumbers.

Many houses are likewise devoted to them. The variety is Mr. Rochford's own raising, and like the foregoing it suits him well. Tons of Cucumbers are cut through the season. It is a grand looking Cucumber, very prolific, and of fine flavour. It is a pretty sight

to see the fruits hanging by thousands in various stages, and everything so clean and nice.

To carry on such an extensive place the labour is a serious matter; but Mr. Rochford does not believe in cheap labour. He believes in paying young and old according to their work. Hence he gets the best of labour. He has hitherto found great difficulty in finding accommodation to house his labour. He has now completed rows of cottages with every accommodation and convenience, on the most approved principle, for his married men. For the single men he is just completing what I consider a novelty. A large and commodious building has just been completed, a fine lofty building with accommodation for upwards of fifty men. There is a fine large dining hall where meals will be served at a most moderate sum. Good substantial solid living is the motto, and the men can get their ale and at cost price. This will be under the care of an experienced caretaker. There is also a splendid library, he having just purchased a thousand books of various kinds for the same. Billiard rooms &c. are all on the ground floor. Upstairs there is splendid sleeping accommodation there, being 52 single bedrooms furnished in a most solid and comfortable manner, lofty, airy and well lit up. At the end of each corridor is bath-room and lavatory accommodation galore—in fact, quite luxuries for working men. This I trust will be fully appreciated by them. It shows the noble spirit of their liberal employer. His ambition is to live and let live and as comfortably as one can. It is intended also that lectures and modest amusements will be held in this institution from time to time, educational to the young men, and at no cost to them either. The spacious offices are everything that can be desired.

The necessity of keeping a good stud of horses receives attention. A splendid lot of animals, well groomed and well housed, is another good feature. The packing accommodation is extensive, and everything that is required for that purpose has been well studied and carried out. For the accommodation of railway goods he has his own sidings, conveniently to hand. All the best machinery has been erected for various purposes, including the pumping of water; and, which is one of the principal items, this is done with safety and ease. The houses are of the best workmanship, nothing but 21oz. glass being used. To Mr. Tucker, of Tottenham, is the credit due of erecting these splendid specimens of plant-growing houses. To Mr. Thomas Rochford, I offer my congratulations upon having the largest, finest, and best kept establishment I have ever seen in the whole of my horticultural career, either at home or abroad. It contains the best stock I have ever seen, and suitable for all requirements. To those who intend visiting this grand place I may add it will take them a full day to go through the houses and see the stock; and should they be as fortunate as I was to be conducted round the establishment by the enthusiastic owner, they will, I am sure, spend a pleasant and most profitable day.

One thing that haunted me when going round was the wonderment of where all the produce went to, especially when one considers the many hundreds there are at the same business. But Mr. Rochford dispelled all this by stating many times he could dispose of double the quantity he can produce. This shows that the demand must be much more extensive than is known to many of us.—*Alfred Outram, F.R.H.S., 7, Moore Park Road, Fulham, London, S.W.*

EXAMINATION IN HORTICULTURE.

(*Concluded from p. 731*).

ROYAL HORTICULTURAL SOCIETY'S EXAMINATION IN HORTICULTURE.

APRIL 6TH, 1897.

QUESTIONS.

Eight questions only to be answered; four from Division A and four from Division B.

DIVISION A.

ELEMENTARY PRINCIPLES.

1. What are the three chief mineral ingredients of a soil? Name garden plants or shrubs which delight in each kind respectively.

2. What differences may be expected from growing unripe, perfectly ripe, and long-kept seeds respectively?

3. In transplanting, why is it necessary to preserve the extreme and most delicate tips of the root-fibrils?

4. Why does covering Rhubarb redden and lengthen the leaf-stalks and stop the growth of the blade?

5. Describe the structure of a Hyacinth bulb, and explain why the Dutch method of slashing or hollowing out the bottom induces the formation of bulbils?

6. What are the essential conditions for successful grafting?

7. How does the structure of a Plum differ from that of an Apple? Explain the origin of each.

8. Name the natural orders or families to which the following plants belong:—Cyclamen, Rhododendron, Clematis, Stock, Pelargonium, Borage, Potato, Onion, Parsley and Turnip.

DIVISION B.

HORTICULTURAL PRACTICE.

9. Explain the process of cross-fertilisation in garden flowers, and give examples of both hardy and exotic plants that have been improved thereby.

10. After seed of the Chinese Primula has been ripened describe the method of sowing and subsequent treatment of the plants up to the period of their flowering.

11. What is the native country of the Celery plant, and under what conditions does it grow naturally? Give a short account of its culture, such as time of sowing and subsequent treatment.

12. When and under what conditions is Sea Kale found in a wild state? Describe its culture and state the time of the year it is in use.

13. Where is the common Asparagus said to be found in a wild state? State all you know of its culture, and for how long a period it may be had in use.

14. Give an account of the Apple. How are the trees propagated? State what you know of its culture, and the diseases to which the trees are liable, and the remedies. Name one good cooking variety for use in each month from August to April inclusive.

15. State all you know about the Raspberry. What sort of soil is best adapted to its culture? Give method of training and pruning, and the best varieties to cultivate, both yellow and red.

16. Give an account of the usual method of Gooseberry culture adopted in gardens; and also the Lancashire method to obtain prize fruit. Name six of the best prize varieties and six best for ordinary garden culture.

SOCIETIES.

NOTTINGHAM HORTICULTURAL, *July 14th, and 15th.*

THE show of this society, held on the above date in the Arboretum, Nottingham, was splendid all round, the exhibits being grand. The glorious weather also assisted the show. The entries exceeded those of any previous year in number and quality.

Class I. was for a group of stove and greenhouse flowering and foliage plants, arranged in a space not exceeding 200 sq. ft. The first prize was taken by Mr. C. J. Mee, Daybrook Vale; the second and third respectively by Mr. G. B. Worthington and Mr. C. J. Cox. For a group of plants, not exceeding 100 sq. ft., Mr. J. W. Levers led the way, and was followed by Mr. R. Wilkinson and Mr. T. Smith, in the order named.

For six stove and greenhouse plants, three flowering and three foliage, a special prize of a pair of handsome Silver Mounted Fishcarvers in a case was presented by the Ichthemic Guano Company, as the first prize, and this was secured by Mr. C. J. Mee. Mr. J. W. Levers took the second place in this instance, and was followed by Mr. C. J. Cox.

For twenty varieties of Roses, arranged on a table 6 ft. by 4 ft., the prizes were taken by Mr. G. Taylor, Mr. J. Honeyshell and Mr. W. J. Sanders in this order. In the class for twelve Roses, the first prize was secured by Mr. J. Honeyshell, who was followed by Mr. J. Sanders and Mr. E. Parry.

Considerable interest attached to the class for a collection of indoor grown fruit; and the premier award was secured by Mr. G. B. Worthington, beating Mr. E. Parry. Mr. J. G. Ward had the best collection of outdoor-grown fruit; and was followed by Mr. J. Sanders. Mr. E. Parry came to the front for two bunches of Black Grapes, and was followed by Mr. G. B. Worthington and Mr. J. T. Farmer. The same order was observed for the first two awards for two bunches of White Grapes.

Mr. J. Baker, of the Asylum Commlttee, staged the best collection of vegetables. He was followed by Mr. L. Brown, and Mr. E. Parry, in this order.

Amongst miscellaneous exhibits not for competition a fine group of Gloxinias, Liliums, and Begonias, was set up by Mr. S. Harvey, Blyth Street Nurseries, Nottingham. Mr. W. Colchester, Ipswich, exhibited a fine group of plants grown with pure Ichthemic Guano.

The hon. secretary, Mr. J. M. Steward, was presented with an Illuminated Address, a gold watch, and a gold bracelet for his wife, in recognition of his services for the last seven years. The presentation took place at a public luncheon, by the Mayor, who had previously performed the opening ceremony of the show.

SELBY HORTICULTURAL.—*July 15th.*

The flower show of the above date was no exception to the rule, a very excellent display being made. In the open classes for plants in pots, the various exhibits were quite up to the average, but in a few classes, more noticeably in that of six Fuschias, there was evidence of the damage sustained by exhibitors at the recent York Show. In appearance, Messrs. Simpson & Son's six plants, which have hitherto always figured prominently at the various shows in the district, are utterly ruined—certainly for the present season, and it may be difficult to recover their original beauty. There were four entries for the twelve stove and greenhouse plants, in which Mr. H. Harrison Broadley, of Welton House (Mr. C. Lawton, gardener), maintained the position he has previously held at Selby Show with a very effective dozen, Messrs. Simpson & Son coming second with an excellent lot, and Mr. Jno. Sunley, Monkfryston, being third. The group of miscellaneous plants, of 120 sq. ft., arranged for effect (open), brought out four competitors, each of whose exhibits was of a most creditable order and commanded considerable attention on the part of the judges, none less than that of the visitors, who, in no stinted manner, expressed their admiration. That of Mr. J. S. Sharpe, Almondbury, was really a magnificent group, whilst those of Messrs. Simpson & Son, and Messrs. R. Blackburn & Co., Selby, fell little short of it in merit. In the case for groups (80 sq. ft.), by gentlemen gardeners, Mr. James Blacker, of Thorpe Villas, Selby, exhibited two pretty groups, containing some choice Crotons, as well as other fine foliage and flowering plants, and was deservedly first. Mr. H. Harrison Broadley, of Welton House, Brough, however, ran him very close. In other classes of plants, those gentlemen already mentioned were the principal successful exhibitors, as was also Mr. John Sunley, of Monkfryston.

In cut flowers, the Roses were the prominent feature, and Messrs. J. & R. Calam, of Wakefield, and Messrs. Robt. Mack & Son, of Cattrick Bridge, were the successful exhibitors, carrying off first and second respectively in each class. The wreaths of Messrs. Shaw & Son, Leeds, and Messrs. Calam were really magnificent specimens of the florists' art, and the same may be said of the various exhibits of bouquets, epergnes, etc.

Fruits and vegetables were all fairly represented in the open classes, in which it only remains to mention the specimens of hardy flowers shown by Messrs. Webb & Son, of Stourbridge, who were represented by Mr. Andrew, of Doncaster. In the amateur classes the plants in pots and cut flowers were only moderate, with the exception of the Roses, which were better than have been shown in these classes for some years past. Mr. J. K. Burton, of Selby, and Messrs. Tattersall, of Thorne, were the principal exhibitors here. The garden produce was exceedingly fine. The Ichthemic Guano Co. were also represented by a very creditable display staged by Mr. J. W. Beasley, of Selby. The judges were:—

Flowers, fruit and vegetables: Open classes—Mr. W. Link, Everingham, York; Mr. J. W. Frankland (gardener to Sir John Barran, Bart., Chapel Allerton Hall, Leeds). Amateur classes—Mr. Charles Lawton (gardener to Mr. H. Harrison-Broadley, J.P., Welton House, Brough); Mr. G. Cottam, Alma Gardens, Cottingham, Hull.

NATIONAL VIOLA.—*July 17th.*

THE annual show of this society was held in the gardens of the Royal Botanic Society in fine weather, in fact, too fine for Violas, which delight in a cool moist atmosphere. The exhibits were

arranged in the corridor leading from the entrance to the conservatory.

The premier award (the Gold Medal of the society) for a collection of forty-eight sprays of Violas was taken by Mr. W. Baxter, Woking, who had fine sprays of A. J. Rowberry, Goldfinch, Blush Queen, Countess of Kintore, Cherry Park, Molly Pope, Princess Beatrice, Lord Salisbury and Belladonna. Mr. John Forbes, Buccleuch Nurseries, Hawick, N.B., took the second award, his sprays being rather more crowded, though otherwise very good and showing an infinite amount of variety in the various sections of this beautiful race (Silver Medal).

Mr. M. Campbell, Blantyre, N.B., secured the first award for forty-eight sprays or bunches of Pansies, distinct. They consisted of show and fancy varieties, the latter being by far the more numerous. Showy and fine varieties are Sir John Watson, John Jackson, Betsy Kelly, Marmion and Mrs. D. Johnstone (Gold Medal). Messrs. Isaac House & Son, Westbury-on-Trym, were second (Silver Medal); and Mr. John Forbes took the third award, with a fine amount of variety (Bronze Medal).

Mr. M. Campbell again took the lead for twenty-four fancy Pansies, which were arranged on a stand in the usual way, and were very neat indeed. Mr. John Smellie, Busby, N.B., was second. The leading prize for twelve fancy blooms was taken by Mr. Smellie, who had very handsome blooms, as well as for twelve show blooms. Mr. M. Campbell, was second in the former case; and Mr. James Maxwell, Dalton Newton, was second in the latter case.

Mr. John Smellie had the best twenty-four sprays of blooms, being remarkably fresh; Mr. M. Campbell was second.

Mr. John Forbes secured the first prize for six sprays of rayless Violas of the miniature type, showing Violetta, Ophir, Marginata and some others in fine form. Mr. J. Smellie was second. Mr. M. Campbell had the best three sprays of yellow Violas; Mr. J. Smellie was second. Messrs. Isaac House & Son had the three best white selfs. Mr. J. Smellie was to the fore for three sprays of any other colours.

In the amateur classes for twelve and six fancy Pansies, Mr. James Maxwell led the way. Mr. R. T. Dougall, Walthamstow, had the best twelve sprays of Violas, which were very fresh. Mr. J. J. Sheldon, South Woodford, was second. Mr. Jas. Maxwell again came to the front for six sprays. Dr. Shackleton, Sydenham, S.E. was second. Mr. Leonard Brown, Brentwood, showed the best six sprays in another class. Mr. D. B. Crane, Highgate, showed the best six sprays of rayless Violas, which were very fine. He again led the way for three sprays of yellow selfs, and three sprays of white Violas. Mr. J. J. Sheldon had the best three sprays of the Duchess of Fife type. Mr. A. J. Rowberry, South Woodford, had the best eighteen varieties of Violas arranged in glasses, which we think a prettier and more interesting way than any other of staging these showy flowers. He took the Royal Botanic Society's Large Medal. Dr. Shackleton was a good second, and Mr. B. G. Sinclair, Highgate, was third.

The first prize offered by the president for six Violas, shown as they grow, was secured by Mr. D. B. Crane, who had large and well flowered plants grown in a large flat basket covered with moss on the top. Mr. Leonard Brown had the best three sprays of rayless, miniature Violas. Mr. Allison, Kingston, secured the first prize for floral decoration for a dinner table, arranged as for twelve persons. Violas with their own foliage were used. (Large Medal of the Royal Botanic Society.)

Messrs. Dobbie & Co., Rothesay, N.B., exhibited a collection of Violas not for competition. Amongst them were sprays of Duchess of Sutherland, Archie Grant, Blue Border, Hamlet, Iona, Princess Beatrice, Cecilia and others showing strange and beautiful combinations of colour.

MEETING OF THE ROYAL HORTICULTURAL SOCIETY AT CHISWICK.

The president and council of this society some time ago issued cards of invitation to the members of the various committees to meet at Chiswick on the 14th inst. to inspect the gardens, to luncheon and to listen to a speech by Dr. Masters, F.R.H.S., who was to open a discussion on practical suggestions for the better utilisation of Chiswick Gardens.

The committeemen came out in strong force, few members being absent. The Floral Committee had the task of comparing some new varieties of Sweet Peas with those grown in the gardens, both old and new. Countess of Cadogan, a beautiful blue self; Prince of Wales, an improvement on the handsome Princess Victoria; and Queen Victoria, a charming creamy flower, were accorded Awards of Merit. Some seedling Antirrhinums and Pentstemons were also examined but no awards were made. The fruit and vegetable committee concerned themselves with the garden Peas of which there is a large collection on trial. After these various examinations, the committees broke up in small parties all over the gardens inspecting whatever most interested them, Grapes, Tomatos, Pelargoniums, Apple trees, herbaceous plants and vegetables coming in for inspection by those interested in them.

About half-past 1 p.m. they met in a spacious tent pitched upon the lawn to partake of an excellent luncheon provided by the society. The president, Sir Trevor Lawrence, Bart., took the chair, when more than a hundred botanists, gardeners and patrons of horticulture in all its branches sat down to table. Two ladies were also present. Sir Trevor Lawrence, Bart., proposed the toast of "Her Majesty," which was well received. He also thanked the various committeemen for the self-sacrificing help they had at various times rendered the society. There was then an interval of twenty minutes to allow of the clearing of the tent and the rearrangement of the seats.

The whole body of committeemen and others reassembled at three o'clock under the presidency of Sir Trevor Lawrence, Bart,, who at once called upon Dr. Masters to read his paper. The latter, upon rising, said that the principal object of their meeting that day was to take council as to what had best be done with the gardens; and addressing his audience said he would only be voicing their sentiments when he expressed his thanks to the president and council for the opportunity of assembling there that day.

Continuing, he remarked that the gardens, all things considered, were in a most satisfactory condition. Looking back to the palmy days of Chiswick when all eyes were turned in that direction, he could say that no horticultural society had such a glorious past; and none accomplished the same amount of useful horticultural work. The introductions of new plants and their distribution from Chiswick, the descriptions of them that emanated from Chiswick, the meteorological observations made there, and other transactions conferred a glory upon this, as on no other society. They could not hope to repeat it, the times had changed from a horticultural standpoint as in other occupations. Nurserymen had increased, and the more enterprising of them had cut the ground from under their feet as far as new plants and the raising of others were concerned. Nor could they hope to emulate Kew. They must look to the future to work improvements upon present conditions.

The meeting that day, said the doctor, was a mixed one of gardeners and scientific men, but all were as one in their feelings towards Chiswick. He would like to see Chiswick as a great educational and instructional institution, a model garden in which they might grow collections of the best types of fruits, flowers and vegetables. He himself might be ignorant of a Cabbage, but he would like to be able to go to Chiswick and see the best of everything. They do not want full collections of fruit trees now, but only the best and most useful. He spoke in sympathetic terms of the descriptions and classification of fruit effected by Mr. Thomson, a former superintendent, but that was not now particularly wanted. There might be demonstrations of new methods of cultivation, pruning and trainining. They might have trials of Strawberries, Peas, and other subjects; also new plants, remedies for diseases, spraying experiments, &c. The Americans went to a much greater extent than we did and sprayed all sorts of things, at all sorts of times; and the thing could be overdone. At Chiswick, however, they might have properly and carefully conducted trials and the results made known.

Coming to the instructional value of the gardens, he said that the students had no other opportunity of acquiring knowledge than could be picked up in the course of their practical work, a defect which ought to be remedied. Practical work was no doubt the most important in a garden, but if they were content to stick to this view they could make no progress whatever, but continue in the old groove. They might institute a course of lectures to act as a preliminary or scientific knowledge on which to build up their practice. He would suggest an interchange of students between Chiswick and Kew so that they might participate in the benefits of either establishment.

The lecturer alluded at some length to the fifty or more experiment stations that were established in America for the purpose of conducting experiments and teaching the higher branches of horticulture. At Cornell University they found it of little value to merely record all the varieties of any particular subject; but it was of great importance to cultivate type groups, to study their origin, development, their direction and limitations. The studying of groups and affinities they held to be of more importance than the mere description of varieties. Experiments had been carried on to determine the influence of electric light on plants; irrigation, fertilisation, pollination of Pears, Plums and other subjects. Professor Bailey of the Cornell University said that much had been done in the cultivation of, and in making experiments with, fruit, and the work was being continued. At present they were trying what could be done with a collection of Japanese Plums. Their watchwords were wide awake, progressive and hopeful.

In any attempt of this kind at Chiswick they were confronted with a lack of funds to cover the expenses. He despaired of getting assistance from the British Government, but thought that the County Councils might be induced to render some assistance, and might be approached with that object in view.

Sir Joseph Hooker said he had listened with pleasure to the suggestive paper by Dr. Masters. Experiments at home had to be conducted without State aid, so that we were behind America in this respect. In the United States there were more fungoid diseases and more insect pests to contend with in plant culture, hence the greater need for State aid. He hardly dare hope for State aid for Chiswick, because he remembered the extreme difficulty he experienced in procuring £100 to provide lectures on botany, physics, chemistry, &c., for the students at Kew, in order to prepare them for duties in all parts of the world.

Mr. Harry J. Veitch thought it undesirable to institute experiments on any extensive scale at Chiswick on account of the circumscribed space, the injurious atmospheric influences, and the detrimental surroundings for plant culture in a neighbourhood that had been much built upon since he could remember, and which was getting worse every year. Results depended largely on the atmosphere and the nature of the soil.

Dr. Plowright said that twenty to thirty years ago sulphur was recommended as a cure for everything; then it was to cut down and burn everything; now it was spraying; and he hoped that spraying experiments might be established at Chiswick, and the results made known for the benefit of practical men.

The Rev. W. Wilks read letters from M. Vilmorin, of Paris, and Mr. Malcolm Dunn, of Dalkeith, testifying to the value of the trials conducted at Chiswick and their unbiased, independent, trustworthy character.

The president proposed a vote of thanks to Dr. Masters for his suggestive paper, but had little hope of State or County Council aid. Dr. Russell seconded the proposal, and said that if anything could be done to further the scientific aspect of horticulture, he should regard it with great satisfaction. Dr. Masters replied, and a vote of thanks to the president concluded the proceedings.

Vines for Australia.—The Ministers of Agriculture for Victoria and New South Wales (Australia) are importing from France some 50,000 cuttings of the American phylloxera-resisting Grape for distribution purposes. The vines have to be accompanied by an expert's certificate stating that they are exactly as represented. Upon arrival at their destination they will be taken charge of by the agricultural department, and will be planted in quarantine. The length of the quarantine period will be decided by the departmental experts,

DEVON AND EXETER GARDENERS' OUTING.

No pleasanter outing could have heen enjoyed than that taken by the members of the Devon and Exeter Gardeners' Association on the 14th inst. Fine weather prevailed, the great heat being tempered by a strong breeze, which tipped the waves with white and added to the surpassing beauty of the Sound and Hamoaze. The excursionists, who numbered about eighty-five, left St. David's station at 8.10 a.m. by the north mail, two spacious saloon carriages being placed at their disposal by the Great Western Railway Company, Mr. Campfield, divisional superintendent, and Mr. Morris, the stationmaster, having with their usual courtesy made the most satisfactory arrangements for the comfort and convenience of the travellers. Details for the trip were admirably provided for hy Mr. Andrew Hope, hon. secretary of the association, and Mr. W. Mackay, the hon. treasurer, and to these gentlemen every thanks must be given for their foresight and provision. A most pleasant journey brought the party to Millbay Station punctually at eleven o'clock and a move was made to the handsome Town Hall, Stonehouse, where a capital luncheon, laid by Mr. John Wills, of the Battery Hotel, not far off, was partaken of. After the meal the excursionists assembled at the Admiral's Hard Ferry Pier, where a steam launch was boarded and a quick run was made to Mount Edgcumbe Park. Mr. Hope had ohtained permission from the Right Hon. the Earl of Mount Edgcumhe to lead the party through the beautiful gardens appertaining to that ancient and historic pile of buildings which have such an unrivalled view of the great Devonshire seaport. The head gardener, Mr. Richards, met the trippers, who had a most instructive and interesting experience under his courteous guidance. A visit was made to the famous orangery in the Italian garden, where sixty Orange trees were seen in blossom with the fruit both in a green and ripened state—a curious phenomenon peculiar to Orange trees, which in this case were planted in Queen Elizabeth's time. The stem of one tree measures 26 in. in circumference, and from the size of the whole of the specimens it is a work of some difficulty to transfer them in the autumn to the spacious winter house adjoining, a special machine being used for this purpose. Other trees and plants shown by Mr. Richards were the Palms, New Zealand Tree Ferns, and the Norfolk Island Pine, which is usually grown indoors, hut in the genial climate prevailing at this corner of Cornwall is not so pampered. One curiosity was a long and high hedge of Quercus Ilex, which had been blown down by the blizzard of 1891, but which had been cleverly lifted again and restored to its former verdant beauty. A Holly tree 6 ft. 6 in. in circumference, and 25 ft. in height was a subject of much interest. In the French garden they were shown a Quercus Ilex 13 ft. in circumference, a Cork tree 8 ft. 4 in. round, a magnificent Red Cedar, a Chamaerops excelsa Palm, 20 ft. high, Magnolias showing their fragrant blooms, handsome Bamboos, and other remarkable trees.

Pursuing their walk through the park and skirting the cliffs, from which a most enchanting sea view was gained, the members of the association arrived at the Countess Caroline Gardens, hanging in their beauty on the side of the acclivity cut by zig-zag paths, and smiling in a glory of foliage and flower. A long trudge up to the deer park with its beautiful stretch of turf, and its wealth of hracken, brought the party to the summit of the hill, the climbing of which was rewarded by the magnificent view of hill, vale, and sea which greeted the sight. The descent to the gardens at the back of the mansion, the southern portion of which dates from the year 1550, was much enjoyed, the parterres so skilfully laid out presenting a hlaze of colour, whilst upon some of the perfectly kept grassy banks was seen a profusion of wild Thyme.

The visit to the Park ended, a steam launch conveyed the members to Devonport, where, by the kind permission of the Admiral Superintendent, an inspection of the Docks was made, the most interesting object being the first-class battleship Ocean which is in the course of construction.

Having left the Dockyard, the party again assembled at the Town Hall, Stonehouse, where high tea was laid. Mr. Hope presided, and after the repast gave the toast of "The Queen." Mr. Mackay gave "Prosperity to the Exeter Gardeners' Association," to which the chairman and Mr. J. Crabbe replied. The toast of the caterer, Mr. Wills, was also cordially drunk.

After tea, some little time being left, many took advantage of a stroll on the Hoe, or a visit to other places of interest. The 8.10 p.m. train subsequently brought the party back to the city, all being highly delighted, after a truly enjoyable trip.

THE YORKSHIRE COLLEGE, LEEDS.

Dr. James Clark, who has been so successfully engaged for the past six years in University Extension work in agriculture and horticulture, was in March last offered, and accepted, the Professorship of Agriculture in the Yorkshire College and the Directorship of the Agricultural Department. It is the intention of Professor Clark to introduce regular horticulture into the College curriculum.

Below is a prospectus of a short preliminary course on fruit culture which has just been completed, and the examination paper set at the end of the course.

DEPARTMENT OF AGRICULTURE.

A course of twelve lectures on fruit culture will be given in the College by Professor Clark, M.A., Ph.D., on Wednesdays, at 9.30 a.m., and Fridays, at 2 p.m., heginning on Wednesday, May 5th, 1897. Fee for the course, 7s. 6d. The attention of working gardeners is specially invited to this course.

Syllabus of Lectures.

The tree and its requirements, including food, moisture, air, light and heat. General effects produced by excess or deficiency of these necessary conditions of growth. Uses of the different parts of the tree, with a review of the way in which each part performs its work in relation to the rest. The relations between roots and soil.

The growth of the tree. Leaf-huds and flower-buds. Development of the branches. The ripening of the wood.

The flower and its parts. Fertilisation. The growth of the fruit.

Preparation of different classes of soil for fruit culture. Precautions against unfavourable conditions. Selection and planting of fruit trees. Choice of position. Peculiarities of the different stocks in common use. General characteristics and treatment of Apples, Pears, Plums, Cherries, Gooseberries, Currants, Raspberries, Strawberries, Vines, and Peaches. Choice of varieties to suit local conditions.

Principles of pruning, branch and root. Training fruit trees. Propagation of fruit trees.

Principles of manuring. Characteristics, properties and uses of farm-yard manure, and of the artificial manures most serviceable in fruit culture. The mixing of manures.

Diseases and insect pests; precautions, modes of prevention and remedies.

The gathering, storing, grading and marketing of fruit.

The Yorkshire College Fruit Culture.

3rd Term, 1896-7.

1. Show in a general way how the growth of the various parts of a tree is affected by moisture, air, light and heat, respectively.

2. Explain to what extent the growth of the roots of a tree may affect the growth of the branches, and show what bearing this relation has on the general subject of pruning.

3. Describe the general differences in appearance and habit between the roots of the Paradise stock and the roots of the Crab. Why does an Apple grafted on the Paradise stock usually bear fruit much sooner than when grafted on the Crab?

4. Give a short account of the various stocks in use (*a*) for Apricots, (*b*) for Cherries, and point out the merits of each.

5. Give an explanatory account of the conditions of soil and climate most favourable for the cultivation of Pears, Cherries, and Plums respectively. Show with examples how different varieties of the same fruit may vary in their requirements and in their adaptability to unfavourable conditions.

6. Describe the process of fertilisation in the flower of an Apple. What is meant by saying that certain Apples and Pears are "self-sterile"?

7. Describe in detail how you would plant an Apple tree, paying special attention (1) to the preparation of the ground (2) to the preparation of the tree and (3) to the actual process of planting.

8. Give a short account of the nitrogenous manures most serviceable in fruit culture. Under what conditions and in what quantities should each as a rule be applied.

MUTUAL ACCOMMODATION OF PLANT ORGANS.

The Rev. Professor Henslow gave an interesting lecture on this subject before the fellows of the Royal Horticultural Scciety on July 13th. C. E. Shea, Esq., occupied the chair. The lecturer commenced by saying that Herbert Spencer and Darwin may be credited with first presenting the doctrine of evolution in an acceptable form to the British nation. We used at one time to think that the race came into existence fully grown, but now we know that the laws governing the individual also govern the race. Both plants and animals possess a common property, viz., protoplasm. This in plants can produce all sorts of organs, and although it usually does so regularly and according to set rule it is sensible to environment, and will make the special organs that the plant is most in need of at the time. For convenience sake the lecturer classed plant organs into two sets, viz., axes and appendages. To the former group helong roots, stems and branches; to the latter, leaves, leaf-scales, bracts, stipules, and flowers may be referred. Passing on to the definition of the terms analagous and homologous Professor Henslow spoke of the tendril of a Pea as being an altered leaf, and hence the homologue of a leaf; that of the Vine is an altered branch. The tendril in the Vines is analagous to the tendril of the Pea.

The root, contined he, is apparently very different from the stem, but it owes this only to alteration due to evironment, since roots might he found performing the function of stems, and stems of roots.

The normal function of the root is to take up food, but occasionally it becomes a reservoir or storage house for food. Thus the wild Beet is a perennial, but when placed under the stimulus of cultivation it becomes a biennial, having a swollen tap root. The wild Carrot is an annual, but under cultivation is a biennial, with a swollen root peforming a similar function. As a rule roots are underground, and do not produce leafy buds like stems do. Raspberry roots, however, bear leafy buds, so do the roots of Elm. In some parts of the country it is a common sight to see hedges that have been formed in this way. Again, roots may become parasitic as in the Broom Rape. Orchid roots also turn green, dissolve carbonic acid gas from the atmosphere, and form starch.

Stems sometimes mimic by their development underground stems, as in the Mint. Potatos too, if they are prevented from forming tubers underground will produce them in the axils of the leaves on the stem. Conversely the end of a root of the Potato, which under ordinary conditions would form a tuber, will develop an aerial stem. Some trees throw down roots from the branches. The members of the Fig tribe produce aerial roots, which presently reach the gronnd, and act partly as roots, and partly as trunks to support the tree. Other stems perform the function of climbing, as in the Hop and Convolvulus, where the stem bows around and twists itself about the support. Any organ, however, may assist the plant in climbing. Thus the Vine climbs by its tendrils, which are metamorphosed branches. Roots will also do it occasionally.

Leaves perform the three functions of breathing, digesting and perspiring. A good deal of mimicry goes on amongst some plants, for the Stapelias of South Africa have imitated the Cactuses; and their stems fulfil all the functions of leaves.

Stipules are appendages at the hase of leaves. They vary greatly in size and appearance. In the Pea they are foliaceous and rise out of the stem, not out of the leaf stalks. In some of the Acacias they form large horns. These horns are hollow and afford refuge to ants which defend the trees against injurious insects. Stipules are also frequently turned into dry scales and are used to protect the young buds as in Beech, Lime and Oak. Sometimes a leaf stalk undertakes the function of leaves, as in the Australian Acacias. They may he known to be leaf-stalks merely by the way in which the edges point to sun and earth, instead of being horizontal.

Gloxinias and Begonias may produce buds on their leaves. Clematis climhs hy means of its leaf-stalks, which are sensitive.

Passing on to the reproductive series of organs, Professor Henslow remarked that bracts are usually metamorphosed leaf stalks, as in the common Hellebore.

Colour is developed in the corolla for the purpose of attracting insects, but occasionally it is exhibited by other parts, as in the well-known bracts of Poinsettia and in Cornus. The bracts of the latter often so closely imitated the flower as to be mistaken for it. Not infrequently some of the stamens change into a pistil. In other cases pistils have turned into stamens, or into petals. In Begonia the stamens sometimes produce pistils on their tops. Occasionally ovules become petals, or the latter may all become like ordinary foliage leaves, as in the instance of the green Rose. Thus everywhere might be seen instances of the mutual accommodation between the various organs composing a plant.

Throughout the lecture the interest of the audience never flagged, and the remarks of the lecturer were rendered clearer by numerous illustrations and dried specimens of the numerous plants dealt with.

A vote of thanks to the Rev. Professor Henslow proposed from the chair at the close was passed enthusiastically.

SWANLEY HORTICULTURAL COLLEGE.

DISTRIBUTION OF PRIZES.

PREVIOUS to the commencement of this function in the grand hall of the college we had just time for a few minutes' inspection of the exhibits in one of the side rooms and the glasshouses, in company with the gardener or practical instructor. The exhibits from the gardens included a fine display of Potatos, Onions, Tomatos, Scarlet Runners, Peas, Cucumbers, Sutton's Miniature Marrow Cabbage and other vegetables; also Peaches, Grapes, Raspberries, Red and Black Currants, and other fruits. The dinner table decorations arranged by the lady students were very gracefully and tastefully set up, attracting a considerable amount of attention.

We next visited a house containing Melons and Asparagus (Myrsiphyllum) medeoloides, then another filled with well flowered Gloxinias arranged amongst Ferns, Asparagus and Celosias. A stove is filled with Crotons, Dracaenas and Asparagus. Experiments with Cucumbers were being conducted here, and with Tomatos in another house by the process known as water culture. A fine sight was presented by a house of Lockie's Perfection Cucumber, bearing a heavy crop of fruits. All the fruit houses are each 100 ft. long.

Four rows of Tomatos, consisting of Sutton's Perfection and Sutton's Abundance, bore remarkable crops of fruit, but particularly the last named. Maidenhair Ferns occupy the body of three houses beneath Vines which are bearing a heavy crop of fruit; and elsewhere beneath Cucumbers. Black Hamburgh in another close by was nearly ripe. Four houses are occupied with Cucumbers planted out and in various stages of progress. They are all in remarkable health and vigour. Three other houses are filled with Tomatos in various stages of growth. Peaches in pots occupy one house, while the trees in another house are laden with an enormous crop of fruit, more in fact, than would be permitted to hang on the trees by gardeners in private establishments. The fruits, to the number of 3,000, in the early house have been gathered, which will give an idea of the weight of the crop. Hales Early, Early Louise and Nohlesse, are some of the varieties grown.

At 3.30 p.m. the chair was taken by Lord Carlisle, who intimated that he was not a specialist in the horticultural question, but would preface his remarks by the well known quotation from Bacon, commencing, "God Almighty first planted a garden, &c." Gardening in some form or other has been appreciated in every age of the world. At the present time it is the most universal taste prevailing in cottage and hall, from a small greenhouse to a lordly conservatory. He was afraid that modern commerce and utilitarianism would tend largely to crush out the beautiful in gardening. In the question of modern tendencies, he would refer not alone to market gardening and allied industries, but to the national disgrace accruing to us from the great importations of things which we ought to grow. He could not believe that, with our climate and other conveniences, we cannot compete with the foreigner. Education was relatively slow in horticultural matters, and did not receive that encouragement which other occupations did. Schools are growing up in towns to encourage arts and crafts, but gardening is overlooked in that respect.

There was another side to the question to which he wished to allude, namely, the women's side. The pursuit is obviously a good one for women, and he was pleased to hear that in practice it had proved so. It had been said that women as gardeners would tend to lower the salary accorded to men, but the facts are that women were receiving as good pay. Women were particularly suited for one branch of the profession such as floral decorations, as was shown at the competitions. He himself came as a sympathiser and not as an expert, though he wished to learn more about the gardening question.

F. Graham Powell Esq., the resident principal of the college, then read his report, in which he stated that during the year there had been a mean annual average of forty-five students at the classes, eighteen men and twenty-seven women. One important particular was that they had been finding places for their qualified students after leaving the college. They do not profess to send out competent gardeners, but only young men and women well grounded in the science and practice of their profession. Some of the subjects taught were botany, chemistry, geology, physics, mensuration, decorations, &c. The directors were pleased that the men students had vindicated their honour at the May examination of the Royal Horticultural Society. Mr. Langford had taken full marks. The medal of that society had twice come to the college during the last three years. At this point Lady Cecilia Roberts distributed the prizes to the successful students. Sir John Farnaby Lennard, the Chairman of the Kent County Council, then addressed the audience, after which Miss Goodrich-Freer took the platform and spoke in complimentary terms of the diligence and perseverance of several of the students. This year had been characterised by the quality of the men at the classes, though a number of the women students were close up. She humorously put it, however, that the lady students could afford to allow this concession to down-trodden man. Some extra prizes were accorded for collections of wild flowers, dried plants, table decorations, &c.

LIST OF PRIZE WINNERS, *July*, 1897.

Silver Gilt Medal and Chiswick Scholarship Royal Horticultural Society	MR. LANGFORD.
Microscopic Botany	MR. LANGFORD.
Horticultural Chemistry	MR. GOODLET.
Theoretical Chemistry, 1st year ..	MISS BRYSON.
" " 2nd year ..	MR. FLOWER.
Practical Chemistry	MR. COCKS.
Geology, 1st year	MR. GOODLET.
" 2nd year	MR. PILCHER.
Physics	MR. PILCHER.
Botany, 1st year	MISS BRYSON.
" Elementary	MISS BETTY.
" Advanced	MR. LANGFORD.
Bee-keeping, 1st year	MR. GOODLET.
" 2nd year	MR. PILCHER.
Diary, Ladies	MISS WATTS.
" Men	MR. COLLARD.
Practical Work	MISS WATTS. MISS WEBB. MR. COCKS. MR. COLLARD.
Principles and Practice of Horticulture, 1st year	MISS BROADE.
Principles and Practice of Horticulture, 2nd year	MR. COCKS.

GARDENING MISCELLANY.

ANTIRRHINUM HENDEPSONII.

SEEING that Antirrhinums can be so readily raised from seed, few varieties attain a very great age, except named varieties which are perpetuated for exhibition purposes. This would apply more particularly to the northern counties of England and to Scotland, where the Antirrhinum has for many years been regarded as an exhibition flower, special classes being scheduled for its reception. The variety under notice has been in commerce for the last forty years, and owes this fact to the unique character of its flowers which we have never seen exactly matched. The corolla is white, with a heavy and distinct purple margin surrounding all of the five segments. The disc is pale yellow, fading to lemon. It is readily propagated by cuttings, and can sometimes be reproduced true from seed; but as often as otherwise the two colours part company, some of the seedlings being of a dirty purple and others white. Strange to say, nothing good and certainly nothing at all approaching the original has been raised by cross-breeding. The pure white ground has the effect of setting off the purple margins very distinctly. Some fine spikes of this interesting and beautiful old variety were sent us by Mr. John Forbes, Buccleuch Nurseries, Hawick, Scotland.

CARNATION JIM SMYTH.

THE brightness of this border Carnation is indisputable whenever it makes its appearance in public and when shown against other varieties. Being purely a border flower it has not the qualities of form that would tally with the canons of the florist; but for cut flowers and garden decoration it is valuable and most effective on account of its brilliancy. It has more than once secured the first prize at the Crystal Palace as the best border Carnation. The variety was raised in the neighbourhood of the Crystal Palace and is still grown there by Mr. H. G. Smyth, 21, Goldsmith Street, Drury Lane, who has now grown it for some years at his private residence at Forest Hill. Here the plants grow from 2½ ft. to 3 ft. in height, and carry brilliant scarlet flowers 2½ in. to 3 in. in diameter. The calyx is not liable to split but keeps its petals in compact form. Nor is the colour liable to be burnt by the sun, as many richly coloured varieties are.

VIOLA MR. DANIELS.

A BOUQUET of a new sweet scented Viola was sent us by Mr. John Forbes, Buccleuch Nurseries, Hawick. The plant is very dwarf and compact, being only about 3 in. to 5 in. high, sturdy and branching. The flowers are produced in abundance, and are pure white with the exception of a small golden blotch at the eye. An examination of the leaves and stipules shows that the variety is allied to Countess of Hopetoun, Sylvia, and others of that ilk. It has the short and broad stipules derived originally from V. cornuta. The golden blotch extending down from the eye would point to Violetta as being one of its ancesters; and some would say that the fragrance is also derived from the same source. While that may be so, we also know that many of the ordinary types of Viola are sweet scented, the scent being a thing of degree amongst Violas and Pansies generally. Mr. Daniels belongs to the rayless type, and its various qualities should recommend it for extended cultivation.

QUESTIONS AND ANSWERS

*** *Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Carnation Flowers.—*W. J. Foulks*: Of the two you sent we like the appearance of the purple one very much. It will not agree with the canons of the florist owing to the petals being toothed at the edges; but otherwise there is little to complain of. The broad rounded petals are of the richest dark purple, the principal veins being violet. What we consider of more importance, the flowers possess the strong aromatic scent of the Clove, that is all too scarce amongst Carnations. If the habit of the plant is good, and plenty of young shoots are produced for layering, we should consider it a good border variety with rich colour and a delicious scent to recommend it; and for those reasons it is worthy of a name, and deserving of cultivation. The other variety, with red flowers shaded scarlet, is very good in its way, but would not be difficult to match amongst existing varieties. The outer petals are entire and refined, but the inner ones are small and less satisfactory.

White Fly on Tomatos.—*X. Y. Z.*: The white fly you mention as infesting Borecole, also infests Cabbages, and is Aleyrodes proletella, or as some say A. Brassicae. The white fly infesting your Tomatos is Aleyrodes vapororiarum. You say that it enjoys tobacco smoke, but that is not strictly correct. When the flies are in the perfect or winged state, tobacco is sure death to them in a very short time. If you examine the leaves of your Tomatos you will see small, white specks upon them like

scales. These specks are pupae cases in which the resting stage of the fly is passed. Tobacco smoke has no effect upon the fly when sealed up in these white cases. A day or two after fumigation is sufficient to hatch out a fresh brood of the fly, so that the house swarms with them again in a short time. You will hardly be able to exterminate them this season, but if you commence next year with the first appearance of the insects, you should be ahle to destroy them by lightly fumigating at intervals of two days for a time. You could remove some of the worst leaves at the same time, and burn them at once to get rid of the pupae and prevent them from hatching out. If you care to you might use X L All Vaporiser instead of tobacco. In any case begin early before the pupae cases cover the leaves with white specks, and before the flies make the leaves black with excrement.

Caterpillars on Parsnip seed.—*J. T. Thurston*: 1, The caterpillars you sent us were those of a small and insignificant, brown moth known as Depressaria Pastinacella. The moth and the caterpillars have been known to entomologists and to growers of Parsnip seed for many years, though it does not always prove troublesome, and may exist in small numbers without being noticed. The moth is not very wide spread in this country, but is often very destructive on the Continent. In collecting the caterpillars a good plan would be to get a shallow box or tray, cover it with tar, and while a boy carries this holding it close to the Parsnip seed another might shake the plants over the tray. This will cause the caterpillars to drop amongst the tar where they will stick fast and soon die. A white cloth laid under the plants would answer the same purpose, but you would have to destroy them quickly for they move away nimbly. Many of them will now be in the pupa or resting condition and hung up to the Parsnip seed. Those you sent us are now in that condition. Look carefully over the plants, picking off the pupae and destroying them.

Treatment of Tuberous Begonia.—*O. H.*: When shifting this class of plants from 60-size to 48-size pots use a compost of three parts of turfy, fibrous loam, two parts of leaf-mould and one part of well-rotted cow manure, or that obtained from an old hot-bed, with sufficient sharp silver sand to keep the whole porous and open. The whole should be used in a lumpy condition and not sifted at all. Grow them on in a greenhouse or frame shading the plants with tiffany during the hotter parts of the day. The house or frame should be well ventilated during the day, leaving a little air on at night. No artificial heat will be required during the summer months. In the earlier parts of the year they will require a night temperature of about 60°, rising higher by day. As the weather becomes warmer they should he more freely ventilated, especially from the beginning of April onwards. Less artificial heat will then be required to keep up the temperature, but it will all depend upon the weather. From the end of May onwards they should be well ventilated and shaded during strong sunshine to keep them cool and prevent the stems from getting drawn. Keep them well supplied with water, especially when the pots are getting filled with roots.

Treatment of Coleus.—*O. H.*: These should receive stove treatment from their earliest stages. In winter and early spring a night temperature of 55° to 60° will he necessary to bring them along freely. As the temperature outside rises, the house may be allowed to rise to 65° or 70° during the day with sunshine, but plenty of ventilation will be necessary always on fine days. When growing freely, they require a good supply of water. Plenty of exposure to sunshine at all times, and ventilation during fine weather is necessary to keep them sturdy and short jointed, and make them colour well. Good fihrous loam, with a quantity of leaf mould and sufficient sand, will answer in the matter of compost.

Onions Diseased.—*Omega*: They seem to be attacked by the Onion Mildew (Peronospora schleideniana), but you must admit it is difficult to judge from a small piece of leaf in a letter, dried up in transit. Assuming that this is really the case, we may state that the fnngus consists of a great number of mycelial threads that live in the interior of the leaves, and send out fruiting branches which are all that appear on the surface. These forking branches bear a kind of spores known as conidia, which are so light as to be blown about by the wind, so that healthy plants soon get affected by them. Nothing you can apply to the Onions can kill the fungus without killing the plants; and the application of poisons is a dangerous proceeding when the Onions may be consumed in the green state or otherwise. Damp soils and very sheltered spots favour the disease; therefore, see that the soil is properly drained, and choose open, sunny spots for the Onions so that the air can play freely all around them. Perhaps your soil contains too much humus from long-continued applications of farmyard manure. You might use dressings of nitrate of soda and salt to make the plants grow freely. Burn affected leaves if not too numerous. These are preventatives rather than remedies.

"Rules for judging."—*D. N.*: The pamphlet was prepared hy the Royal Horticultural Society, and is issued from their offices at 117, Victoria Street, Westminster, London. Apply to the Secretary at that address.

Names of Plants.—*Salen*: 1, Nephrolepis exaltata; 2, Ophiopogon Jahuran variegatus; 3, Kalmia latifolia; 4, Verhascum pulverulentum; 5, Pteris Wimsetti; 6, Rhus typhina.—*X. Y. Z.*: Galega officinalis alba.—*J. T.*: 1, Aconitum Lycoctonum; 2, Antirrhinum majus var.; 3, Sibthorpia europaea variegata; 4, Dianthus sinensis Heddewigi; 5, Lathyrus sativus; 6, Lychnis fulgens.—*A. R.*: 1, Todea superba; 2, Struthiopteris germanica; 3, Cystopteris fragilis; 4, Asplenium septentrionale.—*G. Thompson*: 1, Cypripedium bellatulum; 2, C. barhatum var.; 3, C. callosum; 4. Oncidium flexucsum.—*James Herd*: 1, Myrtus communis; 2, Tilia cordata; 3, Berberis vulgaris purpurea; 4, Cotoneaster Nummularia; 5, Spiraea ariaefolia; 6, Rosa villosa tomentosa.—*J. B.*: 1, Selaginella Braunii; 2, Selaginella uncinata; 3, Pteris hastata; 4, Asplenium bulbiferum minus; 5, Pteris longifolia; 6, Anguloa Ruckeri.

Communications Received.—A. E. Stubbs.—H. B.—J. H. Fraser.—H. Cannell & Sons—W. P. B.—R. Bryson.—L. N.—James F.—T. Browning.—J. Fletcher.—S. A. Peters.—T. R.—M., Hendon.

TRADE CATALOGUE RECEIVED.

LITTLE AND BALLANTYNE, Carlisle.—Bulb Catalogue.

LONDON SEED TRADE.

July 20th, 1897.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Seed Market, Mark Lane, report full supplies of new English Trifolium incarnatnm of good quality, and prices open low. New Italian Rye-grass and Rape seed and Rye are shewing, but prices are not established.

COVENT GARDEN MARKET.

July 21st, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d	s. d.
Apples.....per bushel		
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve...		
Nova Scotia Apples per barrel		
Cob Nuts per 100lbs.		
Grapes, per lb	2 0	3 6
Pine-apples —St. Michael's each	2 6	6 0
Plums per ½ sieve.....		
Strawberries, per lb.	1 6	2
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
ArtichokesGlobe doz.	2 0	3 0
Asparagus,per bundle	2 6	3 0
Beans, French, per pound	1 0	1 3
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cncnmbers per doz.	2 6	3 0
Endive, French, doz.	1 6	2 0
Herbs .....per bunch	0 2	
Horse Radish, bnndle	2 0	4 0
Lettuces ...per dozen	1 3	
Mnshrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket	1 0	1 3
Small salad, punnet	0 4	
Splnach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips .....per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	2 0	3 0
Bonvardias, per bun.	0 4	0 6
Carnations doz.blms.	1 0	3 0
Carnations, doz. bun.	3 0	6 0
Cornflower, doz. bun.	1 0	2 0
Euoharis ...per doz	2 0	4 0
Gardenias ...per doz.	2 0	4 0
Geranium, scarlet, doz. bunches	3 0	6 0
Lilium candidum, doz. bun.	9 0	18 0
Lilium longiflorum per doz.	3 0	4 0
Lily of the Valley doz. sprays	1 0	2 0
Marguerites, 12 bun.	2 0	4 0
MaidenhairFern, 12bs.	4 0	8 0
Orchids, doz. blooms	1 6	12 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bnn.	4 0	6 0
Poppy, various, doz. bunches	1 0	3 0
Pyrethrum doz. bun.	1 6	3 0
Roses (indoor), doz.	6	1 0
" Tea, white, doz.	1 0	2 6
" Niels	1 6	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	1 0	2 0
Pink Roses, doz.	3 0	5 0
Roses, doz. bun.	3 0	6 0
Smllax, per bunch ...	2 0	4 0
Tuberoses, doz. blooms ...	1 0	1 6

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae per doz.	12 0	36 0
Aspidistra, doz.....	18 0	36 0
" specimen	5 0	10 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Fuchsias, per doz. ...	4 0	6 0
Heliotrope...per doz.	4 0	6 0
Hydrangeas per doz.	9 0	12 0
Ivy-leaved Geranium, per doz.	3 0	6 0
Lilium Harrissii, per pot	1 6	3 0
Lycopodiums, doz.	3 0	4 0
Lobelia .....per doz.	3 0	5 0
Marguerite Daisy doz.	6 0	10 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ...doz.	6 0	10 0
Spiraea ...per doz. ...	8 0	10 0
Scarlets .....per doz.	2 6	5 0

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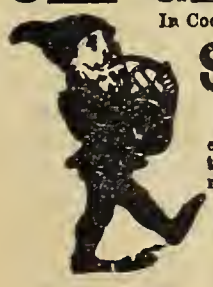

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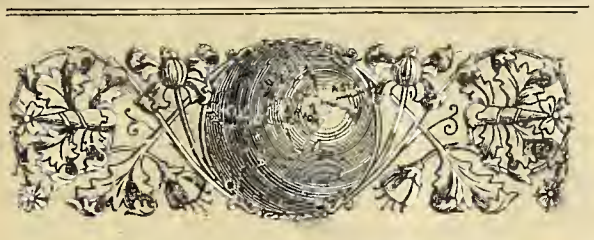

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, JULY 31st, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, August 2nd.—R.H.S. of Southampton's Show (second day).
Liverpool Show (second day).
Cranfield Show.
Beddington, Carshalton, and Wallington Show.
Northampton Show (two days).
TUESDAY, August 3rd.—Leicester Show (two days).
FRIDAY, August 5th.—Maidenhead Show.
National Carnation and Picotee Society's Show at Birmingham (two days).
Sale of imported Orchids by Messrs. Protheroe & Morris.

EXTENSION OF FRUIT CULTURE.—Some years ago, when the extension of fruit culture as a commercial industry was advocated in the horticultural and daily press, as well as at conferences and meetings of various kinds, there were not wanting people to pooh, pooh the whole thing as worse than wasted talk. There was the man who had made his fortune and pocketed the money, therefore in his opinion it was safe only to grow early varieties which could be put on the market and the value realised at once. Nevertheless, the planting of too many early varieties has resulted in much loss, because the owners had not looked abroad for markets to dispose of the whole of their produce within a given time. Then there were those who had their eye upon the decayed and ruinous cider orchards, without considering that outworn plantations could and should be replaced by fresh ones on other soil; and those who had surveyed the land from Dan to Beersheba and imagined that all was barren. The attempts that were made by the various county councils to educate their people have also been ridiculed in scornful epithets as the veriest humbug, not to use a stronger designation. Then the bogey of foreign competition has been held up as something not to be encountered. Our climate is as suitable as many others from which we get supplies, and we can hardly find fault with the foreigner who discovered a tempting price for his produce in the British markets, and was enterprising enough to meet the demand.

It remains for the people of this country to take the hint and be up and doing. This conviction is gradually dawning upon the inhabitants of Cornwall, where the mild and equable climate is suitable for the production of early crops of various kinds. Not only is there a demand in the London markets, but in the large towns and cities of the Midlands and Northern counties. The efforts of the County Council of Cornwall are beginning to take effect, especially since they employed Mr. C. Illot about a year ago to disseminate information amongst the rural population concerning fruit culture. They are now beginning to recognise that good crops may be obtained in suitable localities by an industrious application of the knowledge obtainable. It is not everyone who can grow fruit, a statement which may mean that he lacks either the capability, the perseverance, the energy, or all of these requisites; nevertheless, the enterprising are slowly but surely finding out their own capabilities and that of the soil, so that a considerable extension of fruit culture in Cornwall may yet be expected. Apples, Strawberries, Raspberries, Gooseberries, and Currants are some of the subjects for which the Cornish climate is suitable, independently of flowers and vegetables, which can be had in readiness for market in advance of the supplies from more Northern counties. Moreover, there is evidence already in some parts that growers are becoming alive to the advantages of growing good varieties of Apples instead of the rubbish with which the ground has for many years been cumbered. The budding of good varieties on vigorous young stocks is being rapidly accomplished.

Coming nearer to London we notice fruit culture in Kent is already very extensive and rapidly extending. Any one can see this for himself who gets on to some of the breezy heights overlooking Swanley in one direction and Eynsford on the other. In some directions fruit culture is monopolising the agricultural land to such an extent that some of the fruit farmers are obliged to buy straw for packing and similar purposes. There are thousands of acres of fruit under the care of people who have little knowledge of the practical details of fruit culture and nothing at all of the science of it. On the rising ground above Swanley Junction is a very extensive and model farm where fruit of various kinds is grown and disposed of with great success. About forty to fifty acres are planted annually. Apples, Plums, Black Currants, Raspberries, Gooseberries, and Strawberries are amongst the most important crops. To give an instance of the method of proceedure we may state that Apples and Plums are planted at regular distances all over the ground. Between them are rows of Gooseberries or Black Currants, and also Strawberries. The latter would furnish the earliest returns, and by the time the plantations are getting exhausted, the Gooseberries or Currants have grown sufficiently to monopolise the ground, and furnish supplies of fruit. They in their turn are finally superseded by the Apples or Plums that by and by shade the ground heavily. For some years, however, the shaded Gooseberries furnish a late supply of fruit, owing to their being retarded in the cool shade of the trees. We noted an immense field of 500 acres occupied by 100 acres of Apples, it may be, and equal extent of Strawberries, and so on for other kinds of fruit.

These crops do not always occupy the ground in mixture but are often planted separately. This is often the case with Strawberries and Raspberries, the extensive fields of which testify to their importance. Raspberries look not unlike a hop field in

the distance, except that they are much dwarfer. Hops do not constitute a feature in the neighbourhood of Swanley. Strawberries are amongst the most important, and their fame is known far and near. The crop had been harvested before our visit to the neighbourhood the other week, and only a straggling crew of gleaners held the field where a week or two previously an army of pickers were harvesting the crop. Raspberry gathering was in full swing. Strawberries again cover the fields in the neighbourhood of St. Mary Cray and at other places in proximity to railway stations A jam factory at Swanley finds plenty of employment.

Mr. W. Atlee Burpee, the well-known seedsman of Philadelphia, U.S.A, is now in this country for a time previous to his going to the continent.

A Big Tomato.—Councillor J. D. Llewellyn, J.P., of Neath, recently cut a fine fruit of Tomato weighing 26½ ozs. His gardener must understand the cultivation of this popular fruit.

The Sweet Pea crop of seed being harvested in California about the middle of July was somewhat below the average weight, owing to an unfavourable season for that crop.

Death through eating Laburnum seeds.—Two little girls, daughters of a miner named Paul, of North Hylton, Sunderland, ate a quantity of seeds which had fallen from Laburnum trees. Ruth, aged 5, died, and her sister is very ill, but expected to recover.

A Promising Rose.—A new single variety has been raised in America as the result of a cross between Rosa rugosa and General Jacqueminot. *Gardening (American)* describes it as a splendid single Rose very near to F. Schuyler Mathew's, pure red, but somewhat inclined towards magenta.

Herr Johann Lambert, Lambert & Sons, Trier, Germany, died on the 23rd ult., in the 67th year of his age. He had been ill for a long time. The firm is one of the largest and best known in Germany, and cultivates a large stock of trees and shrubs, but is perhaps best known in this country as one of Rose growers. They were the raisers of the hybrid Tea variety, Kaiserin Augusta Victoria, that has come so much to the front at the leading Rose shows in Britain this summer.

Scottish Horticultural Association.—This association made a new departure on the 20th inst. Instead of hearing and discussing papers, the members, of whom a good many were present, had the privilege of taking part in a very fine exhibition of Strawberries, held at 5, St. Andrew Square, Edinburgh. The collection, in which there were no less than twenty-five varieties of this favourite fruit, was got together by the president (Mr. M. Todd), who had invited prominent Strawberry growers to forward samples of their crop. The invitation was heartily responded to, among the contributors to the exhibition being Messrs. Dunn, Dalkeith Palace Gardens; Smith, Oxenford Castle; M'Intyre, The Glen; Gorrie, Mauldslie Castle; Smith, Hopetoun House; McKinnon, Terregles; Kirk, Norwood; Mackenzie, Trinity Grove; Temple, Carron House; and Grieve & Sons, Redhraes Nursery, Edinburgh. There were also on the table some boxes of beautiful Rose blooms sent by Mr. Hugh Dickson, Belfast, and Messrs. D. & W. Croll, Dundee, as well as specimens of Sweet Peas by Mr. H. Eckford, Wem, Shropshire. The president—who had provided table decorations, the whole forming a capital display—emphasised the value and importance of the exhibition, and hoped it would turn out to be the first of many similar shows. He also congratulated Mr. Dunn on having been awarded the Diamond Jubilee Medal of the Royal Horticultural Society of London. Mr. Dunn briefly acknowledged the congratulations of the association, and commented in some detail on the exhibits. He observed that all the popular varieties of Strawberry were shown with the exception of the Keens' seedling. At the close of the exhibition a Strawberry feast took place.

Cherry picking has been completed in Kent, and so great a failure was the crop that many trees were not gathered at all.

A Musician's Misconception.—A much disgusted amateur of stringed instruments was seen coming away from Regent's Park on Saturday afternoon of the 17th inst. On his meeting a friend who observed that he looked out of sorts, he replied, "No wonder! I came up all the way from Norwood to see an 'exhibition of Violas,' and it turns out that they're nothing but beastly flowers."—*The Globe.*

Cattleya gaskelliana alba.—A fine form of this turned up at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside, on the 23rd inst., and created some lively bidding until finally knocked down for 20 gs. On the same occasion a handsome variety of Dendrobium Phalaenopsis was secured for 10 gs. The whole flower was of a uniform dark purple, intensifying to crimson in the throat.

Wolverhampton Floral Fete.—In a short note on this subject on p. 741, an unfortunate mistake somehow or other crept into the text. The correct reading should be that the hon. secretary, Mr. W. A. Green, was taken ill on the night previous to the show, but Mr. Alfred Outram, F.R.H.S., of London, undertook the duties of secretary, which he carried out to the great satisfaction of everyone. It was most fortunate for the society that he was able to do so amidst his multifarious duties; and we congratulate him upon his versatility and tact.

Scotch Gardeners in England.—A correspondent of a north of England paper having made the statement that the great majority of gentleman's gardeners throughout England are Scotchmen, an Englishman in elucidating the matter says that "Scotland is more famous for gardeners than gardens." He further states that young men are employed to do nearly all the gardening in Scotland, both under glass and outside, and on that account are well grounded in every branch of the art. In Scotland these young men do the work that is mostly entrusted to labourers in England. When the Scotch apprentices have completed their term of engagement they must leave to make way for fresh apprentices. Crowds of them are thrown upon the market and to find employment they must come to England or emigrate to the colonies. This is the explanation which is vouchsafed by the Englishman to account for the number of Scotch gardeners in England; but that is no explanation of the fact that the majority of the head gardeners and many other distinguished horticulturists in England are Scotchmen. Who can explain that?

Ealing and District Gardeners' Society.—The annual outing of this society took place on the 22nd inst., when the members and friends to the number of sixty-six met at London Bridge, where they embarked on the "Royal Sovereign" for a trip to Margate. This was accomplished by 2.30 p.m. in admirable style and weather, luncheon being served on board, when a hearty vote of thanks was accorded Messrs. Green and Roberts for organisation. At Margate no formal arrangements were made—each went as he or she desired. Some courted the briny, or the "yellow" sands, while others elected to go for a drive, the country about the North Foreland being particularly fine. The cereal and leguminous crops were looking well, although the contrast between the fields of golden "Corn," *i.e.*, Barley and Oats, and the verdant tares was very marked. The Wheat also was ready for the sickle—indeed, some had already fallen and was "shocked" or "stooked," according to the nationality of the observer. Potatos, too, were doing well and flowering freely, so much so, in fact, that Solanum jasminoides was suggested. At 6.30 p.m., the elegantly-fitted and well-appointed paddle steamer, "La Marguerite," was boarded, and a most agreeable and enjoyable tea partaken of. Thence for a time our good ship danced upon the ocean wave, but ultimately slowed up Thames to Tilbury, as if conscious that the "bosom" of "father Thames" deserved more gentle treatment. This tender regard for the feelings "of the old gentleman" made us a little late; hence the party did not arrive at Fenchurch Street quite so early as some of them desired. However, we believe that the trip was most successful, and that everybody got home without much inconvenience.

The Flower Show of the Sandringham Horticultural Society held on the 21st inst. was a great success. Exhibits were more numerous than usual and the competition keen. About 5,000 people attended the show.

Jubilee Honour.—The Lord Steward has forwarded a Warrant of Appointment to Mr. H. G. Smyth of Goldsmith Street, Drury Lane, as Horticultural Sundriesman to Her Majesty the Queen. This we believe is the first and only occasion upon which a horticultural sundriesman has been specially selected for such an honour, and we congratulate Mr. Smyth on his appointment in this the Diamond Jubilee year.

Cottage Gardening.—At a recent meeting of the Manchester City Council, the attention of the Parks Committee was called to the excellent example set by Liverpool in assisting cottagers in the densely populated districts to grow window plants in their homes. The proposal was somewhat coldly received; but it is to be hoped that Manchester will not be behind other cities in caring for its poor. Salford has been encouraging a love of flowers amongst its people with great success.

The Blue Dendrobe.—Some time ago we gave some information concerning an importation of a blue Dendrobium under the name of D. Victoriae Reginae. Since then we have seen three different plants of it in flower, exhibited by as many owners. The first plant was the poorest, then came a better example, and the third was at the rooms of Messrs. Protheroe & Morris, Cheapside, on the 23rd inst. This was the best variety we have seen, the sepals, petals, and lip being of a dark blue-purple, except on the lower third of their length, which was white. The lower and white portion of the lip was striated with purple, but the apical half was the richest and most decidedly blue portion of the flower. All these blooms have appeared on the imported bulbs, so that it is hardly fair to the Dendrobe to lay stress upon the colours under those conditions. The last plant which appeared in public gives rise to the hope that something fine may yet turn up when the plants have made growth in this country and become established. The small piece sold for 16s., which some considered a large price for so small a plant. It was bought by Mr. Thomas Walters for Mr. Cypher, of Cheltenham.

National Chrysanthemum Society's Outing.—A large party of the members and friends of this society started from Paddington on the 19th inst., for Greenlands, Henley-on-Thames, picking up others at stations by the way. Arrived at their railway destination, they were taken in steam launches by the river to Greenlands, the white mansion of which overlooks the river and is very conspicuous amongst its trees, and surrounded by verdant lawns. Tall Cedars of Lebanon give the place an air of antiquity, and Willows, which constitute a striking feature of the Thames' banks elsewhere, are also noticeable here. Roses are very plentiful at Greenlands, several of the climbers being very conspicuous. The members of the party were much interested in the Chrysanthemums, of which Mr. Perkins, gardener to the Hon. W. F. D. Smith, M.P., grows about twelve hundred. Mr. Perkins has also a fine batch of seedlings of his own raising. Evidence of his skill was also furnished by the fine crops of highly coloured Peaches and the excellency of the Grapes of various sorts, including Black Hamburgh and Muscat of Alexandria. Palms, Cycads, and other stove plants, as well as Orchids were also inspected and admired by those having an eye to those useful subjects. A fine piece of Peristeria, the Dove Orchid, came in for comment. Greenhouse plants of all the more popular kinds are also well cared for at Greenlands. Malmaison Carnations were very fine. Melons were tempting and Cucumbers cool. The houses here are very numerous and all well filled, while the more popular flowers find a place in the bedding arrangements. Luncheon was partaken of under the presidency of the chairman, Mr. T. W. Sanders, who rendered the usual loyal toasts and proposed the health of the Hon. W. F. D. Smith, M.P., and Lady Esther Smith. During the afternoon the launches took the party down the river to Hurley, bringing them back to Henley in good time for the train. Thus a very pleasant day was spent.

Broom Rape on Clover.—In the neighbourhood of Farndon, Cheshire, the Clover in the hay fields is much infested with Broom Rape (Orobanche minor) as is usual in July.

Gardener to garden boy, after six months' experience: "Why do you want to leave so soon? Rolling stones gather no moss, you know." Garden boy: "I'm a-feared a coating of moss would make me sour."– *Snaggs.*

Birmingham and Midland Counties Gardeners' Association.—The members of this association paid a visit to Mentmore, the seat of the Earl of Rosebery, on the 22nd inst. They were conducted through the plant houses and vineries by the gardener, Mr. Smith, and found much to admire. The party then proceeded to Ascott, the seat of Leopold de Rothschild, Esq, and was conducted round the place by Mr. J. Jennings. The houses and garden grounds (about thirty acres in extent), were eagerly inspected and much appreciated. The gardeners were then entertained at tea by Leopold de Rothschild, Esq., who was accorded a vote of thanks on the proposition of Mr. Walter Jones, one of those by whom the arrangements were made. Mr. John Hughes (secretary) and Mr. W. Spinks were also instrumental in carrying out the arrangements.

Broughty Ferry Horticultural.—The monthly meeting of this association was held at the British Workman, Broughty Ferry, on Tuesday, 20th inst. Mr. John Machar, Corona, gave a paper on "Herbaceous and other Flowers for Cutting." The essayist was listened to intently by his audience. He imparted much useful cultural information, and gave lists of suitable plants and their seasons of flowering. At this meeting there was a keen competition for the best six bunches of cut hardy herbaceous flowers. The first prize, a Silver Medal, was awarded to Mr. Jas. Fairweather, Douglas House Gardens. On the afternoon of Saturday, 24th, twenty-five members of the society paid a visit to the nurseries of Messrs. D. and W. Croll, the celebrated Rose growers. At the close of the tour of inspection the company was entertained by the firm in the house of Mr. James Simpson. Mr. David Croll presided. The president of the society, Mr. Wm. Grant, spoke of their indebtedness to the Messrs. Croll for the opportunity they had given. On the motion of Mr. Stark, a vote of thanks was accorded Mrs. Simpson for the way in which she had looked after the creature comforts of the party.

The Insects of a London Back Garden.—The chapter on this subject commenced by Mr. Fred. Enoch, F.L.S, F.E.S, in the May number of *Knowledge* has been continued in the July number. Having a small back garden, 30 ft. by 17 ft., and being an entomologist it is evident that he favoured the notion of encouraging the insects by creating a rubbish heap, planting some Willow trees and otherwise creating a paradise for vermin. This is legitimate enough for an entomologist; but for a gardener would be reprehensible enough. Those who have gardens and love them need not go to the trouble of making special preparations in order to invite insects, even if they have a love for entomological specimens as well. All they have to do is to cultivate their favourite plants and catch the insects that come to feed upon the same. London back gardens generally swarm with insects of many kinds which enjoy the shelter and protection afforded, particularly by those who permit rubbish of any sort to accumulate, and who cultivate a considerable variety of flowers, fruits, or vegetables. Mr. Enoch mentions numerous interesting insects which he has found, some of which are friends, but the large majority enemies of gardens and gardeners. We have at one time or other met with a large proportion of the moths, beetles, aphides, sawflies, and other insects he mentions, as well as mites and other allies, and in some cases the parasites with which they are infested and kept in check. Numerous illustrations accompany the text and help the reader to understand the strange, wonderful, and often marvellously beautiful forms of insects to be met with in gardens, and their metamorphoses. Anyone in pursuit of a hobby, and with sufficient spare time on his hands would find an immense amount of pleasure and instruction watching, studying, and searching for these various creatures.

Hops in Kent promise to be only half a crop. The vine is so infested with vermin that no washing can keep the insect pest in subjection.

Orchid culture in America.—Two large collections of Orchids have been disposed of partly by private sale and partly by public auction. The collections we allude to were the Corning collection at Albany, New York, and that of Messrs. Pitcher & Manda, Short Hills, New Jersey. The latter was the most complete in the United States, but was got together too rapidly for the demand for this class of plants on the other side of the Atlantic. This grand collection cost Mr. J. R. Pitcher a great deal of time and money, but singularly enough when he became obliged to disperse the collection, he found a buyer for the half of it in Dr. J. M. W. Kitchen, of East Orange, who was about to invest in fancy Carnations, with a few Orchids, &c., but changed his mind when this opportunity occurred of laying in a stock. Most of the buyers of the other half of this collection, and also the Corning collection were growers for market, so that the transactions in Orchids show which way the wind is blowing in the United States. The cultivation of Orchids is increasing, but almost solely on utilitarian lines.

Brentwood Horticultural Show was held in the grounds of Middleton Hall, lent for the occasion by Mr. J. C. Tasker, on July 9th. Last year the show was held in conjunction with the Essex Agricultural Society, and there was, as may be expected, a great falling off of exhibits this year as compared with those of last. This was more particularly the case with vegetables and fruit, although cut flowers were likewise limited in number. Messrs. W. Gadsby, A. Geary, and W. Shelley were the most successful exhibitors in the amateur's section. Mr. J. Preece, gardener to Mrs. Willmott, Warley Place, secured the premier award for a group of plants measuring 16 ft. by 10 ft. Mr. P. Perry, gardener to J. C. Tasker, Esq., obtained the president's prize for fireplace decoration. The president's prize for twenty-four Roses went to Mr. B. R. Cant., Colchester. Mrs. C. S. Burgess was placed first for table decoration; Mr. J. Preece was first for six dishes of fruit; and Mr. P. Perry showed some unusually fine Cabbages. Over £70 was distributed in prizes, the judges being Messrs. Coomber, J. O'Brien, and R. Dean.

BY TELEGRAPH.

THE CHESTER SHOW.

The Chester Show opened on Wednesday under rather gloomy and threatening weather, which contrasted rather strongly with the rich and varied scene under canvas. It was continued next day. Although the number of exhibits are rather under last year, the quality in several classes is far ahead of previous years, and taxed the judges' discriminating powers considerably.

The chief exhibit was that of Messrs. Dicksons, of Chester, which occupied the whole of a large tent and gave them great credit both for the quality and manner in which the exhibit was carried out (Gold Medal). The first prize for grouping was gained by Mr. J. Cypher, Cheltenham, for one of the most effective groups ever put up, and for twelve stove plants he also gained the premier place. Other winners for groups were Mrs. G. Pease, Darlington, and Charles Wigg, Esq., Chester, who were second and third respectively.

In the cut bloom classes Messrs. Perkins, of Coventry, carried off leading honours for bouquets. For a Rose group and for a group of Dahlias, Messrs. Jones, of Shrewsbury, were first; Mr. M. Campbell, Blantyre, Lanark, was second; Mr. J. Walker, Thame, was third. For a group of herbaceous plants, Mr. Gunn, Alton, was first; Messrs. Harkness, Bedale, was second. The latter carried off the leading honours for forty-eight Roses; Messrs. A. Dickson & Sons, Newtownards, were second; Messrs. D. and W. Croll, Dundee, were third. For twelve Roses, Mr. Hugh Dickson, Belfast, was first; Messrs. Harkness, Bedale, came in second; and Messrs. A. Dickson & Sons, Newtownards, took the third place.

Mr. H. Eckford, of Sweet Pea fame, had a lovely display of his speciality; while Mr. Barnes, gardener to the Duke of Westminster, had a group of Carnations, which was one of the largest and most varied ever put up. Messrs. McHattie, of Chester, had a nice front of foliage fruit and bloom.

GARDENING MISCELLANY.

CARNATION MR. JOHN FRASER.

The other week a bouquet of flowers of a new border Carnation reached this office, under the above name, from Mr. John Forbes, Buccleuch Nurseries, Hawick, Scotland. It was cut with long stems, and is evidently a free flowering and vigorous variety. The terminal flower opens first, after which the lateral branches develop in succession, each terminating in a single flower of moderate and very useful size. The blooms had not been disbudded, and for ordinary garden decoration and for cut flower purposes we consider this the best way. There is no evidence of pod-splitting as it is termed, the calyx being long, cylindrical, and perfect. The petals have long claws and are not unduly crowded, facts which would account for the calyx not being split. They are smooth, rounded, and entire at the edges, and of a rich terra-cotta, shaded with salmon, not buff. Mr. Forbes has been working assiduously in the improvement of garden Carnations for many years past and this variety will no doubt prove useful and acceptable for border work, for it is really beautiful. This is the second season it has been tested, and in every respect it promises well. The plants are of free growth, good habit, and produce an abundance of well-formed flowers. The petals are richest in colour in the centre of the bloom, the large, outer ones being much paler and showing that the ground colour is yellow of the shade generally known as old gold. As far as can be determined from the specimens sent it will be really a good thing for border work, and the flowers are certainly handsome.

CRICKET.

Hurst & Son *v.* Elliott Bros.

Played at Walthamstow, Saturday, July 17th, 1897.

Hurst & Son.

Sampson, c and b Trollop	7
Square, c Challens, b Haynes	60
Portch, c and b Fast	1
A. Cox, b Fast	0
Blyth, b Haynes	20
Delacourt, b Trollop	4
Jerry, b Trollop	0
Day, c Cowan, b Fast	14
Thake, b Fast	4
Duggleby, c Trollop, b Haynes	0
Dixon, not out	0
Extras	11
	121

Elliott Bros.

Cooper, b Portch	2
Hood, b Sampson	43
Trollop, c Squire, b Sampson	0
Fast, b Sampson	19
Haynes, c Squire, b Delacourt	6
Cowan, c and b Sampson	2
Challen, b Sampson	8
Barber, b Sampson	3
Byrne, not out	2
Clifford, b Squire	0
Moore did not bat	
Extras	1
	86

COOMBE COTTAGE, KINGSTON-ON-THAMES.

The name by which this mansion is known is unassuming enough, and is due to the fact that it was originally a gamekeeper's cottage. Each successive owner has added to it till it is now a commodious residence of a mixed pattern, but somewhat after the Elizabethan style of architecture. It is built of red bricks partly covered with neatly trimmed Ivy. It is pleasantly situated on the southern slope of the rising ground known in different parts as Kingston Hill, Richmond Park and Wimbledon Common. The site overlooks a wide stretch of the flat portion of Surrey, the view being obstructed in the far distance only by Norwood Hill, Epsom Common, and the Banstead Downs, which are easily seen by the naked eye on clear days. The residence is occupied by J. B. Johnstone, Esq.

There is a considerable amount of glass on the place, with kitchen, fruit, and flower gardens. The kitchen garden, as far as vegetables are concerned, is gradually being transferred from the vicinity of the house to a field lower down the slope, which has

recently been acquired for the purpose. The old kitchen garden is gradually being monopolised by fruit trees.

THE PLANT HOUSES.

A varied assortment of flowers and fruit is grown in the houses, which are rapidly being restored to beauty and utility by Mr. David Gibson, who was placed in charge less than a year ago, but who by unwearied diligence has already affected many changes for the better. Previous to his appointment the plants had been allowed to get into a ruinous condition, the hard-wooded plants and Orchids fast following the soft-wooded.

The first greenhouse we entered used to be empty, but now contains Azaleas, Lilium Harrisii, Coleus and Gloxinias. Some very fine varieti s may be noted amongst the latter, including Her Majesty, Duke of York, Empress of India, Azurea, and various other well-known and first-class sorts. A span-roofed house close by is devoted to Orchids, including many Cattleyas and Laelias, chiefly L. purpurata. Amongst subjects in flower or making for that stage we noted the Butterfly Oncid, Cypripedium barbatum and C. callosum. A large flower of the latter bore two lips, but was otherwise perfect. Many pans of Coelogyne cristata, which had recently been made up, are now making vigorous growth. The same may be said of Dendrobium fimbriatum oculatum and D. nobile. The whole material consisted entirely of peat in very bad condition; but Mr. Gibson is rapidly applying the proper remedy.

A Melon house next entered was occupied with the second crop of fruits for this season, and now about half grown. The most advanced consisted of Sutton's A1; but a younger batch is furnished by Sutton's Scarlet. A large batch of seedling Gloxinias are now in bloom or rapidly approaching that stage. Here also is a fine batch of Sutton's Giant Cyclamen, the seed of which was sown in October last. The plants are now in sixty-size pots, with plenty of foliage and already showing their flower buds. A Tomato house is occupied with Sutton's Eclipse, Perfection, Sutton's Earliest of All, and Chiswick Red, bearing heavy crops of fruit, particularly the latter variety.

The conservatory is rendered gay with a great variety of subjects, including finely-coloured Coleus, Lilium Harrisii, L. auratum, and L. speciosum. Free use is made of zonal Pelargoniums, which have already grown into good-sized bushes bearing numerous trusses of bloom of great size. The semi-double, intense scarlet flowers of Raspail and Raspail Improved, but particularly the latter, are very conspicuous. Very fine also are the huge, brilliant scarlet flowers of Sunray. The orange, white, and scarlet flowers of Souvenir de Mirande are pretty, and strikingly distinct. The double red flowers of Athea never drop, but dry up with age upon the stalks. The huge salmon-pink trusses of James Vick are also double. An Ivy-leaved variety, with semi-donble, rose and pink flowers is also very handsome. Celosia pyramidalis is also grown in some quantity. Several large plants of Roses constitute a feature of the conservatory owing to the profusion of flowers they produce. In this respect we may mention L'Ideal and Celine Forestier, the latter having pale yellow flowers, those of the former being heavily tinted with salmon-red.

One stove is furnished with a fine plant of Stephanotis on the roof, while the body of the house is occupied with Palms, Ferns, Asparagus, Caladiums, Crotons, and Allamanda Hendersonii, the latter making its way for the roof. Gloriosa superba, Anthurium scherzerianum, Palms, and Ferns fill another. A collection of Carnations including the new and named Malmaison varieties raised by Martin R. Smith, Esq., is being got together. Young Fuchsias are being grown on as single-stemmed plants to be trained to the rafters of the conservatory.

FRUIT HOUSES.

THE Banana house is occupied with a fine bed of Musa Cavendishii which has made enormous growth since April last when strong suckers were planted. The back wall is covered with well-established Figs bearing an enormous crop of fruit. A Vinery near here contains well coloured Black Hamburgh and Foster's Seedling grapes, the bunches in many cases being of grand proportions. Another house contains Black Hamburgh, the vines of which are to be removed next spring, and the border renovated for replanting. The latest house of Peaches and Nectarines carries a good crop. A similar and succession house likewise contains a heavy crop. The grapes in the late vinery are just commencing to colour, the varieties grown being Gros. Colman, Alicante, and Alnwick Seedling.

A house about 140 ft. in length and in four divisions is filled with young trees of the Barrington Peach and others, as well as Nectarines, Apricots, and Cherries recently planted. Some of the trees already bear a crop. Tomatos are planted between the trees to utilise the space till the trees grow. The varieties grown are Perfection, Pear-shaped, Chiswick Red, &c. Tomatos are also grown, trained under the roof of several low, span-roofed houses, Sutton's Eclipse and Perfection being the favourites. Early Marrows also find a place here. Tuberoses and Primula obconica are grown on the benches. Other houses are occupied with Melons and Cucumbers in various stages of growth, a second crop in one house being now well advanced. Cucumbers have been very prolific, 408 fruits having been cut from four plants. Cutting was commenced on the 1st April and the plants are still in bearing. The early Peach house contains trees of Royal George from which the fruit has been picked. Muscat of Alexandria is now taking on a fine colour, the berries in this house being of a beautiful amber yellow last year. The bunches are large and the crop heavy. One small Peach house is entirely filled with a tree of Barrington, which hitherto has been barren, but now carries a splendid crop of large and luscious fruits now being gathered. Mr. Gibson keeps the border well watered all the time the fruits are ripening so that they are juicy and excellent.

OUTDOOR GARDENING.

In passing round the garden and through its numerous walks, Chrysanthemums in pots confront the visitor at every turn. They are grown in exhibition form, and as there are 1,000 plants, we shall probably hear of them again, for Mr. Gibson has already had a successful tussle with the competitors at local exhibitions. Sweet Pea hedges are now in their glory, and with Iceland Poppies, Clarkias, Centaurea Cyanus and other subjects give a pleasing brightness to the more utilitarian subjects.

The soil here is light and gravelly, being in fact what the geologists term old valley gravel belonging to the Richmond Park and Wimbledon Common type, and generally very poor, though some trees thrive well upon it. Long continued applications of farmyard manure, however, give it holding power, rendering it rich for vegetable crops. We had evidence of this in a fine crop of Onions sown under glass and planted out. They are now very vigorous, many of the bulbs measuring 12 in. to 14 in. in circumference.

Pyramidal and cordon Apple trees have been planted over the old kitchen garden, so that the vegetables are gradually being ousted. A feature of this garden is a pathway covered with Apple trees on one side and Pear trees on the other. The original trees were trained to arched iron rods, and any branches that grow to the inside are pruned away, while the shoots to the outside and over the top are allowed to grow freely. Hence at a distance the outer face of this arch looks like a plantation of fruit trees. Mostly all of them are bearing a good crop for this year of bad setting. The standards close by are not well set, with exception of a few, including Uvedale's St. Germain Pear, which is loaded. On the wall of the young gardeners' bothy is a fine Vine of the purple leaved Vitis Coignetiae which becomes blood red in autumn.

Near the front of the dwelling house a new herbaceous border has been made and planted. At one end is a splendid mass of Spiraea Lindleyana, about 10 ft. high and now in full bloom. An arch covered with Roses is also very fine. A large plant of Aimée Vibert, a Noisette Rose, on a wall has been a mass of white blossom for some time past. A fine effect is produced by flowers on the top of a corridor outside.

THE FLOWER GARDEN.

Of this we had only a rapid survey as gloaming was falling heavily. An attempt is being made to get away from flat beds, and carpet bedding finds no favour. One bed is planted with Cannas and yellow Calceolarias, edged with Pelargonium Flower of Spring and blue Lobelia. Fuchsias and variegated Maize, on a groundwork of fine varieties of Mimulus, fill another pair of beds; for the principal design consists of beds matched in pairs though at some distance from one another. Duchess of York and Crimson Gem are fibrous-rooted Begonias with bronzy-crimson foliage, the former being the more vigorous and taller grower. They are very conspicuous in two beds, the centres of which are filled with Calceolaria amplexicaulis and night-scented Tobacco. The centres of two other beds are filled with Coleus Verschaffelti; and five plants of Abutilon Souvenir de Bonn, with variegated foliage, distributed through the beds, have done remarkably well. These are edged with Lobelia Northumbria having a large white eye. Various other beds have recently been made and the plants are making good growth.

The Rosery is surrounded by a hedge of Rosa rugosa alba in full bloom, the hedge being meant for shelter. A bed of Tea Roses occupies the centre, and other beds ranged round it are planted with hybrid perpetual Roses. A bower of Roses is also very gay for the climbing varieties used are very floriferous. A fine pyramidal tree of Thuya plicata on the side of the Rosery stands 40 ft. high. There is much work to be done on the place in spite of what has been done, but Mr. D. Gibson is an enthusiastic gardener, and we believe he will effect a transformation in the course of the next few years.

NOTICE OF BOOK.

HORTUS BOISSIERIANUS. Enumeration of plants cultivated in 1885 at Valleyres (Vaud), and at Pierrière (Chambésy, near Geneva). By Eugène Autran, Keeper of the Herbarium Boissier at Chambésy, and Théophile Durand, Keeper of the Botanic Garden of the State of Brussels. Preface by M. F. Crepin, Director of the Botanic Garden of Brussels. Genève et Bale: Georg & Cie, Libraire-Editeurs. Paris: J. B. Baillière & Fils, 19, Rue Hautefeuille. Berlin: R. Friedlaender & Sohn, 11, Carlstrasse. 1896.

THIS is a bulky catalogue or enumeration of the plants grown in the famous gardens of the renowned botanist, Edmond Boissier, who was born in 1810 and died as recently as 1885. He is the illustrious author of the *Flora Orientalis*, a work consulted by all botanists. During his lifetime Boissier made journeys in the East, in Italy, in Spain and numerons excursions in the Alps in search of his favourites. He had two establishments, one of which, Valleyres, was situated at the foot of the Jura. At this place he had a magnificent collection of Alpine plants in an Alpine garden of varied and peculiar construction; for an upright wall specially built for the purpose was covered with tufts and patches of plants requiring that sort of treatment. His lifelong experience enabled him to cultivate in a marvellous manner the more difficult of the inhabitants of high altitudes. Visitors to this establishment were astonished with the rocks, walls, ramparts and squares filled to repletion with a crowd of species, coming originally not only from the Alps of Europe, but from the mountains of Asia and America. Altogether there were about 3,500 species and varieties at Valleyres. A large number of these he collected himself, but spared no expense in procuring specimens collected by others in various parts of the world. None of the plants were common, but rare or comparatively so, and often difficult to cultivate.

During winter, Boissier descended from his Alpine habitation to Rivage, on the shores of Lake Leman, where he had another fine establishment, and likewise a grand collection of plants of an entirely different nature from those above-mentioned. He established a vast arboretum in which he planted many exotic trees, chiefly Conifers, which have now assumed a rare beauty, and are rendered additionally valuable on account of their rarity. At the death of Boissier in 1885 both of the above collections, or such as could be moved were transferred to Pierrière, the residence of his son-in-law, M. William Barbey, who is likewise a botanist.

From that time until quite recently the authors of the *Hortus Boissierianus* have been elaborating the splendid list of plants cultivated by Boissier and existing at the time of his death. The completed list exceeds 5,000 species and varieties, being sufficiently numerous to stock a botanical garden of quite respectable size. Of Dicotyledons he cultivated 582 genera, 2,524 species, and 162 varieties. Monocotyledons were represented by 365 genera, 1,748 species, and 141 varieties. Of Gymnosperms he had twenty-six genera, seventy-seven species, and twenty-five varieties. Vascular Cryptogams included forty-

five genera, 346 species and thirty-one varieties. The total of these amounted to 1,018 genera, 4,695 species and 359 varieties. Any private collector and owner might well feel proud of such a collection. By way of comparison it may be stated that the famous *Hortus Donatensis*, as enumerated by Planchon, contained 2,000 species; and Hortus Thenensis contained 2,753 species.

Amongst other things we note that Boissier cultivated 157 species of Ranunculaceae, 100 species of Crucifers, 160 species of Rosaceae, 138 of Saxifragaceae, 141 of Crassulaceae, 250 of Cactaceae, 772 of Orchids, 139 of Irideae, and large numbers of various other families. The list of Orchids is marvellous for a private establishment.

The book runs to 572 pages, including a good index of all the generic names and synonyms. In the body of the work the natural system of arrangement is followed. Here we have not merely a list of names, but the authorities for the same, references to works in which the species are correctly figured, synonyms, the countries in which they are found in a wild state, and the duration of the plant. Great care has been taken to establish the correct names by referring to the original descriptions, so that the oldest nomenclature might have the right of priority. The *Hortus Boissierianus* will therefore constitute a valuable book of reference to botanists as well as others; and will find a place in libraries by the side of botanical treatises, monographs, and other works of reference. To refer to the original descriptions of each of the 5,000 species and varieties is in itself a work of considerable magnitude. Only the renowned name of Boissier could have induced anyone to work out a catalogue and book of reference on such a scale as the work under notice.

A photograph of Boissier forms the frontispiece, and this is followed by two others of the plant wall at Valleyres, and Saxifraga Kotschyi, respectively. The last was a grand piece in full bloom, cultivated in a cranny of the wall at Valleyres. A vast number of the species mentioned are cultivated in this country, so that the book should be valuable to gardeners as well as botanists for the purpose of referring to the correct name and spelling.

THE PLANT HOUSES.

Pits and Frames.

CINERARIAS.—The earliest plants should now be shifted into their flowering pots. The size of these will depend, of course, upon the size and strength of the plants themselves. Fair sized specimens may be grown in 6-in. pots, but the 7-in. or 8 in. size may well be given where larger plants are required. For this final potting the soil should be rougher than that given in preceding stages, and may be fairly substantial. Mellow turfy loam should be the staple. Two thirds of this together with one third of leaf soil and dried cow manure together, and a liberal addition of road scrapings, or river sand, will answer very well. Soil from an old Melon bed with a little further addition of leaf mould does very well, and is easily procurable. The only difficulty in making the soil too rich is that it conduces to over gross growth, and this is not what is required. A little coddling may be required for a week or ten days after potting. The frame should be kept fairly close and well shaded, whilst the syringe should be drawn lightly over the foliage twice or thrice a day. Watering must be carefully looked after, since it is important that the plants should not be over-watered at this time. Once over the check of potting, the plants will be all the better for more vigorous treatment. Some growers adopt the plan, and with excellent results, be it said, of putting the plants right out of doors during August and the early part of September. Without going the length of this, however, it is possible to obtain stocky vigorous plants by giving plenty of air, and by attending to thinning out and giving the plants more room as growth calls for it.

The later plants may be subjected to similar open treatment, but in all cases shade from the hot sun is necessary, for the sun much distresses the poor plants. The cultivator must have both eyes open for green fly and mildew if he is not to register any losses or failures by reason of their influences.

HERBACEOUS CALCEOLARIAS.—If very late plants are desired, a sowing may be made now to form a succession to the June sowing. The plants resulting from the latter sowing are now large enough to be potted off singly into small 60-sized pots. Equal parts of loam and leaf soil with a good sprinkling of silver sand will make a good potting compost. Keep the plants cool and shaded, and as in the case of the Cinerarias watch for green fly.

CHRYSANTHEMUMS.—The earliest potted plants have now about filled their pots with roots, and watering will become day by day an increasingly heavy item as long as the summer weather lasts. With so much strain upon the plants some manurial stimulants will soon be necessary. Perhaps the great danger in modern Chrysanthemum culture is the fondness for applying chemical manures. This is often done to excess, and the object of their application in a measure defeated. At the first stimulants should be given very charily. A weak solution of soot water is a capital thing. The great point is to obtain it free from sediment, and as such a solution, although not very highly coloured is very strong, only sufficient of it to colour the water slightly should be given. Cow manure, deer or sheep droppings are all good, the only objection being that it is necessary to soak them in a tub of water, the the smell from which is not agreeable to all. Such chemical manures as guano, Clay's Fertilizer, and Thomson's may likewise be given occasionally, timing their application so that a constant change of diet is afforded.

Syringing the plants over on the evenings of hot days proves of the utmost benefit to them. Some cultivators advise syringing with a little soot water as a means of keeping away aphides. If this plan is adopted see that no sediment whatever is left in the water, otherwise the deposit that will be made upon the leaves will stop up their pores and be in reality worse than that the soot water is used to prevent.

LATE STRUCK CUTTINGS.—Small plants in large 60-pots are much in request for indoor decoration during the late autumn and early winter months. These may easily be obtained by striking the tops of growing plants four in a large 60-pot. Put them in a cold frame, cover them with a handlight, and keep them shaded and syringed, when they will soon root.

VEGETABLE CALENDAR.

WITH so many young crops just planted from the seed beds, particular attention must be given to watering, and getting them established as quickly as possible. Showery weather at this season is often deceptive, as only the surface gets moistened, and little permanent good is done unless assistance is given to carry the moisture down to the roots by additional supplies from the water pot. Where "clubbing" is prevalent among the Brassicas, a strong dose—2 oz. to a gallon of water—of sulphate of ammonia will do much good in checking the disease and strengthening the plants Common salt also is very useful for the same purpose when applied in moderate quantity.

LATE PEAS.—The excessive heat has been trying for this crop, and liberal treatment will be needed to maintain the plants in a spring-like vigour of growth. Under these circumstances it is essential to keep a steady moisture about the roots, and an occasional watering with blood manure, nitrate of soda, soot, and other soluble manures will do much good at this season, in preventing the plants getting into a stunted condition. Where house room can be given in autumn, a few dozen pots—48's—may be sown at the present time to give a late supply. When well rooted these can be potted into 10 or 12 in. pots, using good rough material, principally composed of fibrous loam and decayed manure. Select for this sowing one of the best cropping dwarf Marrowfats not exceeding 3 ft. high.

FRENCH BEANS.—To keep up the supply of these until late autumn, a few lights of framing should be sown with Ne Plus Ultra or other approved kind. If a pit containing a flow and return pipe can be devoted to this purpose, I would advise sowing it with Canadian Wonder or Magnum Bonum, as these are more perpetual bearers than the other kinds. After sowing keep the plants dwarf and sturdy until the season comes for protecting them from cold and sudden changes of weather.

CELERY.—The earliest crop should now be well-advanced in growth and a favourable opportunity should be taken to earth it up. Previous to this being done all suckers must be removed from the collars of the plants, and a thorough soaking of water given to the roots. Commence with a good base on which to build; and the soil for filling in the centre and round the plants should be well-pulverised, and a little fresh lime blended with it will give clean heads. Late crops must be encouraged with liberal supplies of liquid manure and mulchings to keep the plants in free growth.

ONIONS.—Crops planted from the autumn-sown seed beds will now have attained full size and may be lifted and ripened before they commence running to seed. These bulbs if stored in a dry, cool place will keep up the supply for some time to come. The spring-sown crop will require attention at this season to prevent premature ripening. On good deeply-worked land there is not much danger, but on thin shallow soils a check soon occurs unless the beds are kept well-watered with some good stimulant.

SPINACH.—A good breadth of the summer kind should be got in at this season. A sheltered and sunny position should be selected for this sowing to get the advantage of all the warmth possible during the autumn months. Preparation should also now be made in selecting a position for the winter crop; and in thoroughly working the ground at least 18 ins. deep. At the same time a good dressing of fresh lime and soot will act beneficially on the land, destroy grubs, and stimulate the plants into quick growth.—*J. R.*

The Orchid Growers' Calendar.

WATER.—It is only when we have a spell of dry weather that we think of making provision for storing the superfluous water that runs through the waste pipe during the heavy rains of winter and early spring. The value of rain water for Orchids cannot be over-estimated. Without it the moss refuses to grow and the plants rarely do so well. Some of us are at our wits end to know what to do during the continued drought. True, if the tanks in the houses are filled up from the main from day to day it gets softened a bit, but not so much as it would if exposed to the sun out in the open. For watering special things and seedling Orchids, we have a large tub out-doors fully exposed to the sun's rays. This is filled up every evening with clear water. At noon on the following day it is quite warm and soft, and may be used as stated above. On dull days it would not get soft so quickly, but then the plants would not dry up so soon, and in consequence require less or no watering.

EAST INDIA HOUSE.—Should there be a scarcity of water for use in this division it is best to let it stand in cans or tubs in the house a few hours before using it, either for watering direct or syringing purposes.

CATTLEYA HOUSE.—There is not much in flower just now so that the syringe can be kept freely going morning and evening, amongst and over the heads of the plants, but see that too much does not lodge in the heart of the new growths of such as C. gigas, C. aurea, &c.

LAELIA CRISPA.—This a good free-flowering summer Laelia, but one that somehow or other is not always found in the best of health. We find it does best when given plenty of root room and well elevated above the rim of the pot. The potting compost, too, must be of the very best, and not pressed down too tightly. This allows the water to pass freely away, and the air to get at the roots.

CATTLEYA GUTTATA LEOPOLDII, C. SCHOFIELDIANA AND C. HARRISONIAE are summer-flowering examples of the tall growing section. They all enjoy a light airy position on the middle of the centre stage. In potting keep the plants well up and make them firm by placing neat stakes to each. This admits of the compost being placed somewhat loosely about them.

COOL HOUSE.—The pretty Cochlioda noetzliana, just now in flower, is certainly a great acquisition to our cool house Orchids. It very much resembles "Mesospinidium," and requires the same treatment. It is best grown in hanging pans in a compost of peat and moss in equal parts. It requires copious supplies of water at the root when growing, and at no time should it be allowed to shrivel for the want of it.—*C.*

HINTS FOR AMATEURS.

Tomatos.—Plants that have been put out in a sunny part of the garden, but have not been given the shelter and assistance of a wall or row of pales, will require attention for staking. If stakes were to hand at the moment when the plants first needed support there is little to do but add ties as growth proceeds. Often enough, however, sufficiently stout stakes are not obtainable. Such stakes should be about 5 ft. in length, and of sufficient strength to carry a heavy prospective crop of fruit. In cases where the plants were not supplied with these stout supports, in the first place, they have been allowed to lie upon the ground. As long as they have been kept from becoming mixed up with each other there is nothing to be said against this practice, as the fruit sets fairly well when the plants are in the procumbent position. In order to ripen the fruits well, however, the plants must be lifted up so that the sun, light, and air can play about among them. Staking, therefore, should be seen to at once. Do not make the ties too tight, as the stems of Tomatos swell considerably in the neighbourhood of any ligatures. About 4 ft. is a good height for such plants, and so when they attain that height, and if they are carrying a fair quantity of fruit, the top should be cut out. All lateral growths meanwhile must be duly cut back, but do not attempt to interfere with the leaves. It is not at all enlightened practice to trim the poor plants until only the vestiges of leaves are left, and yet it is often done.

Dahlias are now making free growth, together with a lot of side shoots. If plenty of flower is wanted this is all very well, and the shoots may be allowed to grow away as they list. If large flowers, up to show standard are what are wanted, thinning of these shoots must be practised. First of all cut out the weaker ones, leaving the stronger and well placed growths. If there are still too many, a further thinning may be given. Staking must next be proceeded with. Each shoot should be carefully tied out to a stake, in such a way that the air can play freely all through the plant. The birchbroom system of tying-up must not be tolerated for a moment. Good flowers cannot be obtained in such a way, and the plants thus treated look sorry-looking objects, indeed.

With the present drought and heat Dahlias will require a lot of water, and liquid manure may be freely given with advantage. A mulching of short manure will also be of great value. Artificial waterings are of special importance to plants that are growing on the borders of shrubberies, for here the shrubs naturally soon exhaust the water supply, and the soil in the neighbourhood of shrubberies that have been standing for long is generally of a poor and hungry nature. Large old plants that have not been divided at all, but have simply been started in the same condition as they left off last year are usually relegated to the shrubbery borders, where by dint of a very little attention they usually render a pretty good account of themselves, and produce plenty of flower. Beyond staking and watering they will not require anything, but may be allowed to produce as many shoots and flower buds as they like—the more the better.

Alstroemeria aurantiaca.—During July and August there is no more showy occupant of the of the herbaceous border than this Alstroemeria. It is a native of Chili, and was introduced from thence in 1831. It is perfectly hardy, and very few subjects indeed require less attention. A sheltered, well drained border with rather light soil suits them admirably. The plants run to 3 ft. or 4 ft. in height, and the flowers are borne in umbels of five or six flowers each. The flowers themselves vary to some extent in colour, but are of some shade of orange streaked with red. They last well in water, and thus for cutting purposes are of great value.

Dwarf Chrysanthemums.—Small plants of 'Mums in pots of a size that admits of their being placed inside ornamental pots and vases and used for the decoration of dwelling rooms, are always in request during the months of November and December. In order to obtain these, cuttings should now be taken. They should consist of the points of the shoots of growing plants. These may be inserted in large 60-pots, four cuttings being placed round the inside edge of each pot. Use light sandy soil, and when making up the pots in readiness for the cuttings, make it fairly firm. A place in a frame facing to the north will do capitally. If there is a bottom of ashes in the frame so much the better, as this is clean, cool, and holds the moisture well. The cuttings may or may not be plunged—very little difference in results will be observed in either case, and these differences are not always constant. Thus in one year the plunged cuttings will do a little better than those that were not plunged, while next season, as likely as not, the positions will be reversed. What is more important is to cover the cuttings with a small handlight, like those used for protecting Cauliflowers. This enables the cuttings to be kept as close as desired, and thus the larger frame can be used for other plants that do not need to be kept so close. In such a position shade will only be required up till about 11 a.m. The cuttings may be gently sprayed with the syringe twice a day during fine weather, as there is no fear of the cuttings damping at this time of the year. At the end of about a week the cuttings will have stiffened up sufficiently to admit of a chink of air being given, but put the light on at once if they are observed to flag much. After roots have been freely made the plants may be grown on in a frame, or outdoors for the matter of that, but do not coddle them in any case. They will not need potting, but may be grown on and flowered in the same pots.

Peaches on Outside Walls.—Trees of such varieties such as Amsden, Waterloo, and Hale's Early must be netted over as soon as the fruit commences to ripen off. Forked sticks about a foot in length must be used to keep the nets far enough away from the tree. A good way of fastening the nets at the bottom is to twine in a few supple twigs with the wires.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Asparagus Beds.—I want to know what is the best plan to follow with Asparagus beds after they have done yielding; whether to spuddle them over lightly or to take a spit of earth from all over the top and dress as I was advised to. An answer in the "Amateurs' Page" would oblige.—*H. B.*

The advice you have received seems to be of a very curious kind. To fork over the beds or attempt to remove any of the soil from the beds now would be attended with fatal consequences. All you can do is to let the plants finish their growth for the season, seeing meanwhile that the beds are kept free from weeds. If your beds are 3 ft. or 3 ft. 6 in in width with alleys between the weeding can be easily conducted. Any very heavy growths that appear to be in danger from the wind may be supported to prevent them from being snapped off. In the autumn when growth has finished, go over the beds and cut down the old stems close to the ground, remove all the weeds that have escaped notice prior to that time and tidy up generally by giving the beds a rake over. Early in the year, say sometime in January, give a good dressing of well-rotted stable or farmyard manure to the depth of at least a couple of inches. The soil may be pricked up slightly, not sufficiently deep to injure the crowns before the manure is applied, and one or two light forkings over may be given between January and March, but no such practice as deep digging or forking must be tolerated.

Ardisia crenulata.—*Alice F.*, will be greatly obliged by information as to the treatment and propagation of Ardisia crenulata. A plant bought about nine months ago with berries still retains them, and has been most useful in a staircase window, and lately in a greenhouse. The leaves begin to look shabby.

This plant will do well in either a stove or greenhouse, although in the cooler house the berries are retained longer, as in this case. The best method of propagation is by seed. The seed should be selected from the largest and finest berries, and sown in light sandy soil in shallow pans in spring. A nice bottom heat and stove temperature overhead will be necessary to insure rapid germination. From the seedling stage the plants may be potted on as desired, using a compost of equal parts of peat and loam with silver sand. All through the summer the plants must be kept well syringed as they are very dirty subjects, and the leaves soon get filthy. Cuttings formed of the half-ripened side-shoots taken any time from March to September will strike root, but they do not make such good plants as the seedlings. After a while—say after the first two years of growth—the plants become leggy, and lose their bottom leaves. Cutting back is then necessary. This is best done in early spring, and the plants should be allowed to get rather dry beforehand. After the cut has dried water may be given, and the syringe regularly applied. When the young shoots make their appearance they should be thinned a little, leaving only sufficient to form a well-balanced head. Potting may be subsequently seen to as required, using a similar compost to that recommended above.

Lillum auratum.—*Chas. Nash*: This Lilium was first introduced into Europe by the Messrs. Veitch in 1862. "Yama Uri," is the native name of the plant in Japan. "Yama" signifies "hill," and "Uri" means a "Lily," so "Yama Uri" is literally "hill Lily."

White Carnations.—Will you give me the names of two of the best white border Carnations, one of them suitable for exhibiting, and the other should be a free flowering variety that will do well as a bedder?—*Walter Soper.*

You will find Mrs. Eric Hambro a grand white exhibition sort, although it is still rather expensive. For bedding purposes you cannot do better than try Mrs F. Watts. It is about fifteen inches in height and a very free bloomer.

Malmaison Carnations.—*Buxton*: You may layer the shoots round the edge of the pot if there is room to do so comfortably.

Ivy Leaves Dropping.—I have several Ivies in a sitting-room. They get plenty of water, but the greater part of the leaves has dropped. What is the cause, and the remedy?

Want of light is probably the reason for the dropping of the leaves complained about. Turn the plants out of doors and give them a place on the window sill. They will soon make fresh leaves, and will be ready for another spell indoors.

Violas.—Please say what is the matter with the Violas of which I enclose samples. As you see the leaves have all turned brown.—*Castor.*

Your Violas are infested with red spider. Keep them frequently sprinkled or syringed. That is all that you can do. The spider is almost sure to put in an appearance during dry periods.

Tomatos not Setting.—At the beginning of June I planted out a quantity of Tomato plants against a wall facing south-west. The plants have grown fairly well and have borne several trusses of flowers, but the fruits never get any larger than a pin's head. They stay in that stage for some time, then turn yellow and drop off. Please advise me what to do.—*Reader.*

The weather is the cause of the failure to set on the part of your Tomato flowers. The little fruits are not properly fertilised, or they would swell up and not drop off. The last week or two the air has been wonderfully dry and not favourable to setting, any more than damp sunless weather would be. Go over the plants daily and touch each of the expanded flowers lightly with a camel's hair brush. You may then see better results.

Hollyhocks.—*Enquirer*: Hollyhocks may be propagated by inserting eyes taken from the side shoots in a frame in sandy soil. A little piece of the stem, and a single leaf are left to each eye. In dibbling the latter in, the top of the eye or bud should be just peeping out of the soil. We prefer the system of grafting young shoots on pieces of the fleshy roots in spring, for the plants will be really as forward as those originating from eyes put in now, and besides you escape having to pay all the winter attentions.

Pruning Deutzias.—*S. Carlton*: It is much too late now to think of pruning Deutzias. It should have been done, if necessary, after the plants had done blooming in the spring. As a rule, the pruning needed is very little. Some of the old wood may be

cut out to make room for the new; that is all. The flowers of next year will be borne on the wood made during this season.

Grapes Shanking.—*R. Wilson*: As a rule the cause of shanking in Grapes is defective root action. The roots of the Vines, probably, have got into some unfavourable substratum in which they can find no food. You cannot remedy the matter now, but must leave it until winter when the state of the roots may be carefully examined.

FLORISTS' FLOWERS AT SWANLEY.

THE other week we paid a visit to the well-known nursery of Messrs. H. Cannell & Sons, Swanley, Kent. Here we found that there had been no rain at all on the occasion when other counties were being deluged with rain and havoc in certain parts caused by devastating hailstorms. Whether indoors or outside, the pot plants at Swanley showed no effect of drought nor otherwise. There is always something in bloom, but the zonal Pelargoniums bloom perennially, and are always worthy of inspection. They are, in fact, a leading feature of this place, but other subjects call for remark here.

GLOXINIAS.

A grand strain of this popular class of plants is grown from seed. One house 100 ft. in length is entirely occupied with plants bearing a heavy crop of seed-pods which will ripen in due course. Even here, however, many of the later plants are still in bloom, and another house is occupied with younger plants, including this year's seedlings. The accompanying illustration, put at our disposal by Messrs. Cannell & Sons, shows the principal Gloxinia house when the plants are in the flowering stage. Pots of various sizes are used according to the size and vigour of the corms to be put in them. Very large plants are grown in 6 in. pots, which are greatly hidden by the large, fleshy leaves.

As in other collections of Gloxinias, so here a considerable amount of favour is accorded the self varieties. This is due to the prevailing taste amongst the public at present. Prince of Wales has large flowers of a glowing crimson-lake, fading to rose at the margin. Her Majesty is pure white, with large massive flowers and of splendid habit. Princess of Wales is glowing scarlet-lake with a narrow white edge and very pretty, owing to the well defined character of the margin. Another very bright sort is Beacon, of which we noticed numerous plants, the bright colour showing up well.

Edged varieties are further represented by Wm. Marshall, a deep claret purple flower having a broad blue margin, well defined. It is a most attractive variety. Others are banded with different colours in a very attractive way, the band usually forming a zone, equidistant between the margin and the throat of the flower. Amiable is white, with a broad, pink zone. Sherlock Holmes has a broad violet band fading to sky-blue. The flowers have six segments, and attain a great size. Spotted and marbled varieties in many colours, and of most intricate pattern may be seen, so that people of all tastes may find something for their delectation. The markings may be rose, pink, lilac, blue, purple or violet, and arranged on a paler shade of those colours or white. The cultivation of Gloxinias is well understood here.

TUBEROUS BEGONIAS.

Eight or nine houses are devoted to the cultivation of this popular race, independently of the plants grown out-of-doors. Those plants which made their appearance at the Temple Show are now in an advanced stage of their growth, and the finer named sorts are being fertilised for the production of seed, or are carrying a crop of pods that have been produced by careful cross-breeding. A fine batch of seedlings sown this year is now in prime condition. Many of them have refined flowers of various colours. Amongst the double sorts some are primrose, yellow, bronzy-orange, glowing crimson-scarlet, white, cream, pink, rose, silvery-pink and scarlet. Most of these have broad, flat, or wavy, crisped petals arranged round a single centre. Hundreds of them have not yet received names.

Single varieties are grown in 24-size pots in other houses. They run through the same range of colour as the double varieties. Very striking are some of the bronzy-orange sorts; the cream flowers with a rosy-salmon edge; pink edged with salmon; white edged pink, and other delicate shadings. One very striking flower is orange internally and red externally.

HOUSE OF GLOXINIAS AT SWANLEY.

CANNAS.

The new Orchid-flowering varieties such as Italia and Austria are grown here, but are not at present in season. The other race with large flowers of the Madame Crozy strain, and known as Gladiolus-flowered are grown in great numbers. They are practically hardly ever out of season, but at present one house is worth a journey to see. The plants are grown in pots, and all are remarkably dwarf considering the great size of the flowers they produce. The foliage is healthy, the spikes large, and the flowers of all shades prevailing in this class of plants, from creamy-white to glowing crimson. The self, variegated and edged flowers are all very handsome,

The orange-red flowers of Königin Charlotte, with a broad margin of gold, are particularly handsome. Alsace is a creamy-white variety that flowers freely.

A golden-yellow flower is Aurea. Madame Crozy is orange-vermillion, edged and mottled with gold. The vermillion-red and yellow-edged flowers of Duke of York are very freely produced. The glowing golden-amber flowers of Paul Bert are distinct and striking. Orange-scarlet is represented by Nardy Père and Sénateur Millaud. Sunset Glow is bright salmon. Other shades are represented in great variety, and we have never seen them finer. About a hundred of the best varieties are in the collection.

BALSAMS, FUCHSIAS, &C.

A fine batch of double-flowered Balsams is now in full bloom, and will presently furnish a good harvest of seed. Petunias are also grown in some quantity, the flowers we noted being mostly double. A rosy-pink variety with compactly arranged, curled and crisped petals closely resembles Mrs. F. Sander, if not the same thing. Another of the same type but having darker rose flowers and very closely arranged petals, beautifully crisped and curled is named Mrs. Cannell. A very singular flower of another type is made up of pink and white petals mixed. The Messrs. Cannell have always been famous for Fuchsias, and though the day for big specimens is almost a thing of the past, yet the plants are neither out of fashion nor neglected. This will be conceded when we state that about 200 varieties old and new are cultivated at Swanley. Moderate sized plants in endless variety of colour may be seen, both light and dark, single, and double, with narrow and wide corollas. Very handsome is Royal Purple, the corolla of which is rich purple with broad, convolute petals. The sepals on the contrary are red. Fuchsia boliviana variegata has its leaves broadly margined with creamy-white. Altogether different in its way is Dunrobin Bedder, a dwarf Fuchsia belonging to the same type as F. Riccartoni, and used for bedding purposes. It forms compact little bushes about a foot in height, and flowers profusely. Efforts are still being continued to improved the Fuchsia by cross-breeding, and many unnamed seedlings may yet be seen at Swanley.

Achimenes and Streptocarpus are grown in considerable quantity, and have been flowering for a long time past. Many varieties of Coleus are grown in quantity in a house that is largely devoted to this fine foliaged subject. There is a great range of colour in the foliage. Some of the leaves are of enormous size, particularly those of Coleus Emile Rodigas, a leaf of which without the stalk measured 10 in. by 9 in. It is velvety-crimson with carmine veins and a yellow base.

Capisicums in great variety are grown for ornamental purposes. Many varieties are peculiar for the remarkable shape of the fruits; and amongst them Elephant's Trunk may be included, with long, curved fruits as the name would suggest.

A splendid strain of Cockscombs is grown for the purpose of seed which is now nearly ripe. After this has been gathered the combs commence growing again, swelling out to exhibition size. We noted all shades of colour from white to the deepest crimson and carmine, Other shades are rose, purple, yellow, lemon, golden, and rosy-violet with a wavy golden line along the top of the crest, giving the variety a quaint and pretty appearance. They are grown in pots in one of the many span-roofed houses so well suited for the cultivation of the soft-wooded subjects so largely in vogue at the present day.

We shall have to refer to the zonal Pelargoniums on another occasion, for they are never out of season; and though old-fashioned subjects they are ever new and interesting, especially for pot work under glass where their huge flowers and trusses can be protected from the variable and fickle whims of our climate.

CHEMICAL PROCESSES IN AN ORCHID.

(*Concluded from p.* 741).

This (see diagrams) would be an explanation of the manner epiphytal Orchids derive their earthy and alkaline constituents, and it is suggestive of the cause why Orchids growing on native wood go wrong when the wood begins to decay. The earthy salts would then be in a different state, and probably less soluble, and therefore in a condition which the root of an Orchid cannot absorb. I have found that hanging an Epidendrum ciliare up and simply watering, although it flowered for the first year or two, ultimately perished, no doubt due to exhaustion caused by the removal of a certain proportion of the earthy salts by the flowers, and by the inability of the plant to obtain a fresh supply of the earthy salts. Dendrobium nobile will also exist for a year or two under similar conditions, but will gradually decrease in the size of its growth and ultimately perish.

I noticed that after a severe thunderstorm on Whit Sunday, the tips of the leaves of the Bull-rush became changed from their green colour to the brown colour of autumn, this was no doubt due to a rapid formation of ozone during the storm, acting upon the chlorophyll and bleaching it. I have found that a similar re-action takes place by placing a portion of the leaf of the Bull-rush in per-oxide of hydrogen, HO_2, and exposing it to sunlight. The influence of sunlight and a temperature over 70 F decomposes the HO_2, and sets free an equivalent of oxygen O, which attacks the chlorophyll with the result, bleaching and turning brown of the edges of the leaf.

Turning now to the flower bud when it first appears from the sheath it is green from the chlorophyll, but as it expands it becomes white by the rapid oxidation of the chlorophyll. Carbonic acid and water are formed, and the colouring matter is probably in the condition of white indigo, but after a few days a further equivalent of hydrogen gets oxidised, and the mauve colour of the Cattleya appears. I have no doubt that many of the white blooms which become tinged with colour, and are therefore comparatively valueless, derive their colour in the above manner, and it is only the plants of weak constitution that are the true albinos.

The act of the expansion of the flower is a reversal of the growth of the leaf. In the case of the leaf carbonic acid is absorbed by the tissues, and oxygen expired; in the case of the flower carbonic acid is expired and oxygen absorbed.

Assuming that the chlorophyll in the flower bud has the formula $C_{19}H_{18}NO_5$ by the absorption of fifteen equivalents of oxygen, a compound would be formed with the formula $C_{19}H_{18}NO_{22}$, which under the influence of sunlight might split up into $C_{16}H_6NO_2$ (white indigo) plus 3 of carbonic acid 3 (CO_2) plus 12 of water 12 (HO), if, however, another equivalent of hydrogen was oxidised, blue indigo is formed, $C_{16}H_5NO_2$.

In the split up of the juices of flesh the following products are formed:—

Urea $C_2H_4N_2O_2$
Kreatine $C_8H_9N_3O_4 + 2$ (HO)
Kreatinine $C_8H_9N_3O_4$
Sarkosine $C_6H_7NO_4$

and it is probable that a similar series may be formed by the split up by the oxidation of the chlorophyll in the flower bud.

Professor Graham, in a classic paper published in the Phil. Trans. for 1866, on the absorbtion and dialytic separation of gases by colloid septa, demonstrated that gases behaved very differently if passed through indiarubber or gutta percha membranes, although indiarubber and gutta percha are chemically identical substances. He showed that gases pass membranous septa most readily, which are easily liquified by pressure. Carbonic acid, therefore, penetrates more easily than hydrogen or oxygen.

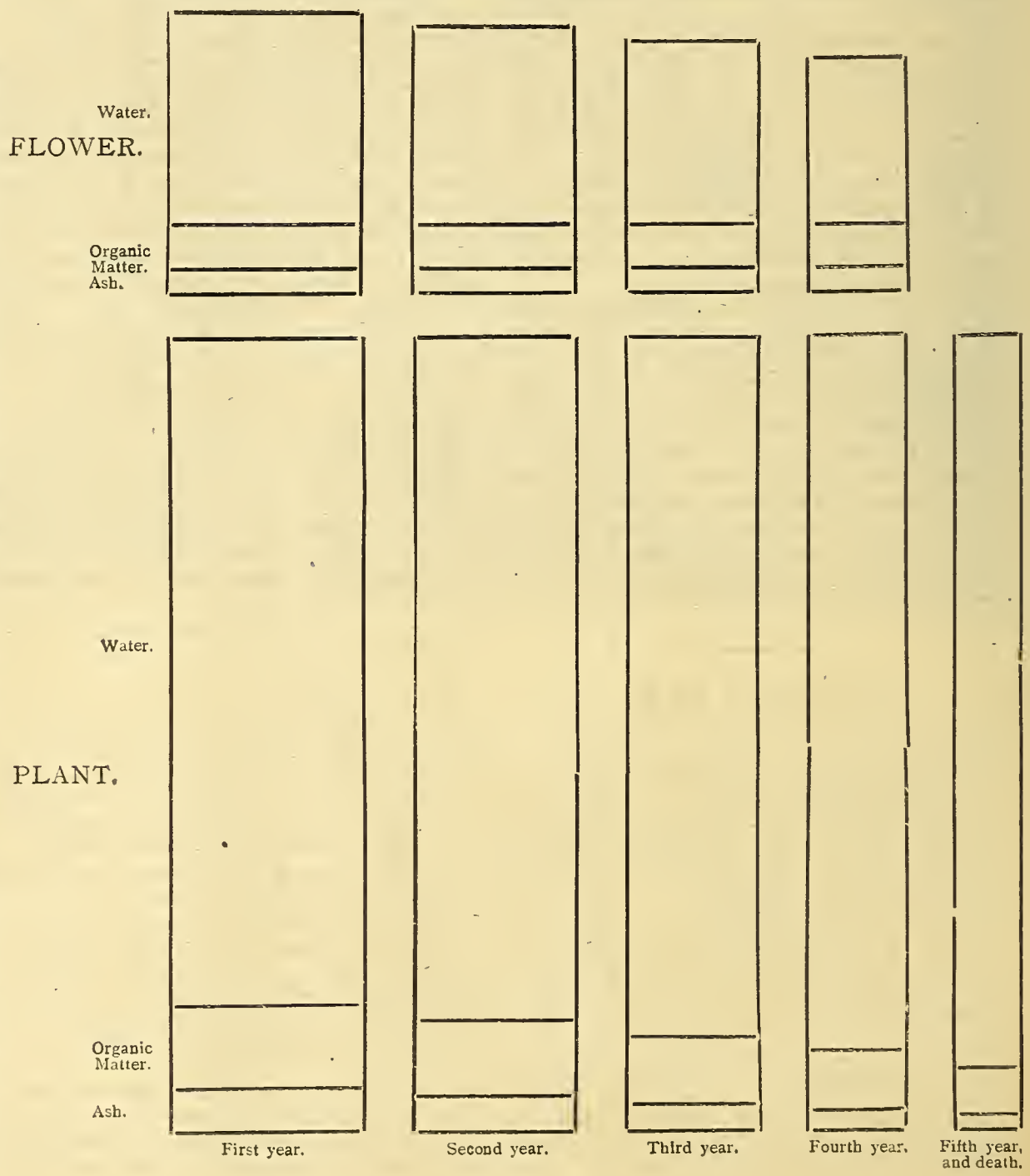
Thus, with the time being equal, the volumes of gas which pass through the rubber express the velocity of penetration.

Penetration through rubber in equal times.

	Velocity.
Nitrogen	1
Carbonic Oxide	1·113
Atmospheric Air	1·149
Marsh Gas C_2H_4	2·148
Oxygen..	2·556
Hydrogen	5·500
Carbonic Acid..	13·585

That is, carbonic acid passes 13½ times more rapidly than nitrogen. This is not wonderful, considering that carbonic acid is soluble in water, in ether, and volatile oils, and that it is dissolved by the

DIAGRAMS TO ILLUSTRATE THE EFFECT OF REMOVAL OF EARTHY SALTS BY THE FLOWER OF AN ORCHID DEPRIVED OF THE POSSIBILITY OF GETTING ANY FRESH EARTHY SALTS.



hydro-carbons of the rubber, the rubber being wetted through by the liquified gas, which re-appears as gas into a vacuum on the other side of the membrane, or into another gas which acts as a vacuum.

He also proved that the effect of temperature on rubber rendered it more permeable to gases as the temperature is elevated. There is no doubt but that the membranous skin of the leaf of a plant behaves in the same manner as the film of indiarubber, moreover, oxygen is twice as soluble in rubber as the same gas in water at the ordinary temperature. It is probable that the membranous skin of the leaf alters its physical condition at various stages of its growth, approaching at its resting period to gutta percha, and its power of absorption of the gases would consequently differ at different temperatnres and at different seasons of the year. This would be an explanation of the reason why at certain stages of the plants' growth the process of the absorption of its gases is reversed.

I suspect that the phosphates increase the inflorescence of plants. Last year I watered a Marechal Niel Rose in a pot with water containing nitrate of ammonia. Although the plant made a strong growth of 10 ft. in length, the flowers were very few in number this year, and badly developed; on the other hand, two Gloire de Dijon Roses, which I fed with phosphate of ammonia in addition to the nitrate, had in the one case 93 and in the other over 180 large and fully-expanded blooms open at the same time.

The phosphates are decomposed and reduced to their elements by plants, and phosphorus (P) is liberated. Phosphorus may replace the nitrogen in the ammonias in organic compounds; in this manner another series of organic products is built up in the constituency of plants.

I believe that the scent of flowers is formed in the flower itself. If Pinks or other flowers are cut and placed in water under a bell glass in which a funnel filled with ice and salt has been placed, the ethereal odour of the blossom given off by the flower is deposited on the exterior of the glass funnel and drops into a glass vessel below; if a little ether is volatilised under the bell glass, the whole of the odour can be extracted from the flower, but next day the flower will regain its scent. Flowers growing on the plant behave in the same manner as cut flowers. The experiment may be repeated two or three times, but after that the flower ceases to make any more scent. I have in this manner extracted the scent of Pinks, Roses, Lilies and other flowers. I believe that these odours are of the nature of camphors, they are very volatile, and rapidly become sour by oxidation, they have definite crystaline forms, but are very unstable, and liable to change by exposure.

In concluding this letter, I cannot help expressing a hope that the horticultural society or amateur Orchid growers will raise a fund to be expended in having a thorough analysis made by a professional chemist of the chemical constitution of Orchids, together with the mineral and alkaline salts of the flowers, and pseudo-bulbs of the principal species of Orchids, which are in cultivation at different seasons of their growth. I feel convinced that many obscure points in their habits would be cleared up and a more rational treatment would follow, in place of the empyric and rule of thumb method of cultivation now in vogue.—*A. H. Smee, The Grange, Carshalton, July 7th.*

SOCIETIES.

NATIONAL CARNATION AND PICOTEE, *July 21st.*

THE exhibition of the southern section of this society was held in the gardens of the Royal Botanic Society at Regent's Park. The show was well up to the average standard, although numbers of exhibitors failed to put in an appearance. The flowers were staged in the large tent in the expectation of hot weather, when the shade would have been grateful, but as it was the day was dull, and the light none too good. Martin Smith, Esq., presided at the luncheon held in the afternoon.

CARNATIONS.

BIZARRES AND FLAKES.—In the most important class in this section, viz., that for twenty-four blooms, including not less than twelve dissimilar varieties there were eight entries. Mr. C. Turner, Slough, led the way with a grand lot. Prince George of Wales, Robert Houlgrave, Arline, Guardsman, Chas. Henwood, Duke of York, Tom Pinley, and Bil'y Henderson were some of the strongest blooms. Mr. Rowan, Clapham, was second; Mr. J. Douglas, Gt. Bookham, Surrey, third; and Mr. Geo. Chaundy, New Marston, fourth.

In the smaller class for twelve blooms, dissimilar, the winning stand came from Mr. Chas. Phillips, Bracknell. Messrs. Thomson & Co., Birmingham, were second; and Mr. A. J. Saunders, gardener to the Viscountess Chewton, Cobham, third.

There were only five entries for six blooms, dissimilar. Mr. A. K. Brown, Handsworth, led the way in this class.

SELFS.—There were eight entries in the chief class for twenty-four blooms in not less than twelve varieties, and some superb material was forthcoming. The first award went to Mr. Chas. Blick, gardener to Martin R. Smith, Esq., The Warren, Hayes, Kent, who had a truly grand lot. All the samples were strong, but mention may be specially made of Endymion, Helmsman, Mrs. Prinsep, Her Grace, The Naiad, Purity, Solon, Mrs. McRae, and Mrs. Eric Hambro. The second award went to Mr. C. Turner; the third to Mr. Jas. Douglas; and the fourth to Mr. John Walker, Thame, Oxon.

Mr. E. Colby Sharpin, Bedford, headed the list in the class for twelve blooms, distinct, followed by Mr. Chas. Phillips in the second place, and Messrs. Thompson & Co. in the third.

The class for six blooms, distinct, was a most popular one as there were no fewer than sixteen entries. J. H. Went, Esq., Thames Ditton, took premier honours with good samples of Sir John Falstaff, Miss Ellen Terry, Miss Maude Sullivan, and Miss Aubrey Campbell. Mr. A. K. Brown was second; Mr. Chas. Harden, Ash, third; and Mr. W. Garton, Junr., Woolston, fourth.

FANCIES.—There were six entries in the class for tweuty-four blooms, distinct, in not less than twelve dissimilar varieties. Mr. G. Turner secured the leading prize here, and his blooms were remarkably good all round, size, form, and colour being first-class. The Gift, Duchess of Portland, Seedling, and May Queen, were the back row flowers. In front of these appeared grand samples of Virgo, Geo. Cruickshank, and Primrose League. A large proportion of the flowers were unnamed seedlings, and yellow grounds were very strong. Mr. Jas. Douglas received the second award, also with a good collection. Such varieties as Damocles, Haidee, Pelegia, Cato, Czarina, Khedive, Minerva, and Phcebus were grand. Mr. John Walker, and Mr. Chas. Blick occupied the third and fourth positions respectively.

In the class for twelve blooms, dissimilar, there were but two entries. Mr. Chas. Phillips was placed first, and Mr. G. Chaundy second.

Six blooms, distinct, were represented by ten entries. The winning stand came from Mr. W. Garton, Jun., who was followed in order of merit by Mr. A. Greenfield, Sutton; T. C. Taite, Esq., Shortlands; and M. V. Cherrington, Esq., Hever.

SINGLE SPECIMENS.—There was a good deal of competition under this part of the schedule. The following exhibitors won first prizes in their respective classes; Mr. J. Douglas, for a rose flake with William of Wykeham; Mr. R. Sydenham, Birmingham, for a scarlet flake, with John William Wormald; Mr. Geo. Chaundy for a purple flake with Gordon Lewis; Mr. Sydenham for a pink bizarre, with Master Fred; and Mr. Chas. Turner for a purple bizarre with Robert Houlgrave.

In the classes for self-coloured flowers the first prizes in each division were awarded to Mr. A. R. Brown, for the white Mrs. Eric Hambro; to M. V. Charrington, Esq., for the scarlet Verbena; to Mr. A. R. Brown, for the crimson Marcuriam; to Mr. C. Phillips for the yellow Lord Wantage; and to Mr. Colby Sharpin for a buff-coloured seedling.

Brodrich, shown by Mr. J. Douglas, was awarded the first award in the class for fancies.

PREMIER BLOOMS.—The premier blooms in the show in their respective classes were adjuged to be as under:—Bizarre, Robert Houlgrave, shown by Mr. Rowan; flake Matador (scarlet), shown by Mr. Douglas; self, Mrs. Prinsep (yellow) shown by Mr. Chas. Blick; fancy Brodrick, shown by Mr. Douglas.

PICOTEES.

WHITE GROUND.—Six stands of twenty-four blooms were staged, the first prize lot coming from Mr. C. Turner, who had Favourite, Brunette, Little Phil, Mrs. Payne, Duchess of York, Mrs. Gorton, and Lady Emily Van der Heyst in grand order. Mr. James Douglas was placed second, showing fine samples of Gannymede, Liddington's Favourite, Jessie, Her Majesty, and Constance Heron. Mr. M. Rowan, Clapham, was third, and Mr. John Walker, fourth.

Amongst the four competitors for twelve blooms, dissimilar, Messrs. Thomson & Co. scored a first, followed in the second place by Mr. C. Chaundy. There were also four entries for sixes. Here Mr. A. R. Brown secured the first award with some capital samples; Mr. Thos. Anstiss, Brill, received the second prize.

YELLOW GROUNDS.—The premier class in this section was for twelve blooms of six distinct varieties. Here Mr. C. Blick distanced all competitors with grand samples of Badminton, Dorris, Voltaire, Mohican, Golden Eagle, His Excellency, and Mrs. Tremayne. Mr. James Douglas was second, Voltaire, Empress Eugenie, Xerxes, Hygeia, and Miss Violet Douglas were some of his strongest varieties. Mr. Charles Phillips was third.

Mr. Frederick Hooper, Bath, showed the best stand of six blooms, dissimilar, with fair samples of May Queen, Mrs. Gordon, and Ladas. Mr. Chas. Harder received the second award, and Mr. W. Garton, Junr., the third.

SINGLE SPECIMENS.—First prizes were awarded to the following exhibitors in their respective classes: Mr. Chas. Turner, for the yellow ground Mrs. Douglas; Mr. Rowan, for the light purple-edged Somerhill; Mr. A. R. Brown, for a heavy, purple-edged seedling; Mr. J. Douglas, for the heavy, crimson-edged Brunette, also for the light, crimson-edged Mrs. Gorton; Mr. Sydenham, for the heavy rose-edged Lady Louisa; Mr. Chas. Turner for the light, rose-edged Mrs. Payne; and also for the heavy, scarlet-edged Duchess of York.

PREMIER BLOOMS.—The premier blooms in the show were as follows: heavy, scarlet-edged Duchess of York, shown by Mr. C. Turner; light, scarlet-edged Favourite, shown by Mr. Douglas; yellow-ground Picotee Badminton, shown by Mr. C. Blick.

ALL CLASSES.

Here both Carnations and Picotees of any section were admitted. In the class for six blooms of such mixed material, Mr. G. Wright, gardener to F. G. W. Wiggin, Esq., Woodford Green, scored a well-deserved first.

EXHIBITS WITHOUT DRESSING.

Under this section of the schedule Mr. G. Charrington, Chislehurst, secured a first award for twelve Carnation blooms, each arranged with a spray of its own foliage. S. A. Went, Esq., was first for six blooms similarly staged.

F. A. Wellesly Esq., Woking, contributed the first prize lot of twelve white ground Picotees, staged in the same way as in the two preceding classes, with a spray of foliage to each bloom. There were only two entries in the smaller class for six blooms. M. V. Charrington, Esq., was here awarded a third prize. Six yellow ground Picotees were best shown by Mr. J. F. Kew, Southend. F. A. Wellesley Esq., was second, and S. A. Went, Esq., third.

Mr. Chas. Blick was placed first for a group of Carnation plants arranged in an area of fifty square feet. The plants were all healthy specimens in 8 in. pots.

Mr. J. Douglas received the first award in a smaller group occupying 30 sq. ft. Mr. Chas. Blick carried off chief honours for twelve specimen plants. Mr. Chas. Turner was second, and Mr. Jas. Douglas third in this class. Mr. Chas. Blick showed the best specimen plant in a fine sample of a scarlet seedling.

THE MARTIN SMITH PRIZES.—Under this heading Philip Lionel Browne, Esq., Bishop Stortford, secured a first for twelve trusses of a self-coloured border Carnation, showing Miss A. Campbell. M. V. Charrington, Esq., was first for nine varieties of flake, bizarre, or fancy Carnations or Picotees. The blooms were shown in large bunches, arranged with their own foliage. Mr. A. Sparling, Blackheath Park, was first for six bunches of border Carnations. Three very pretty floral dinner tables were exhibited, the first award going to Mr. Chas. Blick, who had a tasteful arrangement of Carnations, Smilax, and Asparagus.

The best three sprays of Carnation and Picotee blooms came from Mr. Chas. Turner, Slough, whose flowers were fresh and good. Mr. Chas. Blick was second. Mr. Jas. Douglas had the best vase of Car-

nations, and was followed by M. V. Charrington, Esq., in the second place.

MISCELLANEOUS.—There were a few non-competitive exhibits, and these helped to fill the large tent, and were very attractive. A table full of floral designs was contributed by Mr. J. R. Chard, Stoke Newington; Poppies, and Gypsophylla paniculata were very conspicuous.

Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, S.E., sent a nice group of the rarer Caladiums, including Lady Mosley and Her Majesty in excellent condition. The plants were set up with small plants of Maidenhair Fern.

Messrs. Cuthush & Son, Highgate, N., sent a number of brightly-coloured cut blooms. A considerable variety was manifest, Mr. E. F. Hopper, Rye Park, Hoddesdon, Herts, also sent cut Carnations arranged in loose bunches. Messrs. Jas. Veitch & Sons sent two large stands of first-rate cut blooms remarkable for size, colour, and good form.

Mr. J. Douglas staged a table of cut blooms set up with their own foliage. Some grand varieties were on view here, and a good deal of note-taking by enthusiasts went on around this table.

Messrs. Kemp & Wilson, 85, Mortimer Street, W., exhibited a number of plants of dwarf yellow, striped, and crimson Nasturtiums. The plants were full of flower, and very showy.

A collection of cut blooms of Sweet Peas came from Messrs. Barr & Sons, King Street, Covent Garden. The flowers were all first-class samples both for size and colour.

GREAT BOOKHAM, SURREY.—*July 21st.*

The 20th annual show of the Great Bookham, Little Bookham, Fetcham and Effingham Horticultural Society, was held at Eastwick Park on Wednesday, July 21st, and by the quantity and quality of exhibits maintained its reputation as the best cottager's show in this part of Surrey. Special mention should be made of the Peas, Beans, Lettuces, and the collections of Vegetables, which, considering the drought experienced lately, speaks well for the industry of the cottagers. A superb collection of fruit and choice flowers was exhibited, not for competition, by Mr. Alderman, gardener to C. Czarnikow, Effingham Hill, and was perhaps the most admired feature of the show. Other groups of plants, praiseworthy, were exhibited by Mr. Ellis, gardener to Sir E. Moon, Bart., Fetcham Rectory; Mr. Hamblin, gardener to F. Muir, Esq., Effingham Lodge; Mr. Higgs, gardener to T. B. Hankey, Esq., Fetcham Park, who also sent a large basket of choice fruit and a collection of vegetables; Mr. Bristol, gardener to C. Lambert, Esq., Effingham Manor House; and Mr. Goff, gardener to W. Keswick, Esq., Eastwick Park, a collection of fruit and plants. Mr. Lindam, The Gables, Great Bookham, sent a named collection of Nasturtiums. The Rev. P. P. Edwards, Little Bookham Rectory, sent Carnations, and the Rev. E. Bayley, Effingham Rectory, honey.

All of these exhibits were very highly commended by the judges, Messrs. E. Ellis, A. J. Saunders and W. Higgs. In the ladies classes the floral devices found most admirers, Miss Bird, The Grange, taking first with a crown, and Miss Keswick, Eastwick Park, second, with a sedan chair. The table decorations were very pretty, as well as were the bouquets and epergenes. Mr. O. Goldsmith, seedsman, had a stand of Itchthemic Guano, which has found favour in this neighbourhood. Through a heavy thunderstorm coming on in the morning the show was not so well attended till late in the day, but it proved fine enough in the evening for a large company to have dancing on the lawns to the music of the Bookham Brass Band.

TRENTHAM AND HANFORD HORTICULTURAL.—*July 22nd.*

The above society held their 9th show on Thursday, July 22nd, in the beautiful grounds at Trentham. A more lovely spot to hold an exhibition of this kind it would be impossible to find. The grounds are in splendid order; great improvements have been made in the various departments, the credit of which is due to Mr. Peter Blair, who has long held the position of gardener-in-chief to the great satisfaction of his noble employers, the Duke and Duchess of Sutherland. Both take great interest in everything beneficial to the inhabitants, encouraging many things — for instance, cottage gardening — and amongst the children they offer prizes for bouquets of wild flowers, &c. The show was opened by the Duchess, accompanied by Lord Henry Grosvenor, Marquis of Stafford, Lord Alistair, the Austrian ambassador (Count Deyn), and that veteran, and enthusiastic Rose grower, the Dean of Rochester. The Duchess, in a few encouraging remarks, opened the show, and then proceeded with the Countess of Rosslyn and other ladies to assist in the judging of the floral designs. The weather was everything that could be desired, the company large, and we hope a satisfactory financial result will be forthcoming. To Mr. L. T. Alford and Mr. J. P. Jones and the committee we offer our congratulations, for a better show and better arranged, combined with excellent quality of the exhibits, we have not seen this season.

Roses were superb, and we question if a finer lot will be seen this season. One of the principal features of the show was the groups arranged for effect, and not exceeding 300 sq. ft., which brought forward six entries. Prizes to the value of £70 10s. being offered, the 1st prize was worthily awarded to Mr. C. J. Mee, of Nottingham, for a splendid arrangement, a trifle heavy, but still bright and cheerful, every plant showing to advantage, clean and well-coloured. Mr. Jenkinson, of Newcastle, Staffordshire, whose group if anything was too thin, and lacked the bright colours of the former, was second. Mr. Edmond, gardener to the Duke of St. Alban's, Bestwood, Notts, was third. Mr. Woodgate, gardener to Sir Oswald Moseley, Bart., came in fourth. Extra prizes went to Mr. Finch, Coventry, and Mrs. G. Pease, of Woodside, Darlington. Another year, why not have these groups down the centre of the tent? It would make a far more imposing sight and not be so one-sided.

Prizes were also offered for growers who employ only one gardener. There were only two entries, but these call for no special comment—Roses were in full force and a grand lot. Bouquets were good, collections of hardy flowers grand; also Eckford's Sweet Pea prizes proved a very interesting class.

In the open classes the premier award for forty-eight distinct blooms of Roses was taken by Messrs. Harkness & Sons, Bedale, who were quite in their usual good form. They were followed by Messrs. A. Dickson & Sons, Newtownards, Ireland, and Mr. B. R. Cant, Colchester, in the order named. The National Rose Society's Gold Medal for thirty-six Rose blooms was also taken by Messrs. Harkness & Sons, who were followed by Messrs. A. Dickson & Sons, and by Messrs. Townsend & Sons, Worcester. Messrs. Dickson & Sons came to the front for twenty-four Roses in triplets, and Mr. B. R. Cant was second. This order was reversed in the class for twelve Tea and Noisette Roses in triplets, as well as for eighteen blooms of Tea and Noisette Roses. The Rev. J. H. Pemberton, Havering-atte-Bower, Essex, had the best twenty-four single blooms; and H. V. Machin, Esq., Gateford Hill, Worksop, was second. The same order was observed for twelve blooms. W. Boyes, Esq., and H. V. Machin, Esq., took the first and second prizes for eighteen Tea and Noisette Roses in triplets. Messrs. Harkness & Sons had the best hardy border flowers. The Duke of Sutherland (gardener, Mr. P. Blair) had the best Sweet Peas in competition for Mr. H. Eckford's prizes.

Fruit all round was excellent, particularly that for the table of decorated fruit and the competition was very close and keen. Grapes, especially black sorts were good, but Muscats, generally speaking, lacked colour, except those shown by Mr. G. Reynolds, gardener to Messrs. de Rothschild, Gunnersbury Park, Acton, who took most of the leading prizes in the Grape classes. The Veitch Memorial Medal and a money prize were taken, as the leading prize for a decorated table of fruit by Sir J. W. Pease, Bart. (gardener, Mr. J. McIndoe), Hutton Hall, Guisborough. The Earl of Harrington (gardener, Mr. J. H. Goodacre), Elvaston Castle, Derby, was second. The Duke of St. Albans (gardener, Mr. Edmond) came in third; and Lady Henry Somerset, took the fourth award. Sir J. W. Pease, Bart., Lady Henry Somerset, Earl Harrington and Lord Bagot, took the prizes for a collection of six kinds of fruit in this order.

Vegetables were exceedingly grand. We question if a finer lot than those competing for Messrs. Sutton & Sons' prizes has been shown this season. Lady Theodora Guest, Henstridge, was first; G. Garraway, Esq., second; and B. T. Fitzherbert, Esq., third. W. Nicholson, Esq., and B. T. Fitzherbert, Esq., took the first and second prizes offered by Messrs. E. Webb & Sons, Wordsley, Stourbridge.

For non competing exhibits the Society's Silver Medals were awarded to the Earl of Harrington, for Carnations; Messrs. J. Laing & Sons, Forest Hill, for miscellaneous plants; Mr. H. Eckford, for Sweet Peas; Messrs. R. Wallace & Co., for Lilies; Messrs. Pritchard & Co., for Carnations; Messrs. Dicksons, for Herbaceous flowers; and Messrs. Jones & Son. Messrs. Edwards & Son, Nottingham, and Messrs. E. Webb & Sons received Bronze Medals.

PRESCOT HORTICULTURAL.—*July 22nd.*

The annual exhibition of this society was held, by the kind permission of the Earl of Derby, in Knowsley Park, in a charming position near the Prescot entrance.

The exhibits were hardly as numerous as last year but the quality was fully up to the usual standard. E. C. Laventon, Esq. (gardener, Mr. H. McFall), secured the premier award for the most tastefully arranged group, his raised positions of Crotons, Palms, &c., adding much to the general effect. E. S. Eccles, Esq. (gardener, Mr. Jas. Humphreys), took first honours for a garden design, the plan being effective and the colours well chosen.

For six stove and greenhouse plants Mrs. Banner (gardener, Mr. R. Pinnington), was first with Cycas revoluta, Croton Queen Victoria, Kentia fosteriana, Allamanda Hendersonii, Clerodendron Balfourii, &c., Mr. H. McFall was second, but for four stove or greenhouse plants in bloom the latter was first. For a single stove or greenhouse plant in bloom, Mr. R. Pinnington won with Clerodendron Balfourii, Mr. H. McFall being second with Lapageria rosea.

For four Ferns Mr. R. Pinnington led the way with Cibotium Schiedei, Nephrolepis davallioides furcans, Adiantum farleyense and Davallia fijensis plumosa. M. F. Field was second. J. C. Gamble, Esq. (gardener, Mr. W. J. Barnes), was to the fore for six Gloxinias. Mr. A. MacKenzie took the lead for six Begonias, and for one specimen Mrs. Jowett, (gardener, Mr. E. Bridge), secured the leading honour. Mr. E. Bridge was also first for three and a single specimen Fuchsia, and for four Pelargoniums. For two Liliums Mr. R. Pinnington had the finest. For four Coleus Mr. H. McFall was first.

The Roses were somewhat unsatisfactory, the blooms being small and deficient in colour, the only flowers worthy of mention being staged by Mr. P. Greene, gardener to Thomas Gee, Esq., who won in the classes for eighteen, twelve, and six varieties. The other exhibitors staged the blooms too closely on the box, which considerably marred the effect.

The fruit section contained a fair selection, J. Beecham, Esq. (gardener, Mr. W. Oldfield), winning first prize for four dishes containing Black Hamburgh and Buckland Sweetwater Grapes, one Pine, and Grosse Mignonne Peaches. For two bunches of Muscats, two bunches of Black Hamburgh, and two of any black (not Black Hamburgh) the same exhibitor won in each class. For two bunches of any white (not Muscat) Mr. James Rose was first. Mr. R. Pinnington was first for one Melon.

The vegetables, always the strongest feature of the show, were fully up to the high Prescot standard. Mr. Joseph Rainford took the lead for twelve varieties with examples of fine culture, which included the Sutton Snowball Turnip, prizetaker Leek, Moore's cream vegetable Marrow, Veitch's Model Carrot, Ailsa Craig Onion, international Potatos, Wright's Giant Celery, Stratagem Peas, and Perfection Tomatos. Mr. J. Pownall was second with a good collection. For four varieties of Potatos Mr. H. McFall staged a good lot. For three dishes of Tomatos Mr. A. Mackenzie Smith was well to the fore with fine fruits of Polegate, Cestria, &c.

The cottagers' exhibits were of considerable merit, the vegetables and herbaceous cut flowers especially.

The special exhibits included a very fine stand of cut Carnations and Sweet Peas, with a back ground of Adiantum cuneatum. Many of the Carnations were of great merit and well deserved the special awards that it gained.

Mr. H. Middlehurst contributed a nice lot of cut Sweet Peas, and Messrs. Dicksons, Chester, a selection of button-hole Roses and herbaceous cut flowers. Each of these exhibits secured a Certificate of Merit.

NORTH LONSDALE ROSE.—*July 23rd.*

Of all the societies affiliated with the National Rose Society none is more healthy than that of North Lonsdale. Its annual exhibition was held on the above date in the spacious and beautiful park of D. Caird, Esq, at Tod Busk. Prizes to the value of upwards of seventy guineas, and including cash, cups, and medals, were offered for competition. On the head of competition the committee has no grounds for complaint, although several well known firms in the Rose world, such as Messrs. Harkness and Sons, of Bedale, Messrs. James Cocker & Sons, of Aberdeen, and Mr. B. R. Cant, of Colchester, who have been present in other years were not represented on this occasion. The various exhibits of Roses, Sweet Peas, Pansies, and cut hardy herbaceous plants were accommodated in a huge marquee measuring 210 ft. in length by 40 ft. in width.

In the premier nurserymen's class for seventy-two blooms Messrs. W. & D. Croll, of Dundee, headed the list with a fine even lot of flowers. Messrs. A. Dickson & Sons, of Newtownards, occupied the second place, and Messrs. Robert Mack & Sons, Catterick Bridge, Yorkshire, the third.

Messrs. A. Dickson & Sons were heavy winners in the other classes of this section of Roses and secured the first awards for three blooms each of sixteen varieties; thirty-six single blooms, distinct; eighteen blooms, distinct, consisting of six light and six dark sorts, and six Teas; twelve Teas or Noisettes; twelve blooms of any light, and a like number of any dark, Rose; twelve new Roses; and the best seedling, the last-named prize being won with Countess of Annesley. This variety was also awarded the bronze medal as the best Rose in the show.

In the amateurs' classes Mr. H. V. Machin, Gateford Hill, Worksop, scored a number of successes. He was first for eighteen blooms, distinct; twelve blooms, distinct; six light varieties of hardy perennials; six dark varieties of hardy perennials; six single trusses of any hardy perennials, and the best single bloom of any dark hardy perennial. Mr. J. T. Marsden, Silverdale, contributed the best nine Teas or Noisettes, and Mr. J. H. Midgley, Grange-over-Sands, won the bronze medal for the best light bloom with La France.

A number of classes had been arranged for amateurs growing less than 350 Rose trees. Here Mr. W. Wilding, Pennington, secured a first for twelve blooms, distinct. Mr. Geo. Slater, Barrow, staged the best six trusses, distinct; and Mr. Wm. Postlethwaite sent the best three Teas or Noisettes.

In the local classes in which the competition was confined to a radius of thirty miles from Ulverston, the Myles Woodburne challenge cup for the best bloom exhibited by a local amateur fell to the lot of Mr. Wm. Postlethwaite, who showed Maman Cochet in capital condition. The 15-guinea challenge cup presented by Mr. Victor Cavendish, M.P., the Rev. R. T. Langtree, and other gentlemen for twelve Roses, distinct, was borne off by Mr. J. T. Marsden.

There was some excellent material shown in the classes for Mr. Eckford's prizes for Sweet Peas. Mr. J. H. Midgley was placed first on the list for twelve bunches of distinct varieties. Six bunches in as many varieties were best shown by Miss Nash, Cartmel, and three bunches by Mr. W. Wilding.

Messrs. Dicksons, Limited, Chester, had the finest stand of herbaceous plants, and were followed by Mr. W. Shand, Lancaster, in the second place, and by Messrs. A. Dickson & Sons in the third.

Pansies formed an interesting part of the programme, and amateur growers of these charming flowers are evidently numerous in the neighbourhood. Mr. John Greenop, Grasmere, was placed first for twelve show Pansies, dissimilar, and also for twelve fancy Pansies, dissimilar. The best fancy Pansy in the show came from Mr. J. W. Mount junr., Lowick Green, and the best show Pansy from Mr. John Greenop.

ROYAL HORTICULTURAL.—*July 27th.*

Amongst the features of the meeting on Tuesday last were the fine group shown by Mr. H. J. Jones, the Ferns, by Mr. May, groups of hardy herbaceous plants, Roses, hardy flowering trees and shrubs, tuberous Begonias, and new plants. There was a fine display of hardy fruit. The collections of Cacti and the groups in connection with the National Cactus Society were also grostesque and to some extent interesting because uncommon.

E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Cheshire, exhibited a fine collection of cut flowers of Cattleyas, chiefly varieties of C. Warscewiczii cut from sixteen distinct plants. Many of them were richly coloured, but more particularly the lip. Amongst named sorts were C. W. Mrs. E. Ashworth, and C. Mendelii delicata, both being delicately coloured and choice. A Silver Flora Medal was awarded for the valuable and interesting collection.

Messrs. Hugh Low & Co., Clapton, exhibited a fine plant of Cattleya Warscewiczii (gigas) C. gaskelliana Sunray, with a dark purple mid-rib forming a ray on the petals, also Bulbophyllum claptonense and some Cypripediums.

Major Joicey (gardener, Mr. F. J. Thorne), Sunningdale Park, Sunningdale, exhibited Odontoglossum schleiperianum and the rare or little known O. aspidorhinum. Messrs. F. Sander & Co., St. Albans, exhibited Angraecum eichlerianum, Vanda hookeriana superba, Odontoglossum vescillarium rubellum melanocentrum, &c. Messrs. J. Veitch & Sons, Ltd., Chelsea, exhibited Sobralia Veitchi Veitch's var., a most remarkable bigeneric hybrid named Epilaelia radico-purpurata, Cattleya Atalanta, Laeliocattleya Clonia, and Phalaenopsis Hebe, all hybrids.

The chief feature of the show was a fine group of plants put up by Mr. H. J. Jones, Ryecroft Nursery, Lewisham. It ran nearly the length of the body of the hall devoted to the exhibits, and from a scenic point of view was really first class. The arrangement of the material composing it was worthy of the highest praise and demonstrated no small measure of artistic taste. The general idea was a series of mounds of which the central one was the largest and highest. These were connected by narrow and flat pieces. Tuberous Begonias, both single and double, dwarf Caladiums, and Ferns were all exceedingly bright, whilst standing out of the ground-work of dwarfer plants pieces of Bambusa gracilis, Cocos weddeliana, Lilium lancifolium album, Acer Negundo, etc, were very showy. An edging of Isolepis gracilis added a finish to the whole. Mr. Jones was awarded a Gold Medal for this notable effort.

The exotic Ferns, sent by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, were again much in evidence. The genus Pteris was this time the subject of the exhibit and there were many pretty plants to admire amongst the seventy-four species and varieties on view. Conspicuous were such elegant varieties of P. serrulata as P. s. fimbriata, P. s. gracilis, also shapely specimens of the curious looking P. ludens, and P. sagittifolia hastata, as well as the handsome P. Wimsettii, P. tremula elegans, P. longifolia Mariesii, P. palmata, and a number of handsome forms of P. cretica. All the plants were in the pink of health and condition (Silver Gilt Flora Medal).

Messrs. Wm. Paul & Son, Waltham Cross, Herts, sent a number of cut blooms of new Roses. These were for the most part brightly coloured and of free flowering varieties. Sylph, Empress Alexandra of Russia, and Enchantress were some of the most noteworthy (Bronze Banksian Medal).

Messrs. Kelway & Son, Langport, Somerset, had a fine lot of cut spikes of Gladioli. The blooms were all fresh and good and a great range of colour was manifest. Lady Derby, Numa, Baron Schroder, Charterhouse, Princess Royal, Calliphon, Semolina, Isinglass, Mr. Fowler, Ada, Nautch Girl, James Wood, Shazahda, and Earl Cadogan were some of the finest varieties in a superb collection. Two stands of Gaillardias, and some miscellaneous hardy flowers were also shown by the same firm (Silver Flora Medal).

Watsonia Ardernei was again well shown by Messrs. F. Sander & Co., St. Albans. A basketful of plants of Exacum zeylanicum macranthum, and specimens of Lilium philippinense and L. Henryi also came from St. Albans.

Messrs. J. Cheal & Sons, Crawley, Sussex, showed two stands of Cactus Dahlias, and a stand of single flowers.

From Messrs. Jas. Veitch & Sons, Ltd., Chelsea, came a group of hardy shrubs. These were small specimens and were grouped together in baskets about two feet in diameter. Pavia macrostachya, Hibiscus coelestis, Veronica La Seduisante, Spartium junceum, Cornus macrophylla, and Eucryphia pinnatifolia were all very praiseworthy. A stand of leaves and flowers of hardy Water Lilies was included in the group (Silver Banksian Medal).

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N, had an extensive collection of hardy cut-flowers. The variety was very great, and the quality good (Silver Flora Medal).

Hardy cut-flowers were also well shown by Messrs. Barr & Son, King Street, Covent Garden. A collection of Phloxes was the most interesting thing here. Delphinium Willdenow was likewise very bright (Silver Banksian Medal).

Messrs. Paul & Son, The Old Nurseries, Cheshunt, had a small collection of cut hardy flowers, including a stand of Roses (Silver Banksian Medal).

Messrs. Hugh Low & Co. made a noteworthy exhibit of Liliums in pots. The handsome L. nepalense was an honoured member of this group, the flowers being large and beautifully coloured. L. wallichianum was conspicuous for the size of the flowers, of which one fine plant carried four (Silver Banksian Medal).

Sir Trevor Lawrence Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking, sent cut-flowers of Gladioli, Crinum Powelli, and Pentstemons.

Messrs. Richard Hartland & Son, the Lough Nurseries, Cork, contributed a large number of flowers of double tuberous Begonias in excellent condition. The flowers were shown on moss-covered stands with a little of their own foliage. The new yellow form Lady Ashbrook as represented here is a real gem. Henry Lavender, La France, Miss Griffiths, Rosebud, and Lady Gertrude were all first-class varieties (Silver Flora Medal).

Messrs. Jas. Veitch & Son, Ltd., showed a stand of huge trusses of flowers of Javanico-jasminiflorum Rhododendrons. Messrs. Atlee, Burpee & Co., Philadelphia, had samples of the Sweet Pea Pink Cupid.

The Surrey Seed Co., Redhill, exhibited some pots of a beautiful and promising yellow Carnation named Mrs. Moore Binns. It flowers freely and early.

The Duke of Marlborough (gardener, Mr. Whillans), Blenheim, Woodstock, exhibited a new yellow Malmaison Carnation. He also had a new border variety named Oxford Belle, a particularly free flowering variety with refined flowers.

At a meeting of the fruit and vegetable committee a Silver-Gilt Knightian Medal was awarded to Messrs. James Veitch & Sons for a fine display of fruit. It comprised a hundred dishes of Gooseberries in as many varieties. Most of the leading varieties were represented, and by first-class fruit. Eight dishes of red and white Currants, one of Negro Largo Figs, one of Early Rivers Nectarine, and one of Morello Cherries were also included.

Two or three Melons were shown, but they were lacking in flavour. Mr. McAinsh, Leeds Castle Gardens, Maidstone, sent two dishes of Peach Sea Eagle.

Messrs. James Carter & Co, High Holborn, sent a collection of Turnips.

NATIONAL CACTUS SOCIETY.

This society held a small exhibition in conjunction with the Royal Horticultural Society's show. There was a very fair display of cactaceous plants staged for competition. These plants were supplemented by a very fine non-competitive group staged by Messrs. H. Cannell & Son, Swanley, Kent, for which a Silver Flora Medal was awarded by the R. H. S.

The first prize for a collection of Cacti was carried off by W. P. Bodkin, Esq., West Hill Place, Highgate. The second award went to Mr. C. A. Blogg, Brighton Road, Croydon. The third prize was won by Mrs. Chilton, Wealdstone, Middlesex.

The first award for a collection of twelve Cacti was won also by W. P. Bodkin, Esq. Mrs. Chilton was second in this class, and W. F. Gould, Esq., Bath, was third.

W. F. Gould, Esq., headed the list of competitors in the small class for six Cacti, and was followed in the second place by Mrs. L. E. Carter, Althorp Road, Upper Tooting.

The best specimen Cactus was sent by W. Skinner, Esq., 8, Frant Road, Thornton Heath, who showed a grand specimen of Echinocactus Le Contei. The second prize went to a healthy piece of Opuntia macrophylla, shown by Mrs. L. E. Carter.

GLOUCESTER FLOWER SHOW.—*July 27th, 28th, and 29th.*

This show this year is held in conjunction with the Gloucestershire Agricultural Society's Show, and occupies two spacious marquees, on the show-ground, an extra payment having to be made to gain admission. On the first day the attendance was very discouraging, probably due in some degree to the fact that to view the flower show one had first to disburse 2s. 6d. to obtain admission to the show-ground, and then a further 1s. to obtain admission to the flower show.

A very liberal prize list had been offered by the Society, amounting to nearly £300 among twelve classes, and a very excellent collection of exhibits was brought together, though in several classes competition was anything but keen.

The principal class was that for a group of miscellaneous plants occupying 200 sq. ft., for which prizes of £20, £10, £6, and £4 were offered. Six exhibitors competed, the first prize going to Mr. J. Cypher, Cheltenham, for a very light and pretty group. Mr. W. Vaux, Leamington, was awarded second; Mr. G. W. Marsh, Arle Court, Cheltenham, third; and Mr. H. Whitehead, Heathville Nurseries, Gloucester, fourth. Mr. J. Cypher and Mr. Vaux also secured first and second prizes respectively for twelve stove and greenhouse plants, there being only one other exhibitor.

For the best floral display on a table 12 ft. by 5 ft. only two entered, although the prizes were £10, £5, and £2. Mr. J. Cypher took the first award, and Messrs. Roberts and Starr, Gloucester, the second. Some very fine bouquets competed for prizes aggregating £6, the first (£3) going to Mr. A. E. Price, Queen Street, Cardiff.

Messrs. D. & W. Croll, Nurserymen, Dundee, staged a very nice stand of twenty-four Roses, the freshness and quality of which were very noticeable, and gained them first prize.

Mr. A. W. Pike, Windsor Place, Cardiff, received first for collection of Carnation and Picotee blooms; eight competitors entered in the class for collection of Sweet Pea blooms but only six staged. The prize here appears to have been awarded for quantity rather than quality, the first prize lot consisting of sixty bunches in about ten varieties, Invincible Scarlet being represented by thirteen bunches, Mrs. Sankey and Boreatton, by twelve each. The second prize lot consisted of about thirty bunches in eighteen varieties, among which Princess May was very noticeable, and the third prize lot had thirty-two bunches in thirty-two varieties, there being no duplicates in this lot at all, but the blooms and arrangement were not quite up to the quality and effect of the second lot. The prizetakers were Mr. H. Miller, Quedgeley, Gloucester, first; Messrs. Isaac Howse & Son, Westbury-on-Trym, second; and Mr. G. Winfield, Gloucester, third.

Messrs. G. W. Yates, High Street, Cheltenham, had an exhibit of hardy annuals and herbaceous plants, among which we noticed a new Poppy, Yates' Avalanche, similar to Snowdrift, but in various shades of cardinal, rose, and cream.

Mr. W. Colchester, Ipswich, had a stand of his well-known speciality, "Ichthemic Guano," which is so much appreciated throughout the horticultural world. In the agricultural show, Messrs. Winfield & Co., Gloucester, and Messrs. Jefferies & Co., Cirencester, were represented by characteristic exhibits, setting forth the merits of their seeds, while Messrs. Webb & Son, Wordsley, Stourbridge, had their usual effective display of root, grass and grain seeds, together with a nice collection of Sweet Peas and other flowers. The judges were Mr. Jas. Cypher, Mr. Crump, Mr. J. Jefferies, and Mr. Conway Jones. They were assisted in their difficult task by the genial secretary, Mr. S. S. Starr.

QUESTIONS AND ANSWERS

Examination in Horticulture.—*Donald McGregor*: It is quite unnecessary to attend any horticultural college, or any school, in order to prepare for any future examination held by the Royal Horticultural Society, provided you are sufficiently studious and diligent to persevere with your books and practice without coaching. It would no doubt, however, be advantageous for you to attend some college, school or class, if conveniently near you, so that you could get there in the evenings. At the same time you need not despair of success even in the absence of any such help. Some students manage to pass without such aid. Read over the questions set at the last examination in May, as printed in last week's issue of THE GARDENING WORLD and see how many of them you could answer. Of course the questions will be different for next year, but the last set will give you some useful hints. To prepare for this examination you will have to study the structure of the more important and common garden plants, as well as the physiology of plant life. These matters, together with a fairly thorough understanding of practical work, would enable you to pass. For plant structure and physiology you should procure and study "Structural Botany," Part I., by Dr. D. H. Scott. It is published by Adam and Charles Black, London and Edinburgh, and costs only a few shillings. Of course there are more exhaustive and more expensive books on the subject, but "Structural Botany" is a useful book and quite up to date. Passing the examination would certainly be worth your trouble; there is no telling what service it might be in the course of your career. It takes a good education nowadays to thoroughly understand gardening, and when you come to undertake the duties of a head gardener you will find the knowledge to be of considerable service to you in many ways.

Hardy biennials.—*G. H. J.*: These may be sown at any time from June till August, so that you cannot too soon set about sowing such things as Foxgloves, Canterbury Bells, Wallflowers, Sweet Williams, Campanula pyramidalis, Celsia cretica, and others. It would be a good plan to sow them in boxes in cold frames kept fairly close for a time to get them well advanced before winter. It is even now rather late for Campanula pyramidalis and Wallflowers to get them to good size, but by rearing them as above advised you will bring them on more quickly. As soon as the seedlings have developed a few leaves, you should transplant them either into their permanent positions or into prepared beds in close lines, but at the same time with sufficient space to enable them to get to a useful size for planting out permanently, say about the middle or end of September. The transplanting will prevent them from getting crowded, and the mild dewy evenings will cause them to make rapid growth. The larger the seedlings get before winter, the finer plants they will form, and produce the greater quantity of flowers next summer.

Hybridising Roses.—*M. C. J.*: Select and mark with a piece of matting, those buds which are about to open and on which you intend to operate. As soon as you can get at them, cut away all the stamens with a narrow pointed scissors. The chief point to observe is that you remove the stamens before the anthers have shed their pollen, so as to avoid fertilising their own flower. At this early stage the stigmas will not be mature, but you should cover up the flower for a day or two with fine gauze. Then uncover the flower and apply pollen to the stigma from flowers which you may select as the other parent. Cover up the flower again and the next day you might repeat the operation to make sure that the stigma is dusted when mature. Keep the flowers covered till they fade, so as to prevent insects from bringing pollen of flowers you may not desire.

Flowers for Exhibition.—*J. D.*: The wording of the schedule, "twelve bunches hardy flowers, in variety, named," allows considerable latitude, and if the judges understand their work properly they cannot disqualify you for exhibiting in the way you name. It does not say whether you are to show one or twelve species, so long as you have plenty of variety. At the same time we would advise you to show as many species as possible, say twelve. You may have a number of varieties in each bunch, say blue and white Campanula pyramidalis, various colours of Hollyhocks, various colours of Phloxes, various colours of Everlasting Peas (Lathyrus latifolius and L. l. albus), purple and white Galega officinalis, Lilium Martagon and L. M. album, &c. We should not employ annuals such as Sweet Peas, or Phlox Drummondi. Let them be hardy, herbaceous perrenials. We should not mix two species in the same bunch, such as Lathyrus latifolius and L. rotundifolius; and we should only use one of them in the stand if you have plenty of choice. Some societies object to bulbs such as Lilies, but according to the wording of the schedule in this instance they could not disqualify you.

Names of Plants.—*J. A. C.*: 1, Rosa rugosa alba; 2, Rosa rugosa; 3, Rosa spinosissima var.; 4, Phlomis fruticosa; 5, Kerria japonica flore pleno; 6, Jasminum revolutum.—*M. B.*: 1, Laelia elegans var.; 2, Epidendrum ellipticum; 3, Odontoglossum hunewellianum; 4, Cattleya Warscewiczii; 5, Oncidium sphacelatum.—*H. Calder*: 1, Lycopodium Alpinum; 2, Lycopodium clavatum; 3, Lycopodium Selago.—*J. W.*: 1, Achillea Millefolium roseum; 2, Lychnis Flos-Jovis; 3, Lychnis coronarius; 4, Campanula rhomboidalis; 5, Phyteuma spicata; 6, Gentiana cruciata.—*R. Willis*: 1, Pteris tremula; 2, Nephrodium patens; 3, Nephrodium molle corymbiferum; 4, Osmunda regalis palustris; 5, Veronica longifolia; 6, Geranium sanguineum.

Communications received.—A. E. S.—H. S.—H. C. Zwart.—J. M.—W. B. G.—E. Fierens.—F. Davids.—Jas. Grieve & Sons.—B. Lockwood.—A.R.—Constancy.—Rosa.—P., Twyford.—S. L. Campbell.—Chas. B.

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The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, AUGUST 7th, 1897.

NEXT WEEK'S ENGAGEMENTS.

TUESDAY, August 10th.—R.H.S. at Drill Hall. Weston-Super-Mare and East Somerset Show.
WEDNESDAY, August 11th.—Bishop's Stortford Show. Cardiff Show (two days).
THURSDAY, August 12th.—Taunton Show. Leighton Buzzard Show.
FRIDAY, August 13th.—Sale of imported Orchids by Messrs. Protheroe & Morris.

THE FORM OF SWEET PEAS.—This question was brought before the Floral Committee of the Royal Horticultural Society on the 13th ult., when, after a little discussion, it was finally resolved not to class them amongst florists' flowers that must conform to certain rules or canons from which no flower appealing for favour or distinction must deviate. This we consider a wise arrangement, for whenever such a thing is attempted, a flower invariably loses in popularity sooner or later, very often the former. The causes of unpopularity are not far to seek. Whenever any particular form is agreed upon as the standard, we restrict the number of admirers, the number of varieties, and cause raisers to breed from the few sorts which conform to the limitations laid down. A sure result of this is that judicious cross-breeding is restricted, in-breeding is resorted to in order to get new sorts conforming to the standard, and the constitution of the progeny gets utterly ruined in a short time. It is well known that the finer varieties of Auriculas, Carnations, and Picotees, and others of the old florists' type are extremely difficult to keep alive, and the life of the miserable, dwindling plants can only be prolonged by a few specialists who bring their long and dearly bought experience to bear upon them. Is the game worth the candle to ruin the modern and exquisitely-beautiful race of Sweet Peas by laying restrictions upon form so long as those are in themselves intrinsically beautiful? We say no, and hope it will never be seriously attempted.

Some one may reply by asking whether we are to allow our gardens to be overrun by misshapen forms of Sweet Peas. Well, we are not at all afraid of that, because we have a strong belief that those matters in the hands of a discerning public are able to take care of themselves, and ultimately to right what the enthusiasts in their endeavour to furnish novelty may press upon Sweet Pea admirers and lovers. There are faddists who lose their heads over such monstrosities as Red Riding hood and Oddity, which may tickle the fancy for a year or two but can never gain many permanent admirers.

The question brought before the Royal Horticultural Society was whether they were to encourage the production of those varieties having a hooded standard or flat ones only. The prevailing demand by growers and admirers is for large flowers of beautiful colours. The specialists also consider that those varieties from which the apical notch of the standard has been obliterated, are the most highly evolved, and the finest test of a choice variety. This matter we consider of minor importance, all other things being equal. Nature no doubt had a purpose in the notch, for where it exists it facilitates folding in the bud, and allows the standard to become more or less perfectly flat when fully developed. We have evidence of this in Emily Henderson which has large flowers and a flat standard when expanded. Cupid, Pink Cupid, and many, perhaps most, of the old varieties have notched and flat standards; but then their flowers are small. All Sweet Peas, even the small flowered ones, are beautiful when seen by themselves; but they have little chance of favour alongside of the giant modern flowers. On the contrary the large-flowered Blanch Burpee and many others have the notch obliterated, and as a consequence the standard is hooded but nevertheless exquisitely beautiful. We should prefer its being so rather than folded backwards. There is another danger that must be guarded against. The standard becomes rounded at the apex owing to the prolongation of the midrib. Raisers must be on their guard against a further development of this, otherwise we shall get varieties with pointed standards, which would not be an improvement.

SURPRISES IN PLANT-BREEDING.—Some years ago in speaking of the cross-breeding and hybridisation of plants, gardeners were wont to consider and even to say that the seedlings assumed the habit and general aspect of the seed-bearing plant, and that the colours were chiefly determined by the pollen-bearer. In some cases this might have been so, but not always; and however much this might have been credited as a theory, close observers have noted that it does not always hold good in practice, in fact, frequently far otherwise.

A case in point occurs in Epiphronitis Veitchi, which is recorded as a hybrid between Epidendrum radicans and Sophronitis grandiflora. The *Orchid Review* for January, 1893, states that the Sophronitis was the seed bearer, and yet the same authority in October of the same year says that there is almost no trace of Sophronitis in the hybrid. This then would be a case in which the seed bearer had almost been obliterated in the progeny. Truly at this rate like produces unlike. We had another instance at the Drill Hall on the 27th ult., when Messrs. Veitch, of Chelsea, exhibited Epilaelia radico-purpurata, which they raised from Laelia purpurata crossed with the pollen of Epidendrum radicans. In outward form of the stems, leaves, and flowers as well as the colour of the latter,

the new bigeneric hybrid is practically an Epidendrum, the great size of the lip and its form being the chief obvious differences between it and the pollen-bearer, E. radicans. The strong potentiality of this species is therefore well established.

In a batch of seedling Violas a considerable number number may be picked out which lean towards the seed bearer, while an equal number possibly would lean towards the pollen parent, while another lot might be totally unlike either progenitor. Some of the latter might be accounted for in various ways, but the fact that about an equal number leans towards either parent shows an equally strong individuality in both. In other crosses the pollen parent is the most potential, as the seedlings testify by having flowers agreeing in size and colour with it, although the seed parent might be totally different in both respects. It is when the seedlings are totally different from the seed parent that we acquire confidence in the efficacy of the cross. Cases might be multiplied, but the above must suffice for the present. An explanation of the phenomenon that is gaining ground is that the parent which most affects the progeny is the stronger, more stable, and the less altered by cultivation, cross-breeding or hybridisation. Its constitution is strong, and all its leading characteristics have long been fixed and rendered stable by long continued conditions, both as to climate and environment in a state of nature.

The Banana seldom produces any seed. It is propagated by suckers. The so-called stem is a false one, consisting of the sheaths of numerous leaves tightly wound round one another.

Mr. Andrew McDermiad, from the nurseries of Messrs. James Dickson & Sons, Edinburgh, has been appointed head gardener to H.R.H. Princess Louise and the Marquis of Lorne, Roseneath Castle, Helensburgh.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held on Tuesday, August 10th, in the Drill Hall, James Street, Victoria Street, Westminster, 1 to 5 p.m. A lecture on "Cross Fertilisation of Florists' Flowers" will be given at 3 o'clock by Mr. James Douglas, F.R.H.S.

The Birmingham Gardeners' Association held a flower show at the Technical School on the 27th ult. The number of entries was the largest on record, and of good quality. There were ten entries in the class for six Carnation blooms and twenty for single blooms. Many of those competing in the classes for Roses and Sweet Peas had to go without prizes.

A Flower Service took place at St. Anne's Church, Lewes, on Sunday afternoon the 25th ult., and drew together a large audience. The Rev. C. Jickling officiated and delivered an appropriate address on the words, "As a flower of the field so he flourisheth." From this he adduced the three-fold lesson of thankfulness, sweetness, and contentment taught by the flowers. The offertory was devoted to the Alexandra Hospital, Brighton.

Oaks struck by lightning.—During a thunderstorm which passed over Mentmore, on the 20th ult, a fine Oak on Lord Rosebery's estate was struck by lightning and split in two, the falling timber smashing some pigsties and greatly alarming the villagers. On the 21st ult. an Oak about 45 ft. high was struck not far from White Hart Lane Station, Tottenham, the electric current passing down just beneath the bark. The latter was peeled off in a stripe, showing that the electricity had passed down in three currents, forming as many grooves in the solid wood. A nail buried in the wood happened to be in the middle of one of these grooves, which was scorched as if by gunpowder for 18 ins. above the nail.

A flirt is a Rose from which any man may pluck a petal; but the last man gets caught in the thorns.

Most of the Prize-winners at the recent flower show at Newcastle were Scotchmen, according to a correspondent of the *Newcastle Daily Journal*.

Hop Plantations in the neighbourhood of Worcester are thriving owing to the high temperature and recent rain, but particularly where their owners took the trouble to wash them. The laterals are rapidly developing and the burrs making their appearance. Unwashed vines are very weak, however, and apparently incapable of making much progress.

Salterhebble Rose Show.—There was a slight falling off in the number of entries for this show on the 22nd ult.; yet the show was one of the most gratifying held during the last nineteen years. One of the judges said that the bouquets would hold their own with any show in the North of England. The National Rose Show will be held at Spring Hall next year.

Birmingham Botanical and Horticultural Society.—The annual meeting of this society was held at the Edgbaston Botanical Gardens on the 27th ult. The report said that there had been a substantial increase in the membership as compared with the previous year, but the subscription list was still £60 behind what the committee expected. There was a deficiency on the year of £55, and the total indebtedness was £398. Lord Calthorpe was re-elected president and thanked for his continued donation of £100.

Water Lilies at Blenheim.—The lake at Blenheim Palace, Woodstock, the residence of the Duke of Marlborough, has recently been cleaned out, and a fine collection of hardy Water Lilies has been got together, including all the more recent varieties that have been put into commerce, and embracing some of Marliac's hybrids. The multiplication and dissemination of the numerous splendid Water Lilies in cultivation are a feature of modern gardening, and they will certainly be a feature of Blenheim in the course of a year or two, when they have got thoroughly established. Already they have made wonderful progress since they were planted.

Forest Gate and Stratford Chrysanthemum Society.—The members and friends of this society to the number of 80 paid a visit to the gardens and grounds of Lord Rothschild, Tring Park, Tring, Hertfordshire, on the 17th ult. The party visited the *Museum* in the village and found the finest private collection of birds, beasts and things in the world. The grounds were much admired, as well as the contents of the glasshouses, but particularly those containing splendid collections of Carnations. The party was much amused at the antics and performances of some tame kangaroos in the park, which, however, were not sufficiently civilised to carry tobacco in their pouches. A very enjoyable afternoon was spent here by the excursionists.

Dutch Horticultural and Botanical Society.—At a meeting of the floral committee of this body on July 10th, First-class Certificates were awarded to Mr. C. G. Tubergen, Jun., of Haarlem, for Calochortus clavatus; to the gardening school of Frederiksoord for Chrysanthemum maximum Perfection, and for Centaurea macrocephala; to Messrs. Gratama Bros., of Hoogeven, for Rosa hybrida bifera Captain Hayward; to Mr. G. A. van Rossem, of Naarden, for Rosa indica Nois. Madame Pierre Cochet; to Mr. Jac. Smits, of Naarden, for Rosa indica Nois. Madame Pierre Cochet, Rose François Dubreuil, Rose Mrs. R. G. Sharman Crawford, and Rose Souvenir de Catharine Guillot. At the same meeting Certificates of Merit were accorded to Messrs. de Graaff Bros., of Leiden, and to Messrs. E. H. Krelage & Son, of Haarlem, for Astilbe Lemoinei Gerbe d'argent, Astilbe Lemoinei Panache, and Astilbe Lemoinei Plumet neigeux; to the gardening school of Frederiksoord for Begonia versaillensis, and Myosotis palustris Nixen Auge; to Mr. H. D. Willink van Collen, Breukelen, for Centaurea babylonica; to the botanical garden of Groningen for Cirsium Velenowskyi; and to Messrs. Joh. van den Berg & Son, of Amsterdam, for Russelia juncea. Botanical Certificates were granted to Messrs. de Graaff Bros., for Comanthera bifolia and Gladiolus quadrangularis.

First-class in Botany.—Teacher: "Bobby, what is moss?" Bobby: "It's what rolling stones don't gather, ma'am."—*Scraps*.

A Huge Fuchsia grows in the front garden of a house in Ramsey, Isle of Man, and is said to be the largest Fuchsia in the world. The dwelling-house, only 30 yards behind the Fuchsia, is completely hidden from the eye of the visitor entering the garden.

Garden Allotments in the suburbs of Birmingham were formerly fairly numerous, but they have mostly disappeared owing to the enhanced value of the land for building purposes and similar reasons. Small gardens used to be numerous in the vicinity of Edgbaston, also at Balsall Heath and other places. Some land at Soho has recently been converted into small gardens, as if by way of compensation for others that have been lost. They are on the Winson Green side of the Great Western Railway from Soho to Handsworth.

Royal Botanic Society.—At the annual meeting to be held in the Gardens, Regent's Park, on Tuesday the 10th August, Mr. J. S. Rubinstein will, pursuant to notice bring forward motions recommending the Council (a) to establish classes in the gardens for the study of botany to be open to all students (b) to invite the Royal Horticultural Society to confer as to the feasibility of effecting a union of the two societies (c) to increase the facilities for the holding of exhibitions, garden parties, or receptions in the gardens by local authorities and by leading societies and institutions. The meeting will be held in the gardens at 1 p.m. *J. S. Rubinstein, Hon. Auditor R. B. S.* 56, *West Cromwell Road, S.W., August*, 1897.

Royal Agricultural and Botanical Society of Ghent.—This society is organising its fourteenth international horticultural exhibition for the 16th April, 1898. The schedule of prizes is about to appear. In case anyone has not received that which has been addressed to him, he should advise Mr. Fierens, the secretary of the Society, Coupure, 135, à Gand, who will see that a copy is sent. Since the printing of the programme two new prizes each of 500 francs value have been created. One has been contributed by M. le Comte de Germiny, the great French Orchid amateur. This is for 100 exotic Orchids, comprising species and varieties of most merit from a horticultural point of view. The other prize offered to commemorate Comte Charles de Kerchove de Denterghem, the former president of the society, is meant to recompense the 100 most remarkable annual or biennial hardy or cool greenhouse plants in bloom. The society counts upon the assistance of all those who have the development of horticultural industry at heart, to give the flower show of 1898 the richness and eclat of grand former exhibitions.

Fruit and vegetables at Manchester.—The district around Manchester, taking a radius of fifty miles, is more populous than London, and the food supply is enormous. Market gardening is carried on extensively, yet it merely contributes to the support of the inhabitants. Land lets at from £2 10s. to £8 an acre. The Corporation lands let at from 5s. to £2 10s. an acre for the first year after draining, including as much town manure as is required. Two railway companies estimate that they carried 33,000 tons of fruits and vegetables into Manchester last year, while 31,819 tons of green and dried fruits were brought to the markets by the Ship Canal, besides 5,539 tons of Potatos. The Fruit Brokers' Association estimates that 351,450 boxes, cases, and barrels of Oranges, Lemons, Apples, Tomatos, and similar fruits were disposed of, mostly at one saleroom, during the past year. For the next season (1896-97) the number of packages was increased to 500,000, at an estimated value of £195,670. During the first three months of the year Cauliflowers and Broccoli are brought in from Cornwall at the rate of 200 tons a day or thereby. There are 91,000 cases of Onions from Valentia and 25,000 bags from Egypt. These consignments were carried through the Ship Canal. At one time hothouse Grapes at the beginning of the season fetched 16s. a pound; now he is a lucky man who gets 6s. for that quantity. In like manner new Potatos from the Scilly Islands fetched 2s. 6d. a pound, but now they never exceed 6d. a pound.

King Humbert of Italy lives almost entirely on on bread, vegetables, and fruit. Being forbidden to drink coffee, his favourite beverage is a little wine and plenty of water.

A plague of weeds.—The wide prevalence of high temperatures followed by heavy thunderstorms over a great part of the seed grounds of Europe, especially the northern portion, has caused such a rapid development of weeds that the staff of workers on various seed farms are unable to cope with them.

Big plant lice.—The *Omaha Bee* says that the fruit trees around Sioux City, Iowa, are so overburdened with plant lice (aphides) that the branches have to be propped up to prevent them from being torn from the trees. That's not big enough for Sioux City. Try again, *Omaha Bee*. In some parts of these favoured Isles they are said to be large enough to eat a cow and then pick their teeth with the horns.—*Snaggs*.

National Flower of South Africa.—A correspondent in the *African Critic* says that the competition for rhymes on the Aloe as the national flower of South Africa, in connection with which Dr. Ensor gave a valuable gold ring, and to which I made an allusion some time back, has been won by Mr. Cowper Gray, LL.D. The successful verse describes an imaginary song sung by the Aloe to an evening wanderer in a garden. The following lines are a fair sample of the poet's muse :—

I grow where the storm clouds gather,
And the rain with a mighty rush
Lashes the earth in its fury,
And floods the thorny bush ;
I grow where the veld is dry,
And the rock strewn desert is bare ;
Where the scanty herbage withers,
And dies in the sun's fierce glare.
I grow where the wild deer bounding,
Swiftly speeds from the lion's roar ;
Where round me the ostrich is stalking,
And above me the vultures soar ;
I fringe the slopes of the mountain,
And I gem the wild Karoo,
And Naiad-like stand by the fountain,
In my robe of Ormison hue.

* * * *

Planted by healthful Hygeia,
Her oriflamme proudly I stand ;
A floral carving of Nature,
And Hieroglyph of the land.

I congratulate Mr. Gray on a graceful little composition; it is worthy of the sweet singer of Great St. Helen's himself.

NEW BRONZE BEDDING VIOLA, JOSEPH.

A NEATLY wired spray of fifteen blooms of this new Viola reached us last week in excellent condition from Messrs. James Grieve & Sons, Redbraes Nurseries, Broughton Road, Edinburgh. The blooms are of medium size, quite large enough for bedding purposes, and of fascinating appearance. Many cultivators would be quite delighted to have a bed of this Viola, for it is the finest and most distinct novelty of this particular type which we have seen for some years past. The flowers would give us the impression that they are easily and freely produced, and on these points we are assured that the plant "has good habit, is free flowering, and has a good constitution, being easily struck and kept during winter." If the stems are short-jointed and wiry the variety will be a boon to those whose garden is in any way confined and over-sheltered, making the cultivation of soft-wooded varieties difficult. Plenty of undergrowth is also a desideratum, thereby ensuring a succession of bloom, plenty of cuttings, and testifying to the perennial character of the variety. The three lower petals have each a blackish-maroon blotch, melting at its margins into a rich bronzy-brown, the rest of the flower being yellow and beautifully shaded with bronze. The golden eye and blue eyebrows are very characteristic. We feel sure that most cultivators and fanciers would be charmed with it, and we certainly are. Mr. James Grieve thoroughly understands bedding Violas, for he is practically the father of the race, being the first to improve the Pansy for bedding purposes by collecting the perennial Violas on the Pentland Hills, and crossing the garden forms of Viola tricolor with them.

BRIDAL WREATH (FRANCOA RAMOSA).

"HAVE you no common English name for it ?" is a question pretty frequently asked of the gardener and amateur ; "for I cannot remember your Latin names." This has often to be answered in the negative, and sometimes common names are not of much value, because they give a stranger no idea either of the beauty or utility of the subject indicated. The subject of this notice is, however, most happily named, for its long branching sprays of pure white flowers form a wreath fit to adorn the brow of any bride. A native of Chili, and introduced in 1831, its decorative value has not been very generally recognised till recent years ; but now in some establishments it is grown by hundreds, its beautiful sprays of white bloom being of great service in any floral display when cut, and moderate sized plants in bloom interspersed among other plants have a most pleasing effect. In light warm soils it withstands the vigour of an ordinary winter, but is not hardy enough to risk in low, damp localties. A cool greenhouse is the best place for it. It grows freely, and can readily be increased by cuttings in the early part of the year. Insert these singly in small pots, and keep close till rooted. Grow on well through the summer and then there will be a harvest of floral beauty to be reaped during the autumn and early part of the winter. Unique in its way, it comes freely from seed when procurable. I have seen instances of its having flowered during the summer in airy greenhouses, where young seedling plants have been scattered in profusion on the surface of the soil of almost all the other plants in the structure.—*W.B.G.*

POPULAR FLOWERS AT READING.

FLOWERS of all sorts are now so common that those having little opportunity of seeing them at public meetings and shows could not do better than pay a visit of inspection to trial grounds and similar places where they are grown in quantity and variety. Here the colours may be seen and selected according to taste. The habit of the plants, their free-flowering character or otherwise, and the nature of the ground in which they give any particular result may be seen and noted for future reference. We paid a visit of inspection recently to the trial grounds or seed farm and the Portland Road Nursery of Messrs. Sutton & Sons, Reading, and here make some notes of what we saw.

TRIAL GROUNDS.

These are situated alongside of the Great Western Railway, and passengers cannot fail to be interested in the bright patches and bands of colour of the various subjects in bloom in their season. We described the fine trial of Sweet Peas recently, and now proceed to review some of the other subjects. Shirley Poppies are fairly extensively grown in a great variety of the most delicate and charming colours. There are white varieties with pink edges, pink with white edges, salmon edged white, white, pink fading to white, salmon glittering with satiny gloss, and various other shades. Salmon-coloured flowers are the most durable of any. The autumn sowing was in full bloom in June ; but the spring sowing only commenced to bloom about the beginning of July, thereby giving a succession.

Calendula officinalis Prince of Orange is a handsome variety, the colour of which is expressed by the name. Sweet Williams are selected and grown according to colour in different parts of the ground to prevent their being mixed by insects. In other cases they are sown in mixture. A very variable variety is Harlequin, the flowers of which are white when they expand, but soon change to pink, and then to scarlet, all the changes being present on one head. Tropaeolum Fairy Queen is a beautifully refined variety with primrose flowers deepening to apricot. T. Cloth of Gold has yellow foliage and orange-scarlet flowers.

In passing through the grounds we came upon Sweet Williams in mixture of salmon, white, and pink. A variety simply named Dark Crimson is an isolated instance. Further on we came upon salmon, heliotrope, bright pink, and carmine varieties. All are most floriferous, and a large proportion of them are of branching, pyramidal habit. Sutton's Superb Mixed Sweet Williams is the name given to the strain. We were particularly taken with the salmon variety. Another interesting mixture was passed; then a patch of Sutton's Pheasant's Eye, having brilliant crimson flowers, with a small white eye. It is both pretty, distinct, and comes true from seed. Sutton's Black is blackish-maroon, being the darkest in cultivation. Salmon is white at first but ultimately develops its true tint, various stages being seen on the same plant.

Sutton's Giant Auricula Sweet William is white, with a maroon-crimson zone or belt in the middle of the flower, and blooms most profusely. All these Sweet Williams are of the easiest culture, and if given plenty of space, produce armfuls of handsome heads of bloom.

Convolvulus tricolor is still one of the handsomest of garden annuals with its zones of bright blue, white and yellow. A very free flowering and showy Catchfly is Silene Pseudo-Atocion, with large rosy-pink flowers. It is an annual of branching habit, and allied to S. fuscata and S. rubella. Its native countries are Majorca and Algeria. In one part of the grounds we noted a fine plantation of Sutton's Rhubarb, which seldom or never flowers, and is valuable on that account.

PORTLAND ROAD NURSERIES.

At every period of the year something of interest may be noted here. During the summer season the tuberous Begonias are of more than passing interest, owing to the fact that they are raised from seed. The double varieties bear flowers of the largest size, and most refined character. Particularly handsome are white varieties, tinted with salmon ; pale yellow, with wavy petals like a Hollyhock ; also scarlet blush, glowing scarlet, and salmon varieties. Many of them have their petals flat and compactly imbricated like a Camellia. Very seldom are names given to varieties of this fine strain. Reading Beauty Coral is the name of a strain of single varieties having flowers of various shades of coral and salmon. Prince of Orange is a type with large, single, luminous orange flowers. Queen of Whites is still regarded as worthy of a leading place on account of its large and pure white flowers produced in great profusion. All other shades of colour are also found amongst the single Begonias grown here from seed.

The fibrous-rooted Begonias are accorded a leading place here, and they well deserve it. We refer more particularly to the beautiful varieties raised from B. semperflorens, which may be had in bloom all the year round in pots. For bedding purposes they are very choice and succeed in wet and dry seasons alike. Crimson Gem is now well-known for its bronzy foliage and carmine flowers, the foliage being best in the open-air. Reading Snowflake has white flowers that are purest under glass. Those of Duchess of Edinburgh are edged with pink. Fairy Queen is wholly of a pale pink, and is charming by contrast with Crimson Gem.

There is a houseful of Achimenes in a great number of varieties, differing in the size, shape and colour of the flowers. The large rich rose flowers of Rosy Queen are very conspicuous. It is relatively a recent variety. The Gloxinias at Reading always continue to assert their beauty and worth. This year's seedlings of Her Majesty are as true to the type as ever. A rich purple is Empress of India ; and Sutton's Scarlet is rich. Duchess of York is white, overlaid with a broad blue band. Azure Blue has a broad, blue margin, the rest being white. The spotted varieties are abundant and variable.

A large collection of hybrid Gesneras competes with the allied Achimenes for favour. The soft and velvety purple and bronze foliage is a sufficient excuse in itself for cultivating the plants. The irregularly funnel-shaped flowers may now be had in a considerable variety of colour, such as white, primrose, yellow, cream, salmon, orange and scarlet, the two latter being both conspicuous and showy. The same range of colours may also be seen here pervading a set with green leaves, and equally deserving of cultivation. The Cyclamens in another house are making good progress in 48-size pots and will claim more attention later on.

In the open ground are numerous interesting trials of various subjects. Many varieties of bedding Lobelias are grown from seed. That named Dark Blue forms compact little balls of dark blue flowers. Royal Purple has purple-blue flowers, with a conspicuous white eye. Numerous strains and varieties of Golden Feather are grown here, including the best golden strain in cultivation. Amongst a collection

of Pansies, that named Meteor stands out conspicuously, by reason of its glowing bronzy-scarlet and crimson flowers.

Carnations and Pinks show what can be done with a packet of seed. A plantation of the former consists of plants raised from seed sown in March 1896. With plenty of room, the plants develop an armful of flower stems bearing blooms in a great variety of colours. The percentage of double flowers is very high, and the quality in every way fitted for cut flowers. A strain of yellow Carnations is also grown from seeds and gives great satisfaction. Sutton's Superb Pinks are equally satisfactory, being most floriferous, varied and of high quality. Many of them are good, laced flowers. Giant Single Laciniata has flowers of a soft rose, with a dark crimson eye. Some of the plants measure a yard across. They are accorded the same treatment precisely as the Carnations, and well repay the small amount of trouble necessary to give these results. Those who require an abundance of Carnations and Pinks for the cut flower basket cannot do better than give this system a trial.

JASMINUM AZORICUM.

It is seldom one reads of this sweetly scented creeper as a suitable subject for the conservatory; yet I consider it is one of our best white flowering plants for this purpose, to bloom through the latter part of June and the two following months. Here, it is trained up a pillar and then on to several cross beams that support the various spans that constitute the roof of our large orangery. From here they are allowed to hang down at will. Growths from 3 to 6 ft. in length fairly covered with inflorescences 12 to 18 in. long, show that it is no mean object just now; while the delicious fragrance fills the whole house. What they require is plenty of light so that the growth can be well ripened, or else the flowers are few and far between. What little pruning is required should be done soon after it has done flowering. It is a native of, and was introduced from, the Azores in 1724.—*J. Mayne, Bicton.*

[The graceful sprays of this by no means common Jasmine diffused a grateful odour through the room whenever they were unpacked. The pure white flowers are rather larger than those of the common Jasmine, and scattered or disposed in loose cymes all along the upper portion of the young shoots. The leaves consist of three dark green shining leaflets that apparently cause no difficulty whatever in keeping them clean. Mr. Mayne evidently knows how to grow and flower this species to the best advantage, for the trusses were most abundant, and suitable for inserting in vases, either by themselves or in conjunction with other flowers which may perchance be scentless, to the great advantage of the latter. The Jasmine from the Azores might more frequently be cultivated in our greenhouses and conservatories. Ed.]

PLANTS RECENTLY CERTIFICATED.

The awards mentioned below were given by the Royal Horticultural Society on the 27th ult.

Orchid Committee.

Epilaelia radico-purpurata. *Nov. hyb. bigen.*—The reputed parents of this bigeneric hybrid were Epidendrum radicans and Laelia purpurata. The former has been the most influential both with regard to the stems and leaves, the shape, colour and structure of the flower. The leaves are arranged in two ranks on upright stems about 9 in. to 12 in. high. The plant is only young, however, and carrying a pair of flowers on a terminal peduncle. The oblong sepals and broader petals are orange scarlet. The lip is greatly enlarged, square, three-lobed, and flat. The terminal lobe is bronzy-red and the basal portion paler, with a central golden-yellow blotch. It is a very distinct and striking hybrid. First-class Certificate. Messrs. J. Veitch & Sons, Ltd., Chelsea.

Cattleya Warscewiczii Mrs. E. Ashworth. *Nov. var.*—The sepals and petals of this choice and pale variety are of a delicate blush-lilac. The lamina of the large lip is similar, but has a darker blotch in the centre. The throat is pale yellow, and the interior of the lip striped with light purple. It is choice and distinct. Award of Merit. E. Ashworth, Esq. (gardener, Mr. H. Holbrook), Harefield Hall, Cheshire.

Floral Committee.

Gladiolus General Duchesne.—This is a grand variety of the Gladiolus Saundersii type with huge triangular flowers, of a rich carmine, streaked with crimson, and having a large creamy blotch on the two lower segments, edged with crimson. The blotches, however, are variable even on the same spike. Award of Merit. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), Burford Lodge, Dorking.

Veronica Seduisante.—The intense purple flowers of this variety are produced in numerous spikes close to the apex of the stems, and certainly seducing, as the name would imply. The leaves are of a dark shining green, but similar in form to those of the well known V. Andersonii. For greenhouse and conservatory culture it is an acquisition. Award of merit. Messrs. J. Veitch & Sons, Ltd.

Hibiscus syriacus Painted Lady.—The flowers of this grand variety are of great size for the species, and white, with a maroon blotch at the base of each of the five petals. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

Hibiscus syriacus Coelestis.—In this case the flowers are of a rich dark blue, with five maroon blotches at the base. Both this and the previous one are hardy and flower in autumn when flowering shrubs are very scarce. Award of Merit. Messrs. J. Veitch & Sons, Ltd.

Godetia Gloriosa.—The flowers of this beautiful variety are of an intense maroon crimson, with a rosy base, and are produced in the greatest profusion. They are moderate in size in dry soils and seasons, but get larger with plenty of moisture. Award of Merit. Messrs. Dobbie & Co., Orpington, Kent, and Rothesay, N.B.

Gladiolus Carleton.—The flowers of this sort are of a rich magenta-purple, and have a white blotch on the lower segment. It is a fine variety of the G. gandavensis type. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

Gladiolus J. G. Clarke.—The large, triangular, rosy-salmon flowers of this variety are of the Saundersii type. The two lower segments are marbled, and spotted with crimson on a creamy ground. Award of Merit. Messrs. Kelway & Son.

Croton Shuttleworthii.—The long, linear leaves of this Croton arch over lightly and gracefully. They are yellow and dark green when young, but later on become creamy, tinted with pink, and variously marked with dark green, but only to a slight extent. Award of Merit. Mr. J. Bugg, The Gardens, Eastgate House, Lincoln.

Heliopsis pitcheriana.—The foliage of this plant is dark green and scabrous. The flower heads are moderate in size, and of a rich golden-yellow. It seems allied to H. scabra, or is a dark variety of it. Award of Merit. Messrs. Paul & Son, Cheshunt.

Phlox Rayleigh.—The flowers of this late flowering Phlox are of moderate size, freely produced, and amongst the darkest blue sorts we have. Award of Merit. Messrs. Paul & Son.

Rosa rugosa atropurpurea.—Occasionally there are a few extra petals in this variety, but it must nevertheless be included amongst the single sorts. The flowers are of a rich dark, crimson red. Award of Merit. Messrs. Paul & Son.

Canna Miss Elsie Perkins.—Here the flowers are of a uniform clear yellow with the exception of one or two golden petals in the centre. Award of Merit. Messrs. Paul & Son.

Pelargonium Anna Bateson.—Amongst zonal Pelargoniums this must take rank as one of the dwarfest, being only about 6 in. high to the top of the flowers, which are double salmon and pink, and freely produced. The leaves are small and dark green. Award of Merit. Mr. G. Davidson, Ammanford, R.S.O., South Wales.

Gladiolus White Lady.—The lower segments of this flower are lightly tinted with cream, otherwise they are pure white, and therefore very choice. Award of Merit. Messrs. Paul & Sons, Cheshunt.

Rose G. Nabonnand.—Here we have a good bedding Tea Rose of a distinct and delicate salmon-pink with large open flowers produced in great profusion. Award of Merit. Messrs. Wm. Paul & Son, Waltham Cross.

Fruit and Vegetable Committee.

Nectarine Precoce de Croncels.—In size and form this closely resembles Rivers early, but is lighter in colour, with much less crimson on the sunny side. It is a freestone variety with a white and very juicy, highly flavoured flesh. Award of Merit. Messrs. J. Veitch & Sons.

On the afternoon of the 27th ult. ten of the Floral Committee of the Royal Horticultural Society met at Chiswick, and accorded the following Awards of Merit to plants on trial there. According to the new rule nine or more of a committee are entitled to give Awards of Merit, whereas on former occasions xxx was the highest distinction they were entitled to make.

Pentstemon President Carnot.—On a previous occasion this was accorded xxx, and now it is honoured with an Award of Merit. The large, well-expanded and conspicuous flowers are purple-red externally and white in the interior of the tube.

Pentstemon Sandorff.—Here we have quite a new type, inasmuch as the flowers are six lobed, with the soft mauve segments spreading at right angles to the tube. The latter is pale mauve externally and white internally.

Pentstemon George Ulrich.—The large flowers in this case are scarlet with a white throat and tube internally, and very handsome.

Pentstemon Cassiope.—The committee gave this name to a handsome seedling, and at the same time accorded it XX, with the intention of seeing it at a future period to learn how it should behave. The large open flowers are rosy-purple with a large crimson blotch at the base of each of the three, or sometimes four, segments of the lower lip.

Canna Doyen Jean Leopold.—The huge trusses and flowers of this variety are soft yellow, thickly spotted all over with pale bronzy or brown markings.

Canna Edouard Mieg.—The large flowers of this Canna are of an intense crimson-red, and the foliage is dark glaucous green.

Canna Allemagnia (Germania).—This is of the same type as Austria and Italia. The flowers are of huge size and yellow, with all the central portion of a bronzy-scarlet.

Canna Seedling.—An unnamed sort under number received an Award of Merit, and the name is to be sent for from the raiser. The trusses are of great size, and the large flowers crimson-scarlet, edged with yellow. It is the finest of this type.

Canna Corsaire.—This flower is of an intense dark crimson-scarlet. The foliage is bronzy.

Canna Pfitzer.—The flowers of this variety are similar to the last named, but much brighter and glowing scarlet. The foliage is also bronzy.

Canna America.—This is of the same type as Italia and Austria, but is remarkably distinct in being yellow, heavily overlaid with a rich orange-scarlet. The leaves are of a dark bronzy hue.

Phlox Evenment (Lemoine).—The large flowers of this Phlox are rosy-salmon, with a violet eye.

Phlox Tourpillon. — The blooms are even larger in this case, and of a rich salmon-carmine.

Phlox Beranger.—Here they are soft salmon-pink, with a violet eye, and often marked with five white rays.

Phlox Cocquelicot.—Flowers of medium size and rich orange-scarlet, with a purple eye. The name Cocquelicot means Poppy-red.

Phlox Princess Beatrix.—The plant is 2 ft. high, extremely floriferous and having rosy-pink flowers washed with white. The bright eye is carmine.

Phlox Bouquet de St. Cyr (Forbes).—The large flowers in this case are white with a heavy and bold, carmine-purple eye, and particularly telling. It was also shown by Messrs. Barr & Sons, Covent Garden, who likewise got an Award of Merit for it. The name at Chiswick was wrongly spelt, but this was rectified.

FRUIT UNDER GLASS.

Peaches and Nectarines.—As soon as the succession houses are stripped of their fruit they may be treated in a similar fashion to that recommended for the earlier houses. Plenty of light and air and copious syringings are absolutely necessary in order to get the most out of the foliage, and to enable the wood to finish properly. The cutting out of the growths that have fruited is also an assistance. The borders may require several soakings of water before they are reduced to the proper condition of moisture.

RIPE GRAPES, or others which are ripening off, will need a good deal of careful watching. With the gathering of the small fruit crops, the birds are induced to turn their attention to something else, and now and again they make their way into the vineries, where they soon work a deal of havoc. As the month goes on, wasps too are becoming increasingly numerous and troublesome. Cracking of the berries not infrequently causes trouble, but this may be obviated by extra care being taken with the watering, since it is lack of care in this direction that is mostly to blame for the malady. The borders are allowed to get dry perhaps, and a soaking of water is given. A rush of sap to the berries is the result, and cracking inevitably follows. It is a good plan to allow some of the laterals freedom to grow a little, for these will act as a safety valve and prevent much mischief.

POT VINES.—As the plants that are intended for forcing next year show signs of approaching maturation, the house may be ventilated more freely, and a good circulation of air may be left on throughout the night with advantage. Finally they may be placed out of doors in a sunny spot to complete the ripening process. As long as they have leaves on, however, they must not be allowed to suffer for lack of water, as flagging is distinctly injurious to them at any time of the year.

STRAWBERRIES.—Supposing the layers to be well rooted, no time must be lost in transferring them to their fruiting pots. The size generally favoured is 6-in., for this contains sufficient soil and does not take up too much room. A good substantial compost is required, but we do not advise the mixture of chemical manure with the soil. Two parts of mellow loam such as that which has been used for growing Melons, and one part of manure from a spent Mushroom bed rubbed through a ½-in. mesh sieve with a fair addition of coarse river sand will make a capital medium. A sprinkling of soot may be added if desired. The soil should not be too wet at the time of potting, but the particles should adhere to each other when squeezed in the hand, and fall apart when thrown down. In soil such as this, the rammer may be pretty freely plied without danger. The pots must not be filled fuller than to within ½ in. of the top of the rim. Pot Strawberries are very thirsty things and plenteous supplies of water will be needed presently, therefore the need for room to contain the water.

VARIETIES.—Although the number of varieties is legion, even the largest establishment has need for only a few. Of these Royal Sovereign is the best for all general purposes. It forces well, and the fruit has a fine appearance, large size, and excellent flavour. British Queen for flavour is of course magnificent, not so its constitution and cropping qualities. Laxton's Noble is a first-rate forcer and the fruit is of fair quality. La Grosse Sucrée, Keen's Seedling, President, and Sir Joseph Paxton, have all been favourites for forcing purposes for some years, and are likely to remain so.

ORCHARD HOUSE.—The cultivation of Apples, Pears, Plums, Cherries, etc., in pots has received considerable attention of late years, and it has been demonstrated over and over again that even hardy fruits such as Apples and Pears may be brought to magnificent condition under glass. Air the house liberally, see to pinching and stopping as required, and give the trees support, should this be needed. Naturally with such a strain upon them liquid manure must be liberally given. Plum and Cherry trees from which the fruit has been gathered may be removed outdoors.—*A. S. G.*

HARDY FRUIT GARDEN.

STRAWBERRIES.—Now that the layers have rooted they should be severed from the parent plants at once and removed. This gives the chance of trimming the plants and cleaning the beds. With some growers the barbarous custom prevails of cutting the whole of the leaves off the stools, leaving the latter quite bare. This is too drastic treatment unless in the case of the plants being attacked with fungoid pests. All the runners and a large quantity of the leaves may be cut away, but a few should be left to carry on the work of the plants. Rubbish and weeds should then be straightway carted off and burnt out of the way. The spaces between the plants may subsequently be lightly pricked over with a fork—deep digging would not be admissable on account of the proximity of the roots to the surface.

NEW PLANTATIONS.—In establishments of any size where there are several Strawberry beds there is usually a fresh one to be made up each year Some cultivators prefer to treat the plant altogether as an annual, and to fruit it for the one year only. There is much to be said for this system in cases where only very fine fruit is of much value. Good fruit is yielded by plantations in the second and third year of their existence, and if it is used for nothing else the authorities in the kitchen will usually take all that they can get for preserving purposes.

The making up of new beds should be attended to as early as possible in August, that is as soon as it is possible to obtain well-rooted layers. The site for the plantation should be well manured and trenched beforehand, although it is not a good plan to employ a lot of rank manure which would only tend to produce unduly gross growth. The distance allowed the plants will depend upon the variety, whether strong-growing or not. For varieties of average vigour, 2 ft. between the rows and 18 in. between the plants in the rows is plenty of room. Some growers adopt the plan of putting three plants together to form a clump, and giving a little more room each way between the clumps than they would were the plants put out singly.

PEARS ON WALLS that are carrying heavy crops of fruit will stand in need of plenty of water, for although we have had heavy thunder showers in various parts of the country, the moisture thus obtained will not last long. Some of the cordons particularly are carrying plenty of fruit, and there is a good deal of strain upon the trees. Liquid farmyard manure will be of inestimable service now.

SMALL FRUITS ON WALLS.—Gooseberries and Red and White Currants are always in request both for the dessert table and for culinary purposes as long as they can be obtained. On bush trees, however, the fruit does not keep for long; Gooseberries particularly soon falling off the trees. A few trees on north walls are therefore of value, for in such a position the fruit will hang a long time. Gooseberry trees, however, will require to be covered over with mats, otherwise the fruit soon goes wrong. The old Red Warrington or Rough Red, as it is popularly called, is one of the best varieties for keeping in this way.

GENERAL WORK.—Continue the syringing of wall trees that are not carrying crops of ripe or nearly ripe fruit. Cut out the surplus suckers from Raspberries. See to the netting of ripening Plums and Morello Cherries. Gather early Apples and Pears as they become fit. If gathered too soon they never become sweet but remain sour and nasty. On the other hand if allowed to hang on the trees for too long they become mealy and insipid. After gathering, a few days on a warm dry shelf will improve them immensely. Carry on the training of shoots of Peaches, Nectarines, Cherries, etc., and in the cases of Peach and Nectarine trees from which the fruit has been plucked, cut out a good deal of the old bearing wood. Proceed with the budding of Apples, Plums, Peaches, Nectarines, Cherries, etc., taking care to select stout and plump, but dormant buds for insertion.—*A. S. G.*

Gleanings from the World of Science.

THE undermentioned subjects were brought up at the meeting of the Scientific Committee of the Royal Horticultural Society on the 13th ult.

Malformed Fungi in Mushroom Bed.—A letter was received from Mr. Taylor, Pembedw, Mold, criticising the reports sent to the last meeting with reference to the loam, as he had splendid results last year with the same loam cut from the open pasture. As the specimens have been lost in transit to Kew the Committee has been unable to receive the report of an expert upon the fungi themselves.

Cucumber with Adherent Leaf.—A specimen was received from Mr. E. Horsley, gardener to Rev. W. Wilks. The petiole of a leaf had become fused with the base of the fruit, the result being a distortion in the latter—a not uncommon procedure.

Cattleyas, synanthic.—This was a fusion between two flowers, the effect being to arrest some parts of the whorls, so that each flower became dimerous. There were two lips.

Poppy with Pistilloid Stamens.—A flower of Papaver Rhoeas was exhibited with this peculiarity. It is rare in this species, but not infrequent in some others, as the Icelandic.

Chemical Composition of Cattleya.—Two papers prepared by Mr. Smee were laid before the Committee by Mr. Veitch, to whom they had been addressed, as Chairman of the Orchid Committee The first contained some figures connected with the composition of the atmosphere; analyses of old and young pseudobulbs were also given, and of the flower including observations upon the colouring matters of plants. Prof. A. Church, having given careful consideration to the first of the two papers, reserving the second for a future meeting, remarked that Mr. Smee had scarcely paid sufficient attention to the more recent analyses of the atmosphere and of rain; the amount of CO_2 in the free air over land and sea being now found to be almost absolutely uniform everywhere (except where locally contaminated), and less in quantity than three parts in 10,000, so that no conclusions could be drawn from the data furnished in the paper on this point. With regard to the amount of ammonia in the air, it is so infinitessimally small in quantity, that it can only be estimated by the most modern and refined chemical operations, so that he was obliged to express some hesitation in accepting Mr. Smee's statements on this point.

With regard to Mr. Smee's analyses of pseudobulbs and of flowers, Prof. Church observed that they agreed fairly well with average results hitherto obtained from terrestrial and epiphytic plants, but he thought that the percentage of undetermined ash constituents—viz., about one-half, was far too great, and he questioned the presence of aluminium, observing that though terrestrial species of Lycopodium contain much of this metal, epiphytal species of the same genus contain none. He felt sure that some ingredient was wanting which had not been determined. With regard to floral colouring matters, Mr. Smee did not appear to have consulted recent researches. Prof. Church had proved that a number of reds, blues and purples, though called by different names—*e.g.*, colein in the Coleus, erythrophyll in Copper Beech, fruits, etc.; oenolin in black Grapes and anthocyan were absolutely the same thing, being represented by the formula, $C_{20}H_{20}O_{10}$. These became purplish in neutral cells, blue in alkaline and red in acid cells. Even the blue-green of a certain Ixia was due to an alkaline solution of the same substance.

With regard to the Beetroot, however, and plants allied to it, as the Amaranthus and Buckwheat, he found that the red-purple was of a different nature, and he had called it "amaranthin." It gave neither a scarlet nor blue reaction, neither green nor yellow with acids, but Prof. Church had as yet not determined its actual chemical composition, although he had found it to differ from anthocyanin by its insolubility in absolute alchohol, and by the absence from its spectrum of definite absorption bands With regard to nutritive solutions, Prof. Church thought that the ordinary solutions for plant culture containing phosphates and salts of lime should be used for Orchids, not the solution surcharged with nitrogen compounds recommended by Mr. Smee. He would suggest spraying with "pulverised" solutions the epiphytic Orchids, for he had proved with Echeverias—as Boussingault had also long ago with other plants—that salts if moist could be absorbed by the surface of the leaf, so that when a lithium salt was placed upon a lower leaf it was detected in others above. Dr. McNab had previously proved the transmission of lithium salts imbibed by the roots throughout the plant, following the suggestion of Prof. Church to use this salt.

Mr. Veitch and Dr. Masters called attention to the practice carried out by amateur Orchid growers of suspending a bag of carbonate of ammonia (smelling salts), so that the vapour might be absorbed. Mr. Henslow suggested that it might be absorbed with the aid of vapour of water, as he had found by experiments that this can be absorbed by leaves.—(*Transpiration in a Saturated Atmosphere*, Journ. Lin. Soc. Bot., xxiii., page 303).

HINTS FOR AMATEURS.

SWEET PEAS.

Up to the time of writing, the summer of 1897 has done nothing to specially distinguish itself from other summers. We have had plenty of sunshine, it is true, but not a long continuance of drought such as we suffered during the early and middle part of the summer of last year. The last week in June and the four weeks in July of this year have been a fairly dry experience, and plants were having a trying time of it all round until the recent rains helped to put a different appearance on plant life. The trying conditions, however, were due rather to the great dryness of the atmosphere, and the equally great heat of the sun, rather than to a long-continued spell of bright weather. The effects of the season are very marked upon the Sweet Peas At numbers of shows, both local and central, some really grand flowers have been staged. The size, indeed, has been above the average, and the colours as vivid and well developed as could possibly be desired.

Amongst hardy flowers the Sweet Pea has monopolised a considerable portion of attention during recent years. Not a whit too much, be it said, for, given a fair average season, there is nothing that can be more confidently expected to give a good account of itself. Such florists as Mr. Henry Eckford, of Wem, Salop, and Messrs. Atlee, Burpee, of the United States, America, have done wonders for the charming flower. Size, form, colour, habit have all been improved, and in no other subject do we get more numerous and more delicate shades of colour than we find in the Sweet Pea. Ultimate excellence is, however, more than ever a matter in which good cultivation has the casting vote. The more highly-bred florists' varieties are very sensitive to good or bad treatment.

A row of Sweet Peas will continue to bloom for a long time unless the weather is exceptionally hot and dry, but by dint of sowing early and sowing late with successional sowings in between, they may be had in bloom the whole summer through, and right up into the autumn until frost applies the closure. Thus an early sowing may be made in February as the weather permits, the same rules governing the sowing of Sweet Peas as of culinary Peas. Thus successional sowings may be made through March and April, the latest lot of seed being confided to the ground about the middle of May to furnish plants for very late blooming.

Where cut flowers are required in quantities the boon of such a supply as is thus afforded can scarcely be over-estimated. The flowers themselves are free from every appearance of stiffness. Made up in bunches with their own foliage for the filling of vases for the sideboard, the boudoir, or the drawing-room, no one can gainsay their beauty and their effectiveness. They can be relied upon to furnish glowing masses of colour without the accompanying stiffness and formality so common to many other plants. Even a tyro in the art of the arrangement of flowers can put up Sweet Peas to advantage. Here the many and subtle shades of colour stand the novice in good stead, for a bunch of mixed varieties gathered at haphazard rarely shows a clash of colours, the decided tints being softened and assisted by the numerous half tones. A dinner table entirely dressed with Sweet Peas and suitable greenery can scarcely be surpassed. The flowers for the most part have long stalks, and may thus be utilised to fill both small and large vases, epergnes, glasses and all the other little knick-knacks which find a place in floral decorations of this kind.

But the value of the flowers is not represented entirely by the uses to which they can be turned indoors. As they stand in the flower garden they are of the utmost service. A well bloomed row, for instance, with the brightly-hued flowers drooping carelessly from every twig of the supports, flowers and greenery delicately adjusted with regard to proportion is a sight that cannot be overpraised. Neither is it too common a one, more's the pity, although it is well within the reach of the greater majority of amateurs whose gardens are other than of Lilliputian size.

Rows or clumps of Sweet Peas again come in splendidly for masking undesirable objects. A heap of rubbish, a manure tub, or other objectionable but often necessary adjuncts to a garden may thus be easily screened from view at a comparatively small cost.

The number of varieties forthcoming is legion, and the aspiring amateur may well be appalled when called upon to wade through such a formidable list in order to make his choice. The following is a selection of good and trustworthy varieties. They are all very distinct and thus cover a good deal of the colour range, although there are scores of intermediate shades to be filled in. This, of course, can only be attempted by those who have plenty of room, and it may also be said a fair proportion of this world's goods, wherewith to purchase that which they require.

Blanche Burpee.—This is without doubt the finest white variety in cultivation. The habit is strong and vigorous, and the seed, if purchased from a trustworthy source should therefore be sown rather thinly. The flowers themselves are of giant size and are very freely produced. By keeping them cut each day the plants may be kept in bloom for a surprisingly long time. The standard or large upper petal of the flower has an entire margin, the notch which is to be seen in Emily Henderson being absent. If there is only room for one white variety Blanche Burpee undoubtedly deserves the choice.

Emily Henderson is another good white that has much to recommend it. It is also a large and fine flower but scarcely so vigorous as Blanche Burpee. The standard instead of being entire as in the latter variety has a deep notch in it, and the two varieties may thus be easily distinguished from each other.

Queen Victoria.—The yellows are not nearly so strong in numbers and quality as the whites, roses, pinks and blues; Queen Victoria is the finest of them up to date, The flowers and very large and creamy-yellow in hue. There is a suspicion of light purple at the bases of the petals.

Coquette is a couple of shades lighter yellow, and may be described as light primrose. A subtle tint of rose is evident sometimes, and a very charming flower is the result. Both Coquette and Queen Victoria deserve a place in every collection, although if only one can be grown Queen Victoria is to be slightly preferred.

Eliza Eckford.—This received an Award of Merit at the hands of the floral committee of the Royal Horticultural Society in 1893. The ground colour is white, both standard and the wings (side petals) are striated with rose, the striation on the standard being rather heavier and bolder than that upon the wings. The appearance of the flower may be somewhat garish, but it is one of the very best of it class.

Lady Mary Currie is a novelty that has received an Award of Merit from the Royal Horticultural Society only this season. The colour is bright rose, the standard showing a slight shading off to a lighter tint.

Lady Beaconsfield is a variety of a number of years standing, but withal unsurpassed as yet by anything in its line. It received the Royal Horticultural Society's Award of Merit in 1892. The wings and keel (lower petal) are sulphur-yellow. The standard may be described as salmon, suffused more or less with rose.

Alice Eckford is white with a creamy-yellow standard suffused with rose—a delicately beautiful combination of colours.

Salopian is one of the very best of its kind, and its merit has been recognised by First-class Certificates at Wolverhampton, Dundee, Birmingham and Edinburgh, as well as having an Award of Merit conferred upon it in 1896 by the Royal Horticultural Society. The colour is deep crimson with a suffusion of orange. When the sun is shining full upon these flowers the effect is superb.

Mars obtained the coveted A. M. from the Royal Horticultural Society in 1895. The flowers are rich fiery-crimson in hue, but without the orange to be seen in Salopian. The crimson intensifies with age.

Prima Donna exhibits one of those delightful shades of soft pink that are well nigh indescribable. It is a little deeper than flesh pink, which would seem to be the nearest approach to description at which we can arrive.

Stanley is distinct among all as the finest dark variety yet introduced, although it obtained an Award of Merit from the Royal Horticultural Society as far back as 1890. It is described as being a deep maroon self, but this scarcely conveys a true idea of its depth of hue, for when the sun is not shining full upon it, it appears nearly black.

Dorothy Tennant exhibits a delicate shade of mauve with a suspicion of rose, on occasion.

Countess of Radnor, certificated by the Royal Horticultural Society in 1891, is yet unsurpassed as a lavender-blue flower of great size and substance.

Countess of Powis, rose, flushed with apricot, is another of the finest of the newer varieties.

The following are all good varieties, to which short descriptions of colour are appended. They might well be included in a collection by those who can afford the space.

Royal Rose, rose, with a carmine centre to the standard.

Senator, white, heavily striped with purple-black.

Venus, yellow, flushed with rose.

Princess of Wales, white, heavily streaked with violet.

Duke of Clarence, deep violet-purple, one of the best of its kind.

Peach Blossom, delicate rose-pink.

Gaiety, white striated purple-rose.

Novelty, rosy magenta.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Ericas.—The plants will be better out of doors for the remainder of the summer, *R. O, Swindon.* The advantage of a turn out of doors to ripen up the growths is particularly noticeable in such forms as E. Cavendishii, and, in fact, all the yellow-flowered ones. You will find it advisable to plunge the pots to the rims in ashes.

Old Red Currant Trees.—From your description of the trees, *Amateur*, we should strongly advise you to pull them up root and branch, and fill their places with young ones in the autumn. You will never do anything with such old stagers—at least, not enough to pay for the trouble. Besides, young Currant bushes are cheap enough to buy, and soon come into bearing.

Potting Odontoglossums.—I have several Odontoglossums, including O Alexandrae, O. Pescatorei, and O. grande that look as if they needed fresh stuff to grow in. Shall I have to wait until next spring in order to pot the plants? A neighbour of mine says that spring is the only time of the year suitable.

The neighbour is wrong this time at any rate. The very best season of the year to pot Odontoglots is the beginning of autumn, say about the end of September. You can pot your plants then with perfect safety, and every hope of their doing well. Autumn-potted plants have a capital chance of getting established in their new quarters before the very hot weather comes to try them.

Ferns.—I have a cool greenhouse which is entirely filled with Ferns. These appear to be in good health, but for the last month they have been putting on a yellow appearance. The house is shaded with tiffany, and I am careful to keep plenty of water thrown about. Can you suggest the cause of the yellowness?—*L. L. R.*

We should ascribe it to the hot weather. No matter how you shade, Ferns always seem to go more or less yellow in the summer. The atmosphere is dry and very trying to them. You might give them a little soot water twice a week. This will help to bring back the green which they have lost.

Erythrina crista galli.—Possibly your plant has not sufficient strength to flower, *Topic.* Give it a position where it will get plenty of light, and feed it well; it may then bear flowers this season after all. We have from time to time seen plants that were poked about in odd corners, shaded from the sun, and nearly starved to death, and they never flowered. The plant will require to be pruned back in the autumn, and may be kept dry through the winter, If you plant it outside you must cover the rootstock with a layer of manure or leaves to afford it some protection from the frost,

Rose Horace Vernet.—*Enquirer*: This Rose was raised by MM. Guillot fils and sent out in 1866.

Hardy Flowers.—*Enquirer*: If the schedule reads "twelve bunches of hardy flowers," and does not further state that they are to be "herbaceous" you would certainly be within your rights in showing Spiraea ariaefolia, or any other shrubby subject for that matter. It is quite possible, as you suggest, that "hardy herbaceous" flowers were really meant when the schedule was drawn up, and if so it only goes to show how necessary it is for the satisfaction of both judges and exhibitors that the schedule should not be ambiguously worded. If the latter does not specify "herbaceous" plants no judge could disqualify you for showing shrubby and herbaceous subjects mixed, as long as they are hardy, as that satisfies the specified conditions.

Growing of Mushrooms—*Tom Jones*: We can let you have 100 copies of "Mushroom Culture for Amateurs" for 8os. The book is by W J. May, and is sold at 1s. each, or by post 1s. 2d.

Madresfield Court Grape Cracking.—*A. Munro*: This variety of Grape proves troublesome with many growers, but others experience no difficulty in this respect. A very good authority and a successful grower of the variety says that watering must be done regularly and carefully, so that the roots are never allowed to become dry. He believes that if through stress of work or any other cause, the Vines are allowed to become too dry at the roots, and then the latter suddenly deluged with water, cracking will very soon make its appearance. The Vines being young, the border should still be good and well drained: it would therefore be worth your while to water carefully and regularly another year, so as to prevent the roots getting too dry before the next supply is given.

RAPHIOLEPIS OVATA.

There are only four species of Raphiolepis known to science and that under notice is the hardiest. One or two of the others are in cultivation, but only as greenhouse plants. On the whole, however, that under notice is the best known, and by far the most widely disseminated in gardens. Being evergreen it requires the shelter of a wall in midland and northern counties. It should find a place in every garden where choice and uncommon shrubs are cultivated. Being evergreen it gives the place a furnished appearance, summer and winter.

The accompanying illustration was prepared from a photograph furnished us by Messrs. R. Veitch & Son, Exeter, and represents a plant growing and flowering on one of the rockeries in the Royal Nursery, New North Road, Exeter. Many beautiful and rare or uncommon subjects are grown by the Messrs. Veitch both in this and other of their nurseries in the neighbourhood of Exeter. The favourable nature of the climate of Devon enables them to grow various things to greater perfection than could be done where the winters are more severe. We had the pleasure of noting these things not long ago during the winter season.

When grown fully exposed on all sides Raphiolepis ovata forms a dwarf, spreading, bushy and well furnished plant as may be seen by reference to the photograph. There are taller trees and shrubs in the background, behind which the roof of one of the glasshouses may be noticed. The leaves of the plant under notice are elliptic or obovate, dark green and very leathery. The white trusses of flowers thickly strewed all over the bush are well displayed against the dark foliage. Nestling amongst the stones in front of the bush several other rock plants may be seen. Alpine plants are grown upon another rockery close by. Very choice and rare things are also grown in frames.

A Mushroom measuring 36 in. in circumference has been gathered at Market Deeping.

John Ruskin and Floriculture.—In the eyes of sage John Ruskin railways, coal mines, iron works, etc, were an abomination, and he turned himself from these with abhorrence to contemplate the rippling brook, and the glowing flowers, and feast upon nature undefiled. To behold Nature and Nature's works in any form, in any guise, gave to him feelings o unalloyed pleasure such as he could not find else where.

CARNATIONS AT EDENSIDE.

Although the attention of the floricultural world is not so exclusively directed towards the Carnation during the month of July and the early part of August as it is towards the Chrysanthemum in the month of November, yet the increasingly keen competition at shows throughout the country bespeaks the fact that the ranks of its zealous admirers and cultivators are year by year being augmented. The development and improvement of the noble flower goes on apace, thanks to the untiring energy and skill of florists like Mr. James Douglas and Mr. Martin Smith, whose names will ever be inseparably connected with the flower they love and grow so well.

'Tis but a few years ago since Mr. Douglas founded his establishment at Edenside, Great Bookham, Surrey, and yet these few years have sufficed to send the name and fame of the establishment throughout the Continent and the English-speaking parts of the world. The site of the nursery is far enough removed from the whirr and bustle of the city to insure pure air, and the maximum amount of sunlight. Much of the ground in this part of fair Surrey is common land, and thus the encroachments of the building fiend are not to be greatly feared, despite the fact that Great Bookham is but twenty miles distant from the L. & S. W. Railway's terminus at Waterloo, and the nursery about three miles distant from Leatherhead.

We recently paid Mr. Douglas a visit and were charmed with his Carnations. Of course we expected to see something good, and were thus not at all surprised to find that the quality of the flowers all round was first class, not a few novelties being in evidence. Large batches of seedlings are raised each year, and as soon as these begin to flower the weeding out process begins. Each variety is thoroughly tested both outdoors and in before it is sent out, and the public can thus rely upon the assurance that a variety is not recommended simply because it is new, but because it is both good and new. The proverbial man in the street has no idea whatever of the amount of time it takes, and the amount of trouble and pains it costs before one of Mr. Douglas's novelties is sent out into general cultivation. This year there are numbers of very promising varieties some of which will find a place in next year's catalogue. We are prevented from alluding to these in detail by reason of the fact that they have not yet been presented with distinctive names.

It is hardly necessary to say that the collection is a large and most comprehensive one. It includes all the finest varieties reared by other growers, more particularly those raised by Martin R. Smith, Esq., in his garden at Hayes, Kent. These constitute a host in themselves, and when we add to them the numerous grand sorts which have first seen the light under the care of Mr. Douglas at Edenside the collection is all the more complete. Yellow ground Carnations and Picotees are avowedly Mr. Douglas's favourites, and the visitor can scarcely fail to remark how strong the Edenside collection is in this respect. Self-coloured varieties are well looked after also, and reach a very high standard. Flakes and bizarres are grown, but their places are being gradually taken in the popular favour by the selfs and yellow grounds.

The plants, for the most part, are grown in pots, and flowered under glass, three or four roomy and well built houses being devoted to them. A stroll through these with Mr. Douglas as guide was a most enjoyable experience. The plants themselves were all in robust health, and the vigour and health of the "grass" bespoke plenty of strong well-rooted layers presently. Layering was even then in progress, for time will wait for no man, not even the Carnation grower. "We do not disbud our plants at all," said Mr. Douglas, "for we find that people like to come and see the profusion of bloom that we are thus enabled to show them. We find, moreover, continued he, that they are disappointed if they come and see plants that have been severely disbudded. They like to see good blooms and plenty of them." That they can do this at Edenside our eyes assured us, for without exception all of the plants were as full of flower as they could well be. The large terminal flowers were over, but the side blooms were making a grand show, and as these were of good size and capital form they left nothing to be desired. "Fertilisation goes on daily" continued our guide. "We do not cut the blooms, they are too valuable for that, as we want the seed." No shading is given, and thus the bright sun soon takes the colour out of the flowers, but what matters, as long as they fulfil the end for which Nature intended

Raphiolepis Ovata.

them? Mr. Douglas sends seed out to all parts of the world, and receives many flattering testimonials from various sources of the good things that have resulted from the Edenside seed.

Among the novelties in Carnations raised by Martin R. Smith, Esq., Endymion is one of the very best. It is a bright salmon-scarlet self of wondrously fine form, and smooth petals. Mr. Martin Smith considers it to be one of the best selfs he has ever raised, and this flattering commendation is not too high. May Yohe has very large rosy-pink flowers, and is noticeable for its very vigorous habit. Mrs. McRae is a fine bright scarlet, and entirely supersedes the well-known Hayes Scarlet. Nox, appropriately enough is a deep maroon, very nearly black, and by far the darkest Carnation in existence. Plants of this superb variety were scattered here and there throughout the houses, and were always most conspicuous. The Bard exhibits a curious shade of buff yellow, a hue that up to the present has not been strongly represented. Lady Hindlip is the latest addition to the crimson-scarlet selfs, and a grand variety. A very pleasing and distinct gradation of colour is formed by placing Endymion, Mrs. McRae, and Lady Hindlip together. Gilda is a magnificent primrose-yellow self.

Mr. Martin Smith's yellow grounds are equally good. Perseus has a ground colour of rich yellow with an edging of lilac, splashed here and there with orange red. Don Juan is a first-class exhibition fancy variety. The ground colour is buff-yellow, curiously flaked and streaked reddish-purple.

Of those raised by Mr. Douglas himself Vesta is one of the very best. It is the finest white self we have yet seen, rather larger than Mrs. Eric Hambro, of equally good form, and much superior habit. Cassandra is a huge pale blush flower that at first sight might easily be mistaken for a Malmaison. Mopsa exhibits a peculiar shade of yellow-apricot, and is of great value on that account alone. The form is also good, and the petals smooth and of great substance. A batch of the rich carmine-rose, Mrs. James Douglas arrested our attention, not only for the merit of the individual flowers but on account of its habit, which is the type of what a bedding variety should be—free, dwarf, and vigorous.

Dragoon is a fine yellow-ground fancy heavily barred and edged with red-purple—a large flower, and of good form. This, in common with all the foregoing, is new.

Standard varieties are by no means neglected. Lady Nina Balfour, a very pretty blush flower, is perhaps better known in the northern counties than in the southern. Other good self varieties, such as Her Grace, Waterwitch, Bendigo, Garville Gem (the best heliotrope-coloured flower), and King Arthur were all in grand condition; and fancies like Phoebus, a recently sent out form, were also well represented.

Picotees were equally as good as the Carnations, and the only difficulty is in the number of good forms that were to be seen, for in the space at our disposal we cannot hope to enumerate them all. The following are all new yellow grounds. Stanley Wrightson is a very handsome and large flower, heavily edged with scarlet. It is one of the best Mr. Douglas has yet raised. Badminton (Martin Smith) is margined with deep scarlet-red on a clear yellow ground. The flower is large, and the petals broad and well formed. Empress Eugenie, another of the Hayes seedlings is clear yellow bordered with rose. Dervish (Martin Smith) makes up a trio of as good flowers as could be wished for. In this case the ground colour is primrose yellow, edged with lilac-rose—a very delicate and charming shade.

Such standard varieties as Florrie Henwood, Harlequin, Mr. Nigel, all of Mr. Douglas's raising, and Golden Eagle (Martin Smith) are standard yellow ground varieties, the value of which has been demonstrated at many shows, both local and central.

One great feature to be observed in all the Carnations and Picotees at Edenside is the strength and stoutness of the calyx. Pod bursters at one time were the rule rather than the exception, and Carnation growers used to bewail this tendency on the part of the plants, but this defect has been very largely remedied, and although a very heavy flower is almost sure to burst its calyx, the majority of flowers do not do so.

In conclusion we can only say that anybody who knows anything about Carnations will find in a visit to Edenside a measure of enjoyment, full, pressed down, and running over.

FAMILIAR GARDEN INSECTS.

A PAPER on "Familiar Garden Insects," by Mr. W. D. Drury, was given at the meeting of the Royal Horticultural Society on Tuesday, July 27th. Dr. Bonavia occupied the chair. In the absence of Mr. Drury, the paper was read by Mr. J. Weathers. There was a fair attendance.

In his opening remarks, the essayist touched upon the important part that insects play in the garden, and with relation to our various crops. This part is but indifferently understood by the gardener both amateur and professional, although in such a case even a little learning would be of service. A great deal of gross ignorance prevails, and not a few gardeners look upon everything that creeps or flies as an enemy that is to be exterminated on the first opportunity. For instance, only sixty years ago at Reading the parish officials were asked to help in clearing away a visitation of lady birds. We have improved a good deal since then, but even now are far behind our American cousins in matters entomological. Even in the secondary schools in Germany, too, biology is taught, but this is most exceptional in this country.

Many amateur and professional gardeners, too, may know greenfly and wireworm when they see them, but know nothing of their history. Everything is an insect to them from a woodlouse to a slug, and yet an insect is well defined. Beetles particularly are looked upon as being dangerous, and thus many useful ones are killed.

Horticulture and entomology, said Mr. Drury, are very closely connected, and in order to obtain success in the one it is necessary to have more than a passing knowledge of the other.

Dealing first with the Coleoptera, the essayist took first the Carabidae. The ground beetles are with two or three exceptions animal and insect feeders. There are three species common to gardens, viz., Carabus nemoralis, C. violaceus, and C. monolis. None of them can fly, but only run rapidly. The insects are nocturnal, and are provided with powerful jaws in which they crush vegetable feeding molluscs or beetles. The larvae, which are black and elongated, are also provided with strong jaws, but little is known about them. C. ornatus is common on the continent, where it is valuable on account of its killing cockchafers. Harpalus ruficornis loves the bright sunshine, but is also nocturnal. It occasionally lives on a vegetable diet. It is oblong in form and black in colour, with reddish legs and antennae. The Tiger Beetles (Cicindela) are very swift-moving insects. They are green in colour with spots of white, or yellow and white. Cicindela campestris is a most ferocious creature. Two of them will fight with each other on the least provocation, and until one is killed. They are beneficial to the gardener. The Devils Coach-horse is at once the ugliest, the most useful and the most persecuted beetle. It is, in fact, the incarnation of beetle ugliness. It has short powerful wings, and wages war against the strongest insect without fear.

The glow-worm is not often regarded by amateurs as a beetle. It is the only British light-bearing insect. The larvae differ little from the perfect female insects in appearance. Glow-worms kill snails and other creatures injurious to vegetation. Lady-birds, as ought to be commonly known, kill aphides, and the larvae are very voracious.

All the above are friends to the gardener, but the following foes are to be found in the Coleoptera. Wireworms are the larvae of several skipjacks, such as Agriotis sputator, and A. obscurus. Many people have a curious idea of what wireworms are, and centipedes, millipedes, etc., are often received for them. Millipedes are slow moving, and vegetarians, centipedes (myriapoda) are active and not vegetable feeders. The Asparagus Beetle, too, is a common and injurious insect.

In the Orthoptera are found the largest insects; also earwigs and cockroaches. The latter do great mischief in plant houses, and are fond of the young fronds of Ferns, the young growths of Orchids, Vines, etc. Our common cockroach is not a native of this country, but an importation. The cockroach takes a long time to arrive at maturity, five years being necessary to complete its cycle of life. It deposits its eggs in hermetically sealed capsules. Blatta orientalis, B. australasica, and B. americana are all very destructive. Phosphorus paste laid about is very effective in getting rid of them, for the cockroaches greedily eat it and pay the penalty. Earwigs are well known as injurious insects, but they are not strictly vegetarians. Two species only are common, Forficula auricularia and F. lahia minor; the other five species are scarce. Earwigs are the only insects which take care of the eggs when laid. The exact purpose of the hook at the end of the body is unknown. Occasionally it is used for helping to fold the wings—perhaps also for biting.

Of the Neuroptera there is none hurtful in Britain. Dragon Flies are beneficial insects. They devour moths, butterflies, etc., although only the body is eaten. There are fifteen species of Lacewing fly in this country, but only two or three are useful. Chrysopa vulgaris has golden eyes and long slender antennae. The larvae are not unlike those of the ladybird.

In the Hymenoptera which contains the ants, bees, and wasps, we find the highest standard of intelligence. There are seven species of social wasps. These destroy the larvae of noxious insects, but with one exception, heavily discount their value in the destruction they deal to fruit crops. The hornet is the exception. Are ants injurious or not? is a question that is often asked, and perhaps it ought to be answered that they are, for they make unsightly heaps on the lawns, and encourage the honey secreting aphides.

Amongst the parasitic Hymenoptera the larvae of the Ichneumon flies do a great deal of good. They keep in check the Cabbage fly, and their cocoons should therefore, never be disturbed. Saw-flies are also held in check by some of the parasitic Hymenoptera.

Butterflies are the most familiar of the Lepidoptera. Except the ordinary white butterfly none of the sixty species is numerous. The larvae of some moths prey on fruit, the Codlin Moth, and Plum Moth being specially destructive, Leaf-rollers are also troublesome.

Included in the Diptera are such foes of the gardener as Crane-flies and Leather Jackets. None is more useful than the Hawk-flies, the larvae of which feed upon aphides.

The Hemiptera are divided into two divisions according to the structure of the wings, viz., Heteroptera and Homoptera. Here we find the scale insects so common in our plant houses, the dreaded Phylloxera and the Aphides. Of the latter 200 species are known, all of which are destructive. Their tastes are omnivorous, and they increase at a fearful rate. Some of these insects are viviparous and multiply at a great speed.

At the conclusion of the reading of the paper a vote of thanks was passed, on the chairman's motion, to Mr. Drury.

GLOXINIAS AT STANSTEAD PARK.

THE cultivation of Gloxinias has now become very popular, the fine state of perfection to which they have been brought being sufficient to account for this. The strain grown by Messrs. J. Laing & Sons, Forest Hill, has been greatly improved within the last few years. We recently had a hurried inspection of them as grown in their Stanstead Park Nursery.

The self-coloured, the handed and edged varieties are most favoured, and these remarks are simply intended to give a general idea of the strain, most of them being seedlings obtained after a number of years of careful cross-breeding and selection. Very few of them receive special names. Very choice are those having velvety-crimson, glowing velvety-crimson, and blue flowers, with a white tube and throat. Those which have six instead of five segments are additionally valuable and showy on account of the extent to which the segments overlap, thus giving rigidity to the flower. Some are crimson fading to rose at the margins; dark maroon with violet edges and six segments; violet and white edges; purple and violet edges; crimson-red and distinct white edges; and others are banded or zoned across the middle, that having white flowers and a wavy but distinctly defined rose band round the flower being choice and pretty.

A strain of Streptocarpus is also grown in quantity, and the flowers are notable for their size, a large proportion of them having blue flowers in various shades.

The profits of Banana plantations in British Honduras are said by Dr. Morris, of Kew, to vary from £12 to £15 per acre after a lapse of 18 months.

SOCIETIES.

JEDBURGH HORTICULTURAL.—*July 20th.*

THE glorious sunshine which prevailed around Jedburgh during the preceding week redeemed the summer exhibition from comparative failure. The welcome change in the weather had come too late for the full development of fruits and vegetables, but forwarded the flowers considerably. The classes set apart for them were therefore well filled. Roses especially were meritorious, and the winning exhibits of other flowers were also well up to the mark. Drenching rain, however, on the day of the show kept away visitors from a distance.

The most successful exhibitor of Roses was Mr. Alexander Walker, who took the leading awards in several classes, as he has done on several previous occasions. He had the premier bloom in the show in a magnificently grown flower of the hybrid Tea, Caroline Testout. There was a good display of Pansies and Violas in splendid condition, particularly the former, the blooms being large and in fine condition. Antirrhinums, Stocks and Pentstemons were also in good exhibition form, especially the first named. The same can hardly be said of the Phloxes, which were hardly up to the standard of former years at Jedburgh, owing to the late, cold season. Less fault could be found with the annuals. Herbaceous cut flowers might have been better.

The chief attraction centred in the keen competition for the Diamond Jubilee Prize offered for a stand of cut flowers. An imposing display was produced by fourteen competitors. Mr. Walker carried off the coveted honours by being first with his beautiful stand. He had fine bunches of the Tiger Lily, White Campanulas, Sea Holly, and good bunches of annuals. Mr. George Ormiston took the second award with some beautiful and tastefully arranged bunches. Mr. Adam Oliver was a good third, having an attractive exhibit. Other tables were also well-dressed. Seven prizes were awarded.

The tables set apart for fruit and vegetables were not well-filled; nor were the exhibits up to the standard. Strawberries and Black Currants were, however, in good form. Only one dish of Raspberries graced the tables, while Gooseberries and Red Currants were only half ripe. Cauliflowers and Rhubarb were good, but Potatos small.

The platform was decorated with Palms, Ferns, and other pot plants by Mr. Scott from Queen Mary's Gardens, who also had baskets and bouquets of cut flowers and excellent Strawberries. The Roses exhibited by Mr. Charles Irvine, Jedburgh, have seldom or never been surpassed at shows here. Samples of Ichthemic Guano, a useful and nutritive manure, were exhibited by Mr. William Neil, seedsman, Jedburgh.

HUYTON AND ROBY.—*July 29th.*

THE annual exhibition of this society was held on the 29th ult., and not only were the exhibits an advance upon previous efforts, but the quantity made such rapid strides that a portion of the vegetables had to be staged outside for want of space. A. McKenzie Smith, Esq., (gardener, Mr. Lyon) gained the premier award for a tastefully-arranged group. Mrs. Banner (gardener, Mr. R. Pinnington) had the best four stove and greenhouse plants, staging Croton Queen Victoria, Kentia fosteriana, Clerodendron Balfourii and Ixora.

Mr. Lyon won the first award for a flowering plant with Clerodendron Balfourii. Mr. R. Pinnington scored with three Ferns, and a similar award was gained for the single specimen with Cibotium Scheidei. This exhibitor also won with two Orchids; and for the single specimen Mr. J. Parrington (gardener, Mr. Thomas Eaton) won with four kinds of fruit, his Black Hamburgh Grapes and Bellgarde Peaches being excellent. This exhibitor also led the way with two bunches of Black Hamburgh; Mr. J. Beecham (gardener, Mr. W. Oldham) winning in the class for white Grapes, with Muscat of Alexandria. For Peaches and Nectarines, Mr. Eaton won in both classes with Royal George and Violette Hâtive.

Mr. R. Pinnington staged the best eighteen Roses, the blooms being small. Mr. W. Lyon won the premier award for eight varieties of vegetables in the open class; whilst Mr. J. Lyon gained the position of honour in the amateurs' division.

The arrangements were ably carried out by the secretary, Mr. H. Middlehurst, and his committee, who certainly have the pleasant difficulty to face of providing more space.

THE HAMBURG EXHIBITION.—*July 30th to August 3rd.*

From July 30th to August 3rd the third special exhibition has taken place in Hamburg, the exhibits consisting of Begonias, Carnations and fruit trees in pots. The arrangements made for this exhibition are really wonderful, for within the short time of two days the never resting committe gave that magnificent park with all its halls an entirely different appearance. Great was the test which the committee had undertaken to fulfil. To-day, as every tree, every flower and every plant stands at its place, we must confess that criticism is, in fact, disarmed; and every person must own that this exhibition rivals its predecessors. Whatever the season offers will be found here in the first-class examples, filling the air with fragrance; on this occasion it is the Carnations.

A noble battle is being fought here in the exhibition for the first prizes for the Carnation. It is a matter of self-understanding that every competitor chooses his best flowers to compete against hundreds of foreigners, and we may proudly mention that our countryman, Mr. Charles Turner, "The Royal Nurseries," of Slough, was lucky enough to take the first prize, a large Gold States' Award, for 200 choice Carnations (grown in pots of course) besides another first prize; the large Gold Medal for 250 cut Carnations; and for six boxes of show Carnations, not in programme, he received the large Silver Medal. Notwithstanding the passage these English flowers have kept in an excellent and fresh condition, and drew the attention of every visitor.

No less abundant is the show of Begonias and the exhibitors give a good proof that they know how to cultivate these flowers. We shall refer to the prize-takers at foot.

The Pelargonium show is also worth while mentioning. Who will not be delighted to see these wonderful products of Nature! A new Pelargonium "Eldorado," shown by the firm of Mr. Carl Buck, Wandsbeck, will likely soon be the favourite of the public.

The art of binding flowers finds a first class representative in Mr. W. Maehl of Hamburg, who sent six wonderful, ornamented ships, a magnificent lighthouse and two anchors to the exhibition; effective to the eye is a tugboat towing a steamer, which are both made from wonderful flowers. It is a pity that these excellent arrangements are at a rather shaded place in the main hall and cannot show their splendour.

The principal prize takers in this third exhibition were the following:—

Messrs. Arends & Pfeifer, Ronsdorf, who took the first prize, a Gold Medal, for an arrangement of various flowers.

Mr. Richard Bandmann, Hamburg, the large Silver Medal for six ice-blocks with bunches of flowers for decorative purposes.

Mr. J. F. Bauer, Bremen, took the first prize, a large Golden States' Award for a group of large and well grown Fuchsia fulgens.

Mr. I. H. N. Becker for an assortment of various vegetables had the large Gold Medal.

The Botanical Garden at Marburg, took the Small Gold Medal for ten pots of insectivorous plants.

Mr. C. Buck, Wandsbeck, for 100 different zonal Pelargoniums took the first prize, a Small Gold Medal; for ten zonal Pelargoniums in their original form the first prize, a Large Silver Medal; for a novelty in zonal Pelargoniums, not in the programme, the Small Silver Medal, and for Fuchsias, out of the programme, the Bronze Medal and 15 marks.

Mr. Toennis Buck took the prize of Honour, granted by Mr. Georg Dralle of Hamburg for the best arrangement of Reseda.

Messrs. Daiker & Otto, Langenweddingen, took the small Gold Medal and 50 marks, for an arrangement of zonal Pelargoniums.

Messrs. Ernst & von Spreckelsen, Hamburg, took the first prize, the large Silver Medal for 100 sorts of cut Gladioli flowers, and for fifty sorts of pot Carnations, the small Gold Medal. These gentlemen are well known seed dealers and many an exhibitor took prizes for plants grown from their seeds.

Mr. W. Hagen, Langenfelde, took the small Gold Medal for 100 Gloxinia hybrida grandiflora out of the programme; for twenty-five Justicia cristata 25 marks, and for fifty-six Fuchsia "Trailing Queen," out of programme, 10 marks.

Mr. C. A. Homann, Hamburg, took the prize of Honour, granted by Mr. Adolf Vorwerk, of Hamburg, for twenty-five blooming Begonias, Dr. Chassagny.

Mr. I. F. Kuehn, Hamburg, received the first prize, a large Gold States' Medal, for 200 blooming Begonias, for which he also took the prize of Honour given by the Barnbeck citizens, besides 100 marks. For thirty-six Hydrangea paniculata, out of the programme, he took 50 marks.

Mr. Ch. Lorenz, Erfurt, received the first prize, a large Gold States' Award for ten sorts of Gladiolus nancyanus; the second prize for 250 pot Carnations; and for various Gloxinia flowers, the small Silver Medal.

Mr. Wilh. Maehl, whom we mentioned above, took the large Gold Medal and 100 marks for the best bound arrangement of flowers. Mr. Joh. Meyer, Hamburg, for an assortment of Celery, the small Silver Medal, and for a pot of large Potatos the prize of Honour, worth 50 marks. Mr. Joh. Mortensen, Hamburg Street, Pauli, for a flower decoration in ice, took the prize of Honour, given by Mr. Theod. Levy, of Hamburg, worth 200 marks. For a table decoration, out of the programme, he took the large Gold Medal. These prizes are all the more remarkable as Mr. Mortensen is only a young beginner in the line, though he took no less than twelve prizes at this one exhibition.

Dr. O. Nanne received the large Gold Medal for a group of Orchids out of the programme. For a group of Crotons, not in the programme, he received the large Silver Medal and 50 marks.

Mr. P. H. Petersen, Hamburg, for 100 Pelargoniums, silver-coloured, took the second prize, a large Silver Medal; for twenty-five Aralia springuifolia the large Silver Medal and 25 marks.

Mr. Gebruder Petersen took the small Gold Medal for the best bridal decoration (his main bouquet exhibited was out of the programme).

Mr. C. F. W. Reinecke, Hamburg, received the prize of Honour, worth 200 marks, for 200 Carnations. Mr. E. M. Riecken, Wandsbeck, took the first prize for 200 flowering Carnations. Mr. Gebruder Seyderheim, Hamburg, took the large Silver Medal for two Carnations out of the programme; in honour of the chief of the committee he called this novelty Carnation Dr. Rudolf Hertz. For various flower bindings he received the large Gold Medal and 100 marks.

Mr. J. F. M. Streiff, Hamburg, took the prize of Honour, worth 100 marks, for the best exhibit of vegetables. Mr. G. H. Wehber, Eimsbuettel, took the small Gold Medal for twenty-two tall myrtles. Mr. H. Wrede, Luneberg, took the large Silver Medal for an assortment of cut flowers of Phlox decussata. For an assortment of Pansies he had the small Gold Medal.

There were also numerous private exhibitors who received diplomas for their exhibits of indoor plants and fruit trees, amounting to 1 to 4 marks, but it would lead too far to mention all these names. Worth while mentioning is, though belonging to another department, the hurdle work for fences of every kind exhibited by the well-known Hamburg firm of Fritz Deckert. These fences, made of sheet-metal, are very handy for exportation and quite new in the market. Undoubtedly they will soon be carried all over the world.—*F. D.*

LIVERPOOL.—*July 31st and August 2nd.*

THE seventeenth grand summer exhibition of the Liverpool Horticultural Association was held in a large marquee on the Review Ground, Sefton Park, under most favourable auspices as to weather. There was a large attendance of visitors.

Stove and greenhouse plants, both foliage and flowering, were a most noticeable feature of the exhibition. Particularly fine were those shown by Mr. Cromwell, gardener to T. Sutton Timmis, Esq.; and by Mr. Bracegirdle, gardener to W. H. Watts, Esq. The former took the premier position, but some were of opinion that Mr. Bracegirdle deserved the leading position. Mrs. Banner was third here, but came to the front for three stove and greenhouse plants. W. T. Davey, Esq., had the best six plants belonging to the same category, the best four fine foliage plants, and the three best Palms. T. Sutton Timmis, Esq., exhibited the best stove plant, the best Fern, the best foliage plant, and the best table plants. S. J. Waring, Sen., Esq., J. A. Bartlett, Esq., Mrs. Cope,

and Arthur Earle, Esq., also took positions of distinction.

Roses were a strong feature of the exhibition, the competition being very keen. The leading prize for forty-eight varieties was taken by Messrs. Alexander Dickson & Sons, Newtownards, who was followed by Messrs. Croll, Dundee, and Mr. H. Dickson, Belfast. Messrs. D. & W. Croll came to the front for eighteen varieties. Amongst amateurs Mrs. Cope had the best twenty-four; and T. R. Bulley, Esq. the best twelve. Thos. Coulton, Esq., had the best collection of eighteen hardy herbaceous, and the best eighteen hardy and half hardy border flowers. The herbaceous exhibits made a fine display.

Fruit was good all round. Mr. Ashton, gardener to the Right Hon. the Earl of Lathom, gained the first prize for the collection of six kinds. John Parrington, Esq., had the best four kinds. Grapes were quite up to the average, but here, as at other shows held recently, the Muscats lacked colour. Messrs. W. L. & R. F. Gladstone had the best four bunches. Mrs. Bright was first for Black Hamburgh; and Sir Geo. A. Meyrick the best Muscat Grapes. Nectarines, Peaches, Melons, Cherries, and hardy fruits generally were well shown.

Vegetables were shown in excellent condition, competition being very strong. Joseph Rainford, Esq., had the best collection of twelve kinds. John Pownall, Esq., was first for eight kinds; and the Earl of Lathom took the lead for six kinds, as well as for four dishes of Peas.

Certificates of Merit were granted to Messrs R. P. Ker & Sons for collection of plants and Campanula; Messrs. J. Cowan & Co., Ltd, for group of Roses and group of Orchids; Mr. Arthur Earl for new Tomato, "Royal Jubilee"; Mr. C. A. Young for cut Carnations and Lily of the Valley; Messrs. Clibran & Sons, Messrs. Dicksons, Chester, for collection of herbaceous cut flowers; Mr. Septimus Page for collection of cut blooms, Carnations, and collection of cut blooms, Pansies and Violets; Messrs. Thos. Davies & Son for miscellaneous collection of plants and sundries.

The extreme heat caused the cut flowers, especially the Roses, to collapse, and unless they were renewed on the second day (after Sunday) this part of the exhibition could not have been very interesting. A stall for the sale of flowers, managed by members of the Woolton Gardeners' Mutual Improvement Society, was in active operation during the show. The proceeds will be devoted to the Victorian Era Fund of the Gardeners' Royal Benevolent Institution.

SOUTHAMPTON SHOW.—*July 31st and August 2nd.* The thirty-fifth show of the Royal Horticultural Society of Southampton was held on Saturday, July 31st, and Monday, August 2nd, in a spacious enclosure on the beautiful Southampton Common, close to the Avenue. There was a very creditable lot of exhibits staged in competition for the various prizes, notwithstanding that owing to financial exigencies the amount of the prize money had to be considerably curtailed. It would be a very great pity if this old society were to be allowed to drift out of existence for lack of financial support, and it is to be hoped that a large number of the subscribers will do as some are doing, namely, double their subscriptions. The judges were Mr. Puttock, of Kingston; Mr. Hudson, Gunnersbury; Mr. E. Molyneux, Swanmore; Mr. Amys, Netley; Mr. Busby, Bitterne, and Mr. J. Jones, Southampton.

The most valuable prize was offered for eight stove or greenhouse plants, and Mr. W. Peel, Shirley, gained first for eight very fine specimens. Mr. E. Wills, Winchester Road Nursery, Shirley, was a good second. There was also a smaller class for specimen plants, six to be shown, of which not less three were to be in bloom. Mr. H. Osman secured first in this class, Mr. J. Amys being second, and Mr. E. Wills, third.

There were three classes for groups, the larger one being competed for by three exhibitors. Mr. W. Peel was awarded first in a very close competition, Mr. E. Wills gaining second, and Mr. E. Carr, Bishopstoke, third. Mr. H. Andrews, Rownham, Mr. W. Mitchell, Chilworth, and Messrs. Longster Bros., Southampton, were respectively first, second, and third in the smaller open class; and Mr. F. M. Vokes and Mr. H. V. Vokes, Sholing, were first and second for amateurs' group.

The class for six stove or greenhouse Ferns, distinct, included some very fine specimens, Mr. G. Hall, Romsey, gaining first with very fine and well-grown specimens of Davallia mooreana, Phlebodium aureum, Adiantum cuneatum, A. cardiochlaena, Microlepia hirta cristata and Dicksonia antartica. Mr. H. Osman was second.

Mr. E. Carr had a nice collection of Orchids, for which he was awarded first prize. Mr. J. Amys gained first prize for single stove plant; and Mr. E. Wills was first for a single specimen foliage plant. Mr. Mitchell was first for four Fuchsias. Mr. Hosey was first for six Coleus and also for six Pelargoniums. Mr. H. Osman took the lead for six double Pelargoniums.

Mr. B. Ladhams was awarded first for table decoration, Miss K. Golding gaining second.

Roses were not well shown, the season in the south being so far advanced. Mr. J. Budd, Romsey, gained first in the open class for twelve distinct Roses, Mr. A. Brown being second. Mr. D. Seaton, Bitterne, was first in the corresponding class for gardeners only. Mr. F. Wilkins was first for twelve bunches of cut flowers.

A very fine lot of vegetables was shown, Mr. H. V. Vokes' collection of six varieties being very fine, and deservedly gaining first prize. The fruit also was well represented and in good evidence. Mr. G. A. Inglefield's collection of six dishes were admirable, and gained first prize, Mr. A. Herbert and Mr. W. Mitchell being second and third respectively. Mr. W. Mitchell's black Grapes were exceptionally fine, be taking first honours in both the class for Hamburghs and also for any other variety, the latter being three exquisitely finished bunches of Madresfield Court. Mr. Inglefield, Mr. Newman, Mr. Cheater, and Mr. Hall were among the prize takers in the same classes. The honours for white Grapes were divided between Mr. Inglefield, Mr. Hall, Mr. Cheater, and Mr. Newman, the first two being first prize takers. Mr. Mitchell gained first for Peaches and also for Melon. Mr. Budd was first for Nectarines.

Special prizes offered by Messrs. Toogood & Son, Sutton & Sons, and Webb & Son for vegetables, were keenly competed for. Some of the exhibits showed marked excellence.

Nurserymen's exhibits not for competition included a very fine lot of Conifers, shrubs, and ornamental trees shown by Mr. W. H. Rogers, Red Lodge Nursery, Southampton, which were very highly commended by the judges. Mr. F. J. Foster, Havant, had a fine and varied collection of Sweet Peas, including most of the new varieties. Messrs. Keynes, Williams, & Co., Salisbury, exhibited collections of Roses and Dahlias not for competition, and also were awarded 1st prizes for twelve Cactus and twelve pompon Dahlias. Mr. B. Ladhams and Mr. F. Bailey had very fine collections of hardy herbaceous plants, which were exceptionally fine in bloom and very well shown. The Belmont Nurseries and Mr. Ewills, Winchester Road Nurseries, exhibited collections of plants, both flowering and foliage, not for competition.

The weather on Saturday was beautifully fine, and sweet music was discoursed by the full band of the Duke of Edinburgh's Regiment (the 2nd Wiltshire) under the able conductorship of Mr. H. S. Cook.

BEDDINGTON, CARSHALTON AND WALLINGTON.—*August 2nd.*

The annual exhibition of this society was held under glorious auspices as to weather. Prizes were offered in 100 classes for gardeners, amateurs, and cottagers, in addition to prizes for poultry. Games, races, &c., were held in connection with the flower show, and there was a conference on gardening at five p.m. The show is intended chiefly to encourage cottage gardening, and in this respect it is a great success every year.

The first prize in the champion class for the best kept garden or allotment ground was taken by Mr. Harvey Hopkins, who remains champion. Mr. Oliver McRae was second. In the cottagers' section for the best kept and cropped allotment ground seven prizes were awarded, Mr. Wm Henn being first, and Mr. G. Bowditch second. For the best cottage garden, Mr. W. Patchell and Mr. F. W. Eastland were first and second respectively. The latter was first for the best flower garden. For the best managed cottage and flower garden, Mr. G. Kearville was first. For the best cropped allotment, Mr. Fred Fuller was first. D'Arcy Chapman, Esq., had the best school garden. Mr. W. Stedman was first for an inside window; and Mr. E. S. Bradley was first for an outside window. Competition in most cases was good.

Cottagers.—The premier award for a collection of six kinds of vegetables was taken by Mr. O. McRae, 1, Golden Terrace, Beddington Corner. His Potatos, Peas, Cabbages, Marrows, Carrots, and Turnips were all good. Mr. Harvey Hopkins, The Wrythe, Carshalton, was a very close second, his Potatos being somewhat inferior. Mr. G. Bowditch, Wallington Corner, was third; Mr. Fred Fuller, London Road, Wallington, fourth; and Mr. E. F. Bradley, Bandon Hill, fifth.

Mr. Harvey Hopkins came to the front for a collection of six kinds of salads. Mr. W. F. Gower had the best six herbs. Mr. Wm. Lumley, 2, Maybush Cottages, Bandon Hill, had the best Cucumbers. Mr. H. Chisley, Highland Cottages, Wallington, had the best Cabbages in a good competition. Mr. Wm. Henn, Beddington Corner, took the lead for Peas. Mr. G. Bowditch showed the best Scarlet Runners; and Mr. Harvey Hopkins had the finest French Beans, as well as Parsnips. Mr. G. Bowditch was first for Broad Beans. Mr. W. Ames, Carshalton Road, Mitcham Junction, was placed first for long Beet Root; and Mr. J. Parfitt, The Wrythe, Carshalton, for round Beet. Mr. O. McRae had the best Carrots. Mr. James Buckenham, The Wrythe, Carshalton, had the best Turnips and Vegetable Marrows; but Mr. E. Scragg, Bandon Hill, was a good second for Turnips. Onions were good, Mr. J. Parfitt taking the lead for spring sown, and likewise for autumn sown, having clean bulbs in both cases. Mr. W. F. Gower was first for Shallots. Mr. E. Bowditch had certainly the best white Potatos; and Mr. Harvey Hopkins was equally strong for coloured Potatos.

In the fruit classes, Mr. Harvey Hopkins had a grand dish of Gooseberries, taking first. Mr. G. Bowditch had the best Black Currants; and Mr. G. Woodall, who was second, came to the front for Red Currants. Mr. W. Patchell, Bandon Hill, was first for Raspberries.

There were also competitions for boiled Potatos, home made bread, jams, jellies, pickles, bottled fruits, window plants, garden and wild flowers. There was also a poultry show, open to the county of Surrey, and prizes for honey.

In the class open to all subscribers in the district the competition for eight dishes of Potatos, half of which were boiled to show quality, was good. E. G. Coles, Esq. (gardener, Mr. J. H. Stevens) The Lodge, Carshalton was a good first, Mr. G. Bowditch being second. An interesting competition was that for a collection of nine kinds of vegetables, the prizes for which were awarded according to points, which were 59, 56, 51½, 48½, 46½, and 39 respectively. Here again Mr. J. H. Stevens came to the front, taking the first prize with 59 points. His Peas, Onions, Potatos, Scarlet Runners, Cauliflowers, &c, were splendid. Mr. H. Shoebridge, gardener, to M. Beddington, Esq., J.P. was a very close second. Mr. Harvey Hopkins was third; and Mr. J. Cripps, gardener to C. R. Nichols, Esq. Carshalton, fourth. Mr. Thos. Osman, gardener to L. J. Baker, Esq. Chertsey, had the best dinner table decoration open to the county, and Miss Lily Kirk, Honeywood, Carshalton, was first for the district.

Gardeners and Amateurs.—In the class open to gardeners and amateurs in Surrey, the best arranged and the most interesting group of plants was that set up by Mr. G. W. Cummins, gardener to A. H. Smee, Esq., The Grange, Wallington. It was very varied and rich in flowers. Mr. J. H. Stevens was second with a bold arrangement of Lilies, Crotons &c. Mr. C. Lane, gardener, to E. H. Coles, Esq. Burntwood, Caterham was third.

Mr. A Etheridge, gardener to A. Z. C. Cressy, Esq. Hayesden, Wallington, had the best group of plants in the class for amateurs in Surrey. Mr. H. E. Gates, gardener, to R. W. Miller, Esq. Belle View, Sutton, was second. In this same division, Mr. H. E. Gates again led the way for a collection of vegetables, which were good; Mr. J. Cripps was second.

Mr. Thos. Osman had the best black Grapes in the gardeners' classes. Mr. O. Jeal, gardener to N. Waterall, Esq., Waddon Lodge, Croydon, was first for Cucumbers. Mr. J. H. Stevens had the best six dishes of fruit, and the best six bunches of garden annuals. Mr. H. Shoebridge was deservedly first for Gloxinias. Various other plants were shown.

Miscellaneous Exhibits were fairly numerous. Mr. John R. Box, West Croydon, exhibited a collection of hardy cut flowers in variety, and set up a

beautiful group of stove and greenhouse plants. Messrs. John Peed & Sons, Roupell Park Nurseries, Norwood Road, London, staged a large collection of hardy cut flowers. The One and All Co., Agar St., London, bad a fine exhibit of vegetables. Mr. Will Taylor, Osborn Nursery, Hampton, sbowed three stands of Roses. Mr. G. W. Cummins staged a group of Cacti.

LEICESTER.—*August 3rd and 4th.*

The twelfth annual Leicester fête and gala opened on Tuesday morning under particularly favourable conditions. Queen's weather reigned supreme, and with a largely increased entry in all departments, the staging, grouping, and what not proceeded with a briskness and enthusiasm which a fine day does so much to foster and develop. A magnificent range of marquees had been requisitioned for housing the show, and arranged as they were in tbe choicest part of the Abbey Gardens a more beautiful setting to the show could hardly have been desired. The system upon which the show is managed is an excellent one. At the head of affairs is Mr. John Burn, the well-known and popular curator of the Abbey Park. Himself a man of direction and superintendence he has the faculty—often rare—of attracting around him able and facile assistants, who delight equally with their chief in the success and popularity of tbe great Abbey Park Fête. It follows naturally, that there is a big gate, and for tbose who possibly might find an entire day inside the tents somewbat relaxing, there are the water sports and a variety of other outdoor events and performances wbich go to form the spice of life.

First and foremost in the exhibits came the really magnificient collection of Caladiums from Messrs. J. Laing & Sons, of Forest Hill. Wealth and breadth of colour are here exemplified in Nature's most beautiful forms. Range of colour is anotber grand feature of this exhibit, and when we say tbat neither the Temple Sbow exhibit nor that at Manchester from the same firm approached this in beauty, we shall perhaps faintly convey to our readers what this really beautiful exhibit was like (Gold Medal).

Tbe Ichthemic Guano Company have possibly some notion that tbeir many competitors and occasional imitators are getting ahead of them, but one may be equally sure tbat a stiff race is in store for any who enter the lists. We are all of us familiar with the characteristic displays this enterprising firm periodically makes at theRoyalAquarium. Well, a good deal of the Royal Aquarium has been brought to Leicester, for here we saw staged the Octagon group rising in tiers from the ground line to the height of 30 ft. or so, the exhibit being necessarily staged in a huge circular tent by itself; and the cholce flowering and foliage plants used in its decoration formed a prettily conceived group upon which, from the cool garden seats placed on the outskirts of the tent one could enjoy a really unique feature of the show. Well done Icbtbemic! (Gold Medal).

Tbat Mr. Henry Eckford should make and could make a striking and very beautiful display goes without saying. Not only were tbe judges unanimously in favour of a high award, but the general public found it difficult to pass his exhibit of Sweet Peas without a lengthy and interesting perusal. (Gold Medal).

Messrs. Dobbie & Co., Rothesay, bad an extensive exhibit of Dahlias, Sweet Peas, Pelargoniums, Violas, and herbaceous plants in variety, occupying a space of 200 sq. ft. Many varieties new to each class were shown, including the fine new white Cactus Dahlia Miss Webster. Of Violas such fine varieties as Wbite Hart, Romeo, and Lord Malcolm were staged. This exhibit was very tastefully arranged, with a fine back-ground of herbaceous flowers. (Gold Medal). Each of the above four awards consisted of the Corporation's large Gold Medal.

A Gold Medal also goes to Messrs. W. Clibran & Son, Altrincham, wbo justly deserve this well-merited honour for their characteristic exhibit. A silver medal goes to Mr. George Draycott, Granby Street; to Mr. Goodacre, Elvaston Castle Gardens; Messrs. Edwards & Son, Nottingbam; Messrs. Brown & Sons, Peterboro'; Messrs. G. Fox & Sons, and Mr H. Rogers. The latter exhibitor stages a good group from the Gipsy Lane Nurseries, Leicester, prominent being the Caladiums, well-grown, Crotons and various other foliage plants. Mr. Rogers also shows well in the vegetable and fruit classes. He was also responsible for one of the best groups ever shown in Leicester; the Crotons were perhaps small in comparison with Mr. Mee's, but tbey were exceptionally well-coloured and all grown in the proper way. He was first also for Begonias, mostly seedlings; and Coleus, well and nicely grown; Fucbsias, also good work. For Zonals he was also first—a long way ahead.

Mr. Charles J. Mee, of Floral Depot, Nottingham, takes first in the group class, in which Orchids are conspicuous, and a splendld arrangement throughout. Tbe centre part was a magnificent Kentia fosteriana, well-grown, and some 12 ft. from tip to tip and 14 ft. high. Odontoglossum and Cypripediums looked healthy and superb, and various Crotons, Warrenii, Nestor and Princess of Wales worthy of special note. Dracaenas also good. Messrs. Harrison & Sons, of Leicester, exhibit a comprehensive collection of vegetables, Peas, Onions, Beets, Tomatos, hardy herbaceous plants, &c.

Mr. Jas. Wright, Granby Street, Leicester, Seedsman, also sbowed well, as did also many others in, and connected with, tbe trade at Leicester.

Mr. W. J. Empson, Amptbill House, Beds., takes first—a well merited award for table plants, Golden Ring standing out in exceptional beauty, and first for twelve buncbes of cut stove and greenhouse flowers, besides otber awards.

The Luncheon to tbe judges took place at the Great Northern Hotel, conveniently adjacent to the Station, where at 2 o'clock, a goodly company sat down under tbe presidency of Mr. Councillor Flint, Chairman of committees, supported on bis right by the Mayor of Leicester, Mr. Councillor J. H. Marshall, and amongst others, Mr. Jas. H. Laing, Mr. Alfred Outram, Mr. Richard Dean, Mr. Burton, Mr. Jno. Harrison, Rev. J. H. Pemberton, Mr. John Burn, Mr. A. E. Stubbs, Mr. Jas. Wright, &c. Tbe Chairman suitably submitted the customary loyal toasts, and immediately followed with tbe toast of the judges, saying that whilst regretting tbe loss througb death of some of tbe faces they bad been accustomed to welcome he was glad to feel they still had an excellent staff of judges in whom they had every confidence and who he thought would be gratified to see that the Leicester Sbow bad adopted many of tbe suggestions wbich the judges in tbe previous year had advocated.

Mr. Laing, in responding, in a suitable and animated speecb said: The very best had been done. It was a good and really excellent show, and they were pleased to congratulate the society on so good a meeting.

Rev. J. H. Pemberton also spoke, claiming that he was mainly qualified as a Rose cultivator, and he, adverting to the Jubilee festivities, said it was fitting and appropriate that day tbe chief award was voted to an excellent bloom of Her Majesty. The Rose season had been a trying one, and although a good year for Roses he thougbt it was hardly equal to last year's blooms. He advocated strongly a fusion witb tbe National Rose Society, and recommended the Leicester Sbow to seek and secure tbe occasion of one of their provincial fixtures.

Mr. Richard Dean proposed success "To the Abbey Park Flower Show," in his characteristic and able way, alluding feelingly to the loss by death of a personal friend in the person of the Rev. R. Pochin, a one time well-known face at their show. Mr, Dean proceeded to say that as a mark of progress in keeping with the Victorian Era was there ever sucb an object lesson as the innumerable types of go-ahead cbaracter as seen in the plants and flowers shown there that day? Surely a sufficient indication of the progress made by horticulture in tbe sixty years record reign.

The Mayor responded in an earnest and thougbtful speech promising that Mr. Dean's practical suggestions had not fallen on barren ground. Mr. Burn, their curator, ought be affirmed, to be well supported. That public spirited officer had indeed done his work well, and he deserved well of tbe town.

Mr. Alderman Wood, followed commending the toast of the parks committee, as the custodians of the public health, to whom they were deeply indebted for the breadth and depth of their work. He coupled with the toast the name of their worthy chairman, Mr. Councillor Flint, who suitably responded.

The Windflower blows and shows which way the March wind blows; hence I suppose its name.—*Snaggs.*

GARDENING MISCELLANY.

CAMPANULA BALCHINIANA.

Last year this Bellflower first made its appearance in public and was notable for the amount of variegation possessed by the leaves, the greater portion of most of tbem being wbite. The flowers are pale blue, but the value of the plant depends entirely upon tbe foliage. It was raised from Campanula isophylla alba crossed with C. fragilis; but it seems strange that this parentage should have given rise to such an amount of variegation. Since it was first exhibited in public it has passed into the possession of Messrs. J. Veitch & Sons, Ltd, Chelsea, who are rapidly propagating it. The leaves have a broad white margin, are sometimes almost wholly white, and the young leaves are tinted with rose. Being hardy it sbould make a good bedding subject, either for small beds or edgings. It is also very suitable for baskets in the greenhouse or conservatory, and appropriate as an edging to the stages.

A UNION FOR GARDENERS.

This is, we think, a dream of the remote future, unless some one with ample means and leisure should step into the breacb and champion the cause. We are too isolated from each other, for a movement of the kind to be carried out at anytbing near the very moderate cost that gardeners as a class could afford to bear. The initial expenses must for the reason stated be much in excess of those connected with unions of factory workmen; and a very large amount of personal visitation must be given before a really strong movement could be floated, and should it ever be accomplished it will not be done without a good many martyrs being added to the role of those who have sacrificed themselves for the benefit of their fellows.—*W. B. G.*

SWEET PEA QUEEN VICTORIA.

This is without doubt the finest yellow Sweet Pea in cultivation. It grows vigorously even compared witb tbose that are considered strong growers. Yellow is a colour that is difficult to evolve from Lathyrus odoratus, and it cannot yet be said that we possess a real and decided yellow. The variety under notice is no exception, but it is the nearest approach, though whether it can be intensified remains to be seen. The Rev. W. T. Hutcbins went into raptures over it two years ago before it was put into commerce. Mr. Henry Eckford, of Wem, Shropshire, who raised it describes it as "soft yellow subtly overlaid with faint purple, imparting a lustre most desirable but difficult to describe." Mr. Hutcbins, if we remember, found an apricot tint in the standard. We should say that the latter is cream beautifully tinted with salmon, and having apricot veins. The wings are of a deeper creamy-yellow, and fade slightly with age. The standard finally becomes pale cream. An Award of Merit was accorded it by the Royal Horticultural Society at Chiswick on tbe 14tb inst., but this seems to have been overlooked.

RESEDA ALBA.

Who ever thinks of Mignonette as an ornamental plant apart from scent, that is, apart from the scented Mignonette (R. odorata)? Yet an ornamental species is an actual reality. The dark green, finely cut foliage and the long spikes of white flowers of the White Mignonette (R. alba) render it bigbly ornamental when seen as an isolated and shapely, branching, border plant, or even better when grown in beds or masses. We have been familiar with tbe species for many years in small clumps, but had no idea of the effect it was capable of producing when used as a bedding plant. A large bed or plantation of many square feet of it may be seen in the nursery of Messrs. H. Cannell & Sons, Swanley, Kent, wbere it has been flowering for weeks past and shows no sign of giving over. It is not exactly scentless, though in this respect it cannot compare witb the scented Mignonette. From an ornamental point of view, however, the latter is a weed by comparison; its leaves are uninteresting and its stems are weighted down by the seeds, while the flowers are dingy and relatively inconspicuous. It should not then prejudice tbe public against R. alba. "What is a Mignonette without scent?" is the usual query, to which we reply "What is a Rose or Carnation without scent?" Such things exist probably by the hundred.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Students and Swanley Horticultural College.—*H. S.*: New students are admitted at any time, but they must be over sixteen years of age at the time of entering. Men students are required to board and lodge in the college, except those who live in their own homes or are over twenty-one years of age. Even the latter are expected to live in some of the recognised boarding houses fixed upon by the Principal. There are three terms each year with about ten weeks holiday. The College course extends over six terms, that is, two years, after which those students who have satisfactorily passed the examinations are granted a diploma. Men who board and lodge at the College are required to pay a fee of £80 per year. Those who reside elsewhere have to pay £30 a year. Fees include all charges except medical attendance, laundress, books and separate room. Fees are payable in advance; and you must give a term's notice before leaving. Other particulars may be obtained by applying to The Principal, The Horticultural College, Swanley, Kent.

Vine leaves going bad.—*W. M.*: We have closely examined the leaves and the tendril you sent for inspection, and agree with you that there is no trace of mildew. Neither can we see evidence of any other fungoid disease. In spite of your failing to find any bad glass in the roof we are fully persuaded it is merely a case of scalding, and not a very severe one. You say that your Vines otherwise appear healthy and are growing strongly; we should say they have been grown too rapidly, or rather that the atmosphere of the house has been kept too moist for some considerable time past. Examine the underside of the leaves and you will see that they are closely covered with small green warts, like little blisters. These warts are due to a saturated condition of the atmosphere for too long periods at a stretch. The atmosphere of the house should be allowed to get dry for a short time about the middle of the day every twenty-four hours. This can be done by proper ventilation and should be done, even if it is necessary to give more fire heat to maintain the temperature you desire. It might have been, and we believe it was so, in your part of the country that there was a spell of cold, wet, cloudy weather, followed by strong sunshine, which the leaves were unable to bear, owing to the softness of their tissue. You should now keep the house a little drier by ventilation, leaving a little bit of air on all night. Under this treatment your vines will soon get healthy and able to bear the sunshine.

Seedling Begonia.—*B. L.*: The flower of the tuberous Begonia you sent is good in every respect except that it has too many centres. There are admirers, however, of this class of flowers and many varieties are named which are not a whit better and many not so good. In our opinion it is prevented from getting amongst first-class varieties merely because it has a number of centres instead of one with the petals all arranged round it. The flower is massive, being indeed of the first size and of the brightest pink, situated between salmon and rose. Mr. T. S. Ware, out of whose collection the batch of seedlings came, has some better and others worse. You say the habit and constitution of the plant is good, while it blooms freely. The weight of the flower is too great for outdoor culture, but it is for that and the reasons you mention well adapted for pot culture under glass, and should be perpetuated for that purpose until it is superseded by a number of more refined flowers. It is far superior to many plants we have seen in private collections. You can propagate it by cuttings of the young side shoots in sand in a cool greenhouse or frame during summer.

Horticultural Chemistry.—*Chris. Leeson*: There are two or three books of different sizes and prices on the subject by Dr. A. B. Griffiths. The largest is a "Treatise on Manures," price 7s. 6d. Published by Whittaker & Co., 2, White Hart Street, Newgate Street. The smaller is "Special Manures for Garden Crops," price 2s. It is published by W. H. & L. Collingridge, Aldersgate Street, London, E.C. "Roscoe's Elementary Chemistry" would be very useful if you want to study chemistry rather exhaustively, but it does not treat the subject from a horticultural point of view. The books by Dr. Griffiths are comparatively new.

Names of Plants.—*J. Johnson*: 1, Lathyrus sativus, not L. azureus; 2, Spiraea palmata.—*A. Scott*: 1, Parnassia palustris; 2, Stachys Betonica; 3, Papaver Rhoeas, the wild form of the Shirley Poppy; 4, Vicia sylvatica.—*A. M.*: 1, Acer dasycarpum; 2, Acer platanoides Schwedleri; 3, Pyrus Aria; 4, Pyrus pinnatifida.—*James Metcalf*: 1, Veronica longifolia; 2, Veronica virginica; 3, Geranium pratense; 4. Nephrodium Oreopteris; 5, Asplenium Ceterach; 6, Nephrodium recurvum.—*C. Walker*: 1, Cattleya Warscewiczii (gigas).—*S. Thom*: 1, Lychnis Githago; 2, Centaurea Cyanus; 3, Lathyrus macrorrhizus; 4, Spartium junceum; 5, Veronica Andersoni variegata.—*A. Herd*: 1, Campanula latifolia macrantha; 2, Campanula isophylla; 3, Galega officinalis; 4, Lithospermum purpureo-caeruleum; 5, Clematis Jackmanni; 6, Hedychium gardnerianum; 7, Laelia elegans.—*T. H.*: 1, Odontoglossum crispum, a fairly good variety; 2, Cattleya gaskelliana; 3, Masdevallia harryana; 4, Oncidium flexuosum.—*W. L.*: 1, Selaginella Martensii robusta; 2, Trichomanes radicans; Platyloma rotundifolia; 4, Scolopendrium vulgare crispum.

Communications Received.—Sutton & Sons.—Geo. Potts.—M. Temple.—A. Outram.—R. G. W.—G. C.—L. W.—H. W.—T. Reid.—G. Andrews.—T. B.—D. C.—T. Hardy.—R. M.—G. B.—H. C.—W. Catto.

TRADE CATALOGUES RECEIVED.

WM CUTBUSH & SONS, Highgate, London and Barnet, Herts.—Hyacinths, Tulips and other bulbous roots.

DAVID W. THOMSON, 24, Frederick Street, Edinburgh.—Bulb List.

T. METHVEN & SONS, 15, Princes Street, and Leith Walk, Edinburgh.—Bulb List.

SUTTON & SONS, Reading.—Sutton's Bulbs for 1897.

FRANCIS G. E. BONNETT, Heathfield, Sussex.—Hyacinths, Roman Hyacinths, Tulips, Narcissi, etc.

COVENT GARDEN MARKET.

August 4th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.		s. d.	s. d.
Apples.....per bushel	4 6	7 6	Grapes, per lb	1 6	3 0
Black Currants ½ sieve	8 0	8 6	Pine-apples		
Red " ½ sieve	3 0	4 6	—St. Michael's each	2 6	8 0
Cherries half sieve	12 0	20 0	Plums per ½ sieve.....		
Nova Scotia Apples per barrel			Strawberries, per lb.		
Cob Nuts per 100lbs.			Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.		s. d.	s. d.
Artichokes Globe doz.	2 0	3 0	Herbs .....per bunch	0 2	
Asparagus, per bundle	4 0	5 0	Horse Radish, bundle	2 0	4 0
Beans, French, per half sieve	4 0	5 0	Lettuces ...per dozen	1 3	
Beet..... per dozen		2 0	Mushrooms, p. basket	1 0	
Brussel Sprouts, per half sieve			Onions.....per bunch	0 4	0 6
Cabbages ... per doz.	1 0	1 3	Parsley ... per bunch	0 3	
Carrots ... per bunch	0 3		Radishes... per dozen	1 0	1 3
Cauliflowers.....doz.	2 0	3 0	Seakale...per basket		
Celery.....per bundle	1 0	1 6	Small salad, punnet	0 4	
Cucumbers per doz.	2 0	3 0	Spinach per bushel	3 0	4 0
Endive, French, doz.	1 0	2 0	Tomatos..... per lb.	0 6	1 0
			Turnips .....per bun.	0 3	

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.		s. d.	s. d.
Arum Lilies, 12 blms.	2 0	4 0	Pansies 12 bun.	1 6	2 0
Asparagus Fern, bun.	2 0	3 0	Primula, double, doz sprays	0 6	0 6
Bouvardias, per bun.	0 4	0 6	Pelargoniums, 12 bun.	4 0	6 0
Carnations doz. blms.	0 6	3 0	Poppy, various, doz. bunches	1 0	3 0
Carnations, doz. bun.	3 0	6 0	Pyrethrum doz. bun.	1 6	3 0
Cornflower, doz. bun.	1 0	2 0	Roses (indoor), doz.	6	1 0
Eucharis ...per doz	2 0	4 0	" Tea, white, doz.	1 0	2 6
Gardenias ...per doz.	2 0	4 0	" Niels	1 6	4 0
Geranium, scarlet, doz. bunches	3 0	6 0	" Safrano	1 0	2 0
Lilium longiflorum per doz.	2 0	4 0	" (English), Red Roses, doz.	1 0	2 0
Lily of the Valley doz. sprays	1 0	2 0	Pink Roses, doz.	2 0	4 0
Marguerites, 12 bun.	2 0	4 0	Roses, doz. bun.	3 0	6 0
Maidenhair Fern, 12 bs.	4 0	8 0	Smilax, per bunch ...	2 0	4 0
Orchids, doz. blooms	1 6	12 0	Tuberoses, doz. blooms	0 3	0 4

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.		s. d.	s. d.
Arbor Vitae per doz.	12 0	36 0	Hydrangeas per doz.	8 0	12 0
Aspidistra, doz.....	18 0	36 0	Ivy-leaved Geranium, per doz.	3 0	6 0
" specimen	5 0	10 0	Lilium Harrissii, per pot	1 0	2 0
Dracaena, various, per doz.	12 0	30 0	Lycopodiums, doz.	3 0	4 0
Dracaena viridis, doz.	9 0	18 0	Lobelia .....per doz.	3 0	5 0
Euonymus, var. doz.	6 0	18 0	Marguerite Daisy doz	4 0	9 0
Evergreens, In var. doz	6 0	24 0	Marguerite Yellow, per doz.	5 0	9 0
Ferns, invar., per doz.	4 0	12 0	Myrtles, doz.	6 0	9 0
Ferns, small, per 100	4 0	6 0	Palms in variety, each	1 0	15 0
Ficus elastica, each	1 0	5 0	Palms, Specimen ...21	0	63 0
Foliage Plants, var., each	1 0	5 0	Pelargoniums ...doz.	6 0	10 0
Fuchsias, per doz. ...	4 0	6 0	Spiraea ...per doz. ...	8 0	10 0
Heliotrope...per doz.	3 0	5 0	Scarlets .....per doz.	2 6	5 0

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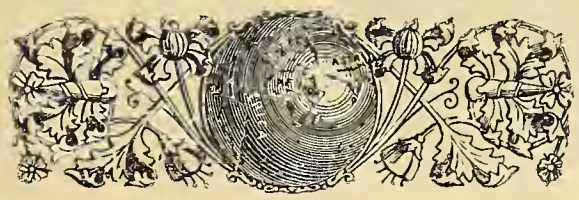


"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.

Edited by J. FRASER, F.L.S.

SATURDAY, AUGUST 14th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, August 16th.—Felling Show (2 days).
TUESDAY, August 17th.—Boscombe Show (2 days).
WEDNESDAY, August 18th.—Shrewsbury Fete (2 days) and Presentation to the Hon. Secretaries.
THURSDAY, August 19th.—Horsham Show.
Fruit and Flower Show at Belfast under the auspices of the R.H.S. of Ireland.
FRIDAY, August 20th.—Devon and Exeter Show.
Perthshire Show (2 days).
National Co-operative Society's Flower Show at the Crystal Palace.
Sale of imported and established Orchids by Messrs. Protheroe & Morris.

WATER LILIES AT GUNNERSBURY HOUSE.—Till within comparatively recent years we had to be contented with what few hardy Water Lilies we had. With the exception of Nymphaea alba rosea, all the hardy sorts were white. Notwithstanding its beauty the latter has never become very common; and although known to the great Swedish botanist, Linnaeus, it does not seem to have been introduced to this country till 1878. Since then, however, it has practically remained the monopoly of a few gardens. For centuries probably our native white Nymphaea alba has been admired and planted by those having ponds and lakes. In some of those lakes it has monopolised considerable areas of the water surface where left undisturbed. All this has been changed since M. Marliac commenced the hybridisation of Water Lilies. Even then, however, it took several years to convince the people in this country that these hybrid Nymphaeas were really hardy.

For some few years past Mr. James Hudson, gardener to Leopold de Rothschild, Esq., Gunnersbury House, Acton, has been getting together a collection of these choice water plants, including the best of the older and the most recent introductions. Naturally Nymphaea alba has longest been planted in the pond and there are now two large masses of it so crowded in the centre that the leaves stand clear out of the water, with any quantity of large flowers nestling amongst them. Round the margins of these clumps both leaves and flowers still remain floating. Another white species is the North American N. tuberosa now well established. Another plant, but of more recent introduction is the hybrid N. Laydeckeri lilacea, with deep lilac-rose flowers. It was only planted in April last. Seigneur Eti is a deep rose-red hybrid with blotched or mottled leaves, and bronzy in the young state. The rosy-pink flowers of N. Laydeckeri rosea are very bright and pleasing. N. Aurora is a soft yellow variety with golden stamens and much mottled foliage. N. Chromatella has green foliage, but flowers very much like those of Aurora. Both are beautiful and striking Lilies. The large and deep red flowers of N. rubra punctata are bold and handsome as they lie upon the water. The rosy flowers of N. odorata exquisita are not yet very large, but in association with the bronzy young foliage are very pretty.

One of the largest-flowered forms (9in. across) in the pond is N. marliacea albida, which received a First-class Certificate from the Royal Horticultural Society on the 13th ult. It is also one of the most floriferous in the pond, and is white, with a pink tint on the base of the outer petals and sepals. While the largest is sought for and admired, the smallest is equally cherished. We refer to the tiny N. pymaea helvola with primrose-yellow flowers, only 2in. across, and golden filaments with paler anthers. It flowers most profusely all the summer, being one of the earliest as well as latest to bloom, developing hundreds of its tiny (for a Water Lily) flowers. The blooms may be cut, and their petals carefully folded back, then placed in a basin of water with some of their own leaves, and kept in a dwelling room, where they will remain open for some days. It would make an admirable subject for tanks in the vicinity of dwelling houses, and for small villa gardens.

White, yellow and red varieties are now well represented, and it would be difficult to say which is the best, as Water Lilies of all the three colours are desirable and indispensable. As far as form is concerned the yellows are most highly evolved. Those already mentioned have broad, blunt petals. N. odorata itself has fragrant white flowers and golden stamens; but N.o. sulphurea has very large flowers, consisting of long, narrow, sharply-pointed, clear sulphur-yellow petals and golden stamens, and very much resembles a Cactus Dahlia at a short distance off. To the broad-petalled forms it certainly holds the same relation as the Cactus Dahlias do to the other types. N. sulphurea grandiflora has larger and scentless but otherwise similar flowers. The two forms are certainly amongst the most handsome of Water Lilies, the narrow, pointed petals giving the flowers an informal and charming appearance. N. odorata minor and N.o. rosacea have also been added to the collection, the latter having darker flowers than N.o. exquisita. There are likewise small plants of N. sanguinea, N. marliacea carnea, N.m. rosea, N. carolinea and N.c. perfecta in the collection.

We have already mentioned some of the red-flowered hybrids, but the best are yet in store. About two years ago N. robinsoniana was the best or only crimson Water Lily. The inner petals are the darkest. Good as it is, this form is superseded by N. ellisiana, which appeared to us of a rich glowing carmine in the sunshine, and was highly conspicuous even at a considerable distance off. This was certainly the finest of the red types with open flowers. The variety was only planted in April, being then a very small piece, and each successive flower that opens is getting larger than its prede-

cessor. It is very much finer now than when it received an Award of Merit from the Royal Horticultural Society in July last. Fine as these two varieties are, another one not in bloom, when we examined the collection, is said to be darker than N. ellisiana. This is N. gloriosa, hardly yet strong enough to flower; but which will doubtless give an account of itself presently. The cultivation of these Water Lilies is simplicity itself. The small pieces of rhizome obtained from the raisers or from nurserymen, are simply planted in a wicker basket filled with good loam and a little cow manure. The whole is then sunk in a relatively shallow part of the pond, and left to the keeping of Nature. The flowers love the sunshine, opening and closing daily for a week while the weather is fine. Should the latter be dull, cloudy or rainy, individual blooms last only three or four days. When the sun rises in the morning and gets bright the flowers rise out of the water and expand. If conveniently situated they seem to have the power of following the sun to some extent during the day, and certainly open and close with the advent and disappearance of the sun behind a bank of clouds, if the shade is of any duration. Then as the sun sinks or becomes obscured during the afternoon, the flowers close and sink into the water till the following morning. In the course of a year or two the collection will be magnificent with all the forms, hybrid and otherwise, well established and flowering. Those that have been established a year or more are certainly grand already, and worthy of the minimum attention they require.

The carpet beds at Hampton Court have been planted with appropriate designs in celebration of the Diamond Jubilee.

Princess Adolphus of Teck presented the prizes to the successful competitors at the Eaton flower show on the 5th inst. The Duke and Duchess of Westminster, Prince Adolphus of Teck and Lady Lettice Grosvenor also attended the show.

Taking the buds of Chrysanthemums in France.—From August 10th to September 10th is considered the period during which the crown bud should be taken in the case of most varieties. If the crown bud is not to be preserved then the number of lateral shoots below it must be regulated for the terminal buds as we term them here.

The forest of Fontainebleau, in France, has been devastated by fire, supposed to be the work of incendiaries, as it broke out at three places simultaneously. Ten kilometres of the forest were in flames last week, the dryness of everything and the prevalence of an east wind favouring the conflagration in spite of the squadrons of soldiers trying to keep it in check. Fontainebleau is a favourite public resort for tourists.

Turriff Flower Show.—The annual show was held in a field in the vicinity of the Square, Turriff, Aberdeenshire, on the 3rd inst. The splendid weather that prevailed drew a large concourse of visitors from the surrounding country. The opinion was freely expressed that this was the best show held at Turriff within the last ten years, the quality of last year being fully maintained, and the entries largely increased. The show was opened by Mr. Stuart, of Laithers, at the completion of the judging. Flowers, including herbaceous plants, Stocks, Dahlias, Sweet Williams, and Antirrhinums were a strong feature of the show. Pot plants were plentiful; vegetables average, and fruit creditable, considering the adverse season. The principal prize-winners amongst gardeners were Mr. John Pirie, Ardmiddle House; Mr. J. Marr, Hatton Castle; Mr. W. Rintoul, Forglen House; Mr. J. Barclay, Craigston Castle; Mr. J. Stuart, Eden House; and Mr. John Brown, Dalgety Castle. There was a good display of Pelargoniums, and Ferns were both abundant and good.

Mr. G. H Sage, formerly gardener to Earl Dysart, at Ham House, Richmond, Surrey, has been appointed gardener to the Marquis of Camden, Bayham Abbey, Lamberhurst, Kent.

The Hamburgh Exhibition.—Up to May 15th last, the money put at the disposal of the executive committee of the exhibition, for disposal in prizes by sovereigns, public bodies, and private individuals, exceeded 250,000 francs (a franc 9½d. of our money).

Abbey Park Flower Show, Leicester.—A pleasing and interesting ceremony in connection with the above was the presentation of a valuable gold watch and chain to Mrs. J. Burn, the wife of the much respected curator of the parks and gardens, in appreciation of her great kindness to horticulturists during their annual visit. The presentation was made on behalf of the subscribers by Mr. Alfred Outram, F.R.H.S., of London—who has acted as one of the judges ever since the show was established twelve years ago.

The Codnor Park and Erewash Valley Horticultural show opened at the Monument grounds, Codnor Park, on the 3rd inst. and while the number of exhibits was less than in some former years, the quality of produce was, if possible, better than ever. The exhibits were exceedingly fine and gave evidence of the great care and attention paid by growers in this district to all the natural and scientific helps given them. A new feature at this show was the very large and varied exhibition of plant foods and other adjuncts occupying a considerable space and presided over by a representative of Messrs. A. Greaves & Son, of Ironville.

Scottish Horticultural Association.—The usual monthly meeting was held on the 3rd inst. The president occupied the chair, and there was a good attendance of members. Mr. Comfort, Kylemore Castle, Galway, communicated a very practical paper on "The Cultivation of the Melon." He strongly emphasised the great mistake commonly made in syringing the plants, and gave many valuable hints. Mr. Graham, The Gardens, Coltness House, Wishaw, exhibited a seedling melon named Diamond Jubilee, and was awarded the Association's First-class Certificate. It is a white-fleshed variety of exquisite flavour, a robust grower and especially suitable for early or late cropping. Messrs. Dicksons and Co., exhibited seedling Pinks; Messrs. J. Grieve and Sons, seedling Carnations; and Mr. Carmichael, three new Strawberries.

Tourist Guide to the Continent.—This is a handy guide for the tourist issued by the authority of the Great Eastern Railway Company, and edited by Percy Lindley. It consists of 156 pages of closely but well printed matter, and is of a handy size for the pocket, a matter of no small importance in these days of rapid transit. Amongst its fresh features are a series of Continental maps, a chapter upon cycling routes in Holland, Belgium, and Germany, and a chapter, "Dull, Useful Information," giving particulars as to the cost of Continental travel. Numerous illustrations, quaint, instructive, and interesting are interwoven with the text, relating to scenes or objects of interest in Holland, Germany, Austria, Belgium, and Switzerland. The views of mountains, rivers, waterfalls, rapids, and lakes in the Bernese Oberland are both numerous and highly interesting. The towns and castles on the Rhine are also so strange to untravelled people in this country, that visits to the scenes must be a desideratum to hundreds. The scenes in Holland are very quaint but now becoming familiar to people in this country. Some of the houses are, however, extremely singular and worthy of a visit. In the chapter, "Dull, Useful Information," we note that one may leave London at 8.30 p.m., sleep at sea, and be in any of the chief cities of Holland in time for breakfast, so that, practically, no time at all is lost by the journey. The same may be said of Antwerp. Useful hints are given as to the cost of a bed room, breakfast, &c. Other places are dealt with in the same way. Information is also given concerning tickets and tours, conveyances, money, passport, soap, baggage, dietary, ailments, &c. The "Guide" is only a sixpence, and may be obtained at various places in London or ordered at all booksellers and railway stations.

A Big Feed.—I'm grown a man noo', wi' a hoose o' my ain, but my mither sends a parcel noos an' thans. She sent me curns o' berries last summer—grozers! A freen' an' me sat ae nicht at the table eatin' the big yellow lads; an' we ate an' ate till we cudna' see ane anither for the big heap o' skins. See *People's Journal*.

Sefton Park, Liverpool.—In one of the span-roofed plant houses, Mr. Herbert, superintendent of the parks and gardens has a charming arrangement of tuberous Begonias and Cannas, the former filling the side stages of about a 100-feet house; whilst the Cannas show to great advantage on the centre stage, the large bold foliage making a capital ground-work to the strong plumes of bright colours. Florence Vaughan and Austria, yellows, are exceptionally fine; and the pick of the crimson is Alphonse Bouvier, whilst Italia is peculiar with its irregular blotches of yellow and brown. The Begonias are medium sized plants, both single and double; and embrace all the colours of this useful race.

"Water and Irrigation in Orchard and Garden Cultivation."—This is the title of a pamphlet of some 31 pages, belonging to the "Salisbury" series issued by Mr. Geo. Tucker, at the Offices of *The Fruit-Grower, Fruiterer &c.*, 1, 2, and 3, Salisbury Court, Fleet Street, London. It deals with the importance of water, methods of drainage, water conservation, the value of drainage, garden cultivation, irrigation, tiles and stone drains, sub-irrigation, Strawberries and water, the trench system, soil aëration, trench drainage, orchard drainage, windmills, improvement of soil, &c. In speaking of land in Belgium, the author says that there are 497 inhabitants to the square mile. The land is well fed, drained and cultivated, so that little more than an acre is needed to supply the physical wants of each head of population. The broad acres of this country are compared with Belgian soils, which may be true enough in its way, but much of the land in this country is under very different geological conditions to begin with. We agree, however, that much of the soil here is capable of vast improvement. Sub-irrigation is more practised in America than here. The author recommends it for this country, but while believing that the method possesses many points in its favour, he says that there are many cases of garden crops which are vastly benefited by overhead watering, in order to destroy green fly, black fly and other vermin, as well as to free the plants and fruits from smut caused by the insects. Other useful information is given, which if not new is not so often acted upon as it might be.

Chrysanthemums at the Antipodes.—The second annual exhibition of the Christchurch Chrysanthemum Society, New Zealand, held on the 5th May last, was even a greater success than that held last year; and if the show continues to increase in size at the same rate as this year, the society will be unable to find a room in Christchurch large enough to hold the exhibits. In the matter of groups much the same style of arrangement is followed as may be seen here; and Mr. H. J. Jones, of Lewisham, has a worthy representative in Christchurch in the person of Mr. W. Jones. It would seem as if an offshoot from the parent country must as a matter of course resemble the parent. We note, however, that a class is set apart for unmarried ladies, who are invited to try their hand at table decorations. Great interest was taken in this competition from the fact that the contest was decided by popular vote as was done at the Royal Aquarium, London, some years ago. Voting papers were in steady demand all the afternoon, and when the votes were counted up it was found that 764 votes were recorded for Miss Garsia; 565 for Miss T. Danks; and 403 for Miss Ross. This decided the order of merit. In the cut bloom classes the greatest amount of interest was centred in the competition for the President's Cup by societies. The Christchurch Society secured the cup by the narrow margin of half a point, the total being 48½ points. The Timaru Society was placed second with 48 points. The varieties in the winning stand were Mme. Carnot, M. Panckoucke, Charles Davis, Viscountess Hambleden (the premier incurved Japanese bloom in the show), E. Molyneux, Elsie Teichman, Thos. Wilkins, Silver King, Maggie Blenkiron, Phoebus, Mdlle. Thérèse Rey and Libbie Allen. The second prize lot was slightly different, but also consisted of well-known varieties.

Caterpillars consume from five to twenty times their own weight each day; hence they have great power for destruction in a garden.

Russian dwellings in the villages and towns are mostly thatched with straw, and as a precaution against setting them on fire, the railway stations are about two miles from the respective places which they serve.

Something like a schedule.—Complaints are often made about the schedules of flower shows being difficult to comprehend in this country, but according to *American Gardening* a real live squib has been sent the round amongst the horticultural societies of New York announcing a Chrysanthemum show in November. This is all right in its way, but the compiler wants specimens of Lapageria, Fuchsia, Epacris, Mimosa, Caladiums, and vines in pots. Flowering shrubs are also wanted as well as Peach and Nectarine fruits, and that too at a period when the country is in the icy grip of winter. Surely there will be a lively competition in the class for a vase of 100 blooms of Chrysanthemums. Well, something lively is necessary to brighten a dull time.

Earth's Oldest Flower.—It is somewhat amusing to note the expressions of opinion by a daily contemporary, regarding the antiquity of the Rose. So great is the antiquity of this flower that all account of its origin has been lost. We quite believe that, and that the fact applies to every other flower whether wild or cultivated, except of course artificial hybrids which some may regard as new creations. It would have been equally true if our contemporary had said that the origin of the Rose had escaped the memory of the oldest living inhabitants of these islands. Solomon's allusion to the Rose is adduced as evidence that it had been long known. Of course there are several species of Rose in Syria; but good modern authorities on the subject believe that when Solomon said "I am the Rose of Sharon, and the Lily of the Valleys," he really meant what we know as the Polyanthus Narcissus (N. Tazetta). Celsius and other learned authorities conclude that some bulbous plant was meant both by Solomon and Isaiah, who furnish the only two passages in the Bible relating to the Rose. Royle considers it to have been the Narcissus above mentioned. It is found in Syria and Palestine, where it is esteemed for its beauty and fragrance.

CRICKET.

HURST & SON v. MIZEN BROS.

Played at Mitcham, Saturday, August 7th.

MIZEN BROS.

Cooper, l b w, b Main	5
Higgs, J., c & b Sampson	21
Higgs, C., b Main	2
Foster, b Sampson	2
Higgs, G., b Sampson	5
Harris, b Main	0
Foster, W., b Main	0
Skinner, b Sampson	0
Rogers, b Main	0
Searle, not out	2
Sackerman, b Sampson	0
Extras	4
	41

HURST & SON.

Main, b S. Foster	22
Blyth, b Foster	0
Sampson, b S. Foster	28
Laker, b S. Foster	3
Hudson, b Skinner	8
Thake, b S. Foster	4
Chapman, b S. Foster	6
Bedford, run out	4
Collins, b S. Foster	3
Nightingale, not out	0
Faulder, b S. Foster	0
Extras	7
	85

STRAWBERRIES.

THE interesting meeting held in the rooms of St. Andrew Square, Edinburgh, which was promoted by the Scottish Horticultural Association, had greater significance than one is disposed to attribute to a gathering for the purpose of bringing together collections of Strawberries to be criticised by cultivators of that popular fruit. One may be allowed to ask, "are we making progress in the growing of Strawberries?" I fear that which has been adduced on "high cultivation" is more nominal than real.

Mr. Fish's remarks on the method of cultivating the plants as annuals, preparing fresh ground yearly, and giving liberal dressings of manure, commends itself to those who wish large finely-flavoured fruit, and proprietors generally delight in looking upon finely developed fruit for dessert, as well as the eating of it. I fear market growers cannot adopt the "annual" system of cultivation with impunity. Their land has to be closely cropped to make it pay, and the growing of Strawberries for preserving is perhaps more profitable than cultivating them to be eaten in their natural state. The remarks of Mr. Long on the Grove End Scarlet, reminds me how that old favourite bore great crops on the same ground behind a hedge for at least ten years.

The old Keen's seedling as a cropper, where it succeeds, has not been beaten yet. In some Fifeshire and Perthshire gardens I have seen such crops of that old sort which would surprise even such enthusiasts who meet at St. Andrew Square. The old Alice Maud I have seen many years ago supply crops year after year on the same ground which would create admiration anywhere. I find, however, it is not profitable to fruit the plants here more than twice, and would treat all as annuals if circumstances permitted.

I notice that in one of the largest gardens which I have seen in Scotland Dr. Hogg is the favourite—a grand Strawberry for all purposes. It is in Lord Zetland's gardens, Kerse, near Grangemouth. I have pitted many sorts against President, which seems well adapted for cool heavy soil. Though it fruits freely for several years in succession, the "annual" system of cultivation gives a distinctness of appearance and quality to the fruit, which one cannot easily realise except they witnessed the difference of two-year-old plants and those fruited within the year after they are planted. I plant those which have been forced, manure liberally and trench well—knowing a good deal of the methods of market men to obtain the most profitable results (having been employed in London establishments). I know that where thousands of the forced plants were planted in good ground as soon as space could be spared, the best results were realised.

Perhaps the best Strawberry culture I have seen (and that includes cases in Wilts, Somerset, Worcestershire, Oxfordshire, Suffolk, and Middlesex), was while employed as a youth under Mr. Thomson, when at Wrotham Park, near Barnet. He trenched deeply, manured moderately, and planted the best of the plants which had fruited in pots. They were put out in the ground during May or June as soon as they were prepared by exposure to abundance of light and air. The plants were trimmed—the balls reduced slightly and put into the ground firmly, and well watered. Other than keeping down the Strawberry runners, they had no further attention till they were "strawed" and well watered just before they were in flower.

The size of Keen's seedling and the enormous crops of them has remained distinctly within my recollection all these years. Ingram's Prince of Wales was a great favourite at Wrotham, and later, year after year, that fine variety was brought from Dalkeith by Mr. Thomson, and tabled at the Royal Caledonian Society's show in April, which created great admiration, and such would now give delight to the two northern veterans, Messrs. Fish and Carmichael, whose fame as cultivators needs no comment from me.—*M. Temple, Carron, Stirlingshire.*

TROPAEOLUM PHOEBE.

TROPAEOLUM PHOEBE.

IT is pleasing to note a striking and interesting variation in a popular garden plant. We first noticed the above beautiful variety at the meeting of the Royal Horticultural Society on the 13th April last, when the Floral Committee were so taken with it as to accord it an Award of Merit by unanimous consent. It was exhibited by Messrs. H. Cannell & Sons, Swanley, Kent. The flowers are of the usual size and golden-yellow with a scarlet blotch at the base of each petal, and abundantly produced. The novelty lies in the fact that each of the wedge-shaped and shafted petals is deeply jagged or lacerated at the ends, forming numerous finger-like points.

In a Pink or Carnation, which are naturally fimbriated, this would be a defect from a florist's point of view. Human nature delights to run contrary to nature, for we take a different view in this case, than we would take for a Carnation, and hail the novelty with delight. Strictly speaking, however, it is the liberty allowed to pleasing variations of any kind that we countenance, because a greater number of cultivators and others can then find something within the limits of the species to admire. There are those who give preference to flowers with entire petals, and with such we find no fault whatever; but by ignoring the limitations of the florist who lays down canons and lines of demarcation, a greater number of people can be interested in any particular flower. The variety under notice is both distinctive and ornamental.

The flowers which received the Award of Merit were cut from under glass, the variety being one of the best for winter flowering. Since then it has proved equally suitable for outdoor culture as a bedder and a climber. It grows very fast and makes a capital hedge for screening unsightly objects, &c., when furnished with sticks or wire netting upon which it can climb. Under these conditions it is extremely floriferous, as a flowering stem before us testifies. Most people are taken with it at first sight.

AQUATICS AT HOOLE HALL, CHESTER.

Once famous was the above for its fine and choice collection of Orchids. The late enthusiastic owner once told me it took no more room and time to grow the best of everything than the commonest; and his collection was rich in many choice varieties which could not be duplicated. After the death of Mr. Potts the collection was presented to a nobleman, where they are flourishing well. Mr. John Taylor, who has had entire charge for many years, is fond of tit-bits. He missed his Orchids very much, but converted the houses for other purposes for which they are suitable; for instance, the Aquatic House is now most interesting. It is a span-roofed house, 41 ft. by 14 ft., and has a tank in the middle, the walls of which are very ornamental, being converted into rockwork, where such plants as Achimines, Impatiens, Torenias, mixed with Ferns and Palms are planted and doing well.

The tank just now is a picture. Many good Nymphaeas are flowering grandly; N. devoniensis, N. caerulea, N. alba are flowering most freely. Nelumbium speciosium (the Lotus), Pontederia crassipes, and Pistia Stratiotes are all growing well and flowering most profusely, forming a gay and interesting feature. The side stages are formed of tufa, making a splendid natural rockwork, where Palms and Ferns and other foliage plants, intermixed with many flowering plants, add considerably to the scene. Their edges are draped to hide the hot water pipes. Panicum variegatum has for its companion Ficus repens, and the two are good useful plants for the purpose. The roof is well adorned with climbers and Allamanda loaded with flowers, all adding to the picturesque scene.

Years ago a grand collection of Auriculas and Carnations were grown, and, when exhibited, always found their way in the foremost ranks.—*A. Outram, F.R.H.S.*

ZONAL PELARGONIUMS AT SWANLEY.

Several of the popular types of Pelargonium are grown in the nurseries of Messrs. H. Cannell & Sons, Swanley, Kent. Show and regal varieties are peculiar to spring and early summer, but the *Zonals* are always in season from January to December, judging from what we have seen of them. All the leading varieties up-to-date are grown.

Double Varieties.

The old or original double forms of Zonal Pelargoniums have totally disappeared. Their flowers formed small densely compacted knobs like small buttons, consisting of a great number of petals. The modern race has very large flowers, with relatively few petals, but of great breadth and well expanded. The same transformation has taken place in tuberous Begonias and Delphiniums. The number of varieties is very great, but we shall only touch upon a few of the finer flowers and distinct colours. There is a house of them, 100 ft. long.

Golden Gate is a beautiful, bright orange-scarlet flower. Cousin Bell is a charming salmon variety; but Madame Jouis is what is termed a mottled salmon variety; that also has huge flowers and a dwarf habit to recommend it. Of its colour together with its other qualities, the variety is certainly one of the finest. Many white sorts have been raised at one time or other, but Hermine is certainly choice. The red flowers of Ville de Poitiers may be described as semi-double, but of great size and borne upon trusses of great dimensions. If anything, it is beaten, however, by Madame Charlotte, for the individual pips measure 2¼ in. across, and the trusses 6 in. to 8 in. Size goes a long way with cultivators, but surely this is large enough. The double Henry Jacoby also finds a place here, and differs from the type merely in being double, for the flowers are very dark crimson.

Blue and yellow colours are still desiderata amongst Pelargoniums, but there are some very plausible substitutes for either. There are single dark purple sorts in cultivation, and now Madame de la Rue is a valuable double, bearing large trusses of bloom. Choice and delicately coloured varieties jostle the darker colours in every part of the house, making beautiful contrasts. Aime Henriot is of a charming peach-pink, and supports huge trusses of bloom. Remarkably distinct is Jeanne d' Arc, which is of a soft flesh colour and finely spotted with purple at the base of the petals. Practically a new race might be developed from this variety. Beauté Poitevine is considered synonymous with King of Denmark, and has bright salmon flowers tinted with pink. The trusses are large. Joyful is rightly named, being very cheerful. The blooms are white with a charming, bright salmon-orange zone in the centre. Distinct also is Rafael Garetta with crimson-red flowers, freely produced.

Single Varieties.

Even if not always so durable as the double sorts, there are, and probably always will be, many cultivators who will prefer them on account of their brighter and more cheerful aspect, because the colours never clash owing to any accidental twisting of the petals; or it may be because the arrangement or disposition of colours is fully displayed in each bloom.

The flowers of Cassiope are orange-salmon and very pleasing. Perfectly distinct from it is Duchess of Marlborough, with soft salmon flowers and white edges. For cut flower purposes we should consider Virginia one of the best, for the peduncles are at least 2 ft. long, and bear large trusses of pure white, flat flowers. A very singular and pretty variety is Belle Alliance, for the soft flesh coloured flowers are densely spotted with dark carmine. In thus being spotted it is closely allied to the double Jeanne d' Arc above mentioned. The plant under notice is of dwarf and compact habit.

One of the darkest of the bright colours is Dr. MacDonald, having large trusses of glowing crimson flowers. Eleanor is bright orange, getting towards yellow, and indispensable on that account in every good collection. Lady Newton is of the same crushed-strawberry type as Souvenir de Mirande, but has much broader petals and large trusses of flowers. Madame Bruant is very distinctly shaded and streaked with rich carmine on a white ground. A charming light-coloured variety is Gertrude Pearson, the rich pink flowers of which have a white eye-spot at the base of the two top petals. The plant is dwarf, compact and serviceable. Like Madame Jouis amongst the doubles, A. F. Wootton takes a similar position here with its huge flowers and trusses of mottled salmon. Softly pink and pretty are the flowers of Delicata.

The best single purple is Royal Purple, the hue of which is very intense; there are crimson blotches on the base of the two upper petals. The Rev. Bartram is a huge, bright scarlet flower with a small white eye. The huge white flowers of Valkyrie are distinguished by a regular and dark salmon eye. The rosy-scarlet Kitty is equally large in flower and truss. Princess Alice, on the other hand, is rosy-salmon and very distinct. M. Calvat is a bold crimson flower, with a white eye. A pleasing flower is Duchess of Portland, with rich pink flowers and a white blotch at the base of the two upper petals. Both flowers and trusses are of the first size.

One of the secrets of growing these Pelargoniums is to keep them in a well-ventilated but not draughty house, with a very moderately high temperature both summer and winter. The plants are kept near the glass owing to the benches of the low, span-roofed houses being near the roof, summer and winter. Under these conditions the plants grow slowly, with short-jointed wood, and the flowers attain a large size and last well. Light is a leading requisite of these sunny South African flowers.

CALLAS.

These Arum Lilies are indispensable for decorative purposes, and the cut blooms are largely used for Easter decorations. When their blooming season is past many growers plant them out in trenches. We gave that plan a trial two years ago; the plants made fine growth, but when we potted them up we found they had made such a quantity of roots that it was impossible to get them into 24 and 16 size pots without a lot of root mutilation. The plants were stood in a shady position outdoors until they made a start, when they were given a more open window.

When housing time arrived they were removed to a cool and light airy greenhouse; but during the winter we found a quantity of the largest leaves rot off as though the growth was too strong and succulent to withstand it. As we were not satisfied with the result of the "planting out" method, the next season we reverted to our old plan of standing the plants in a partially shaded position when they were removed from the conservatory. They received water for a week or two, to let them gradually finish their growth, and then the pots were laid on their sides to enable them to ripen off.

About the middle of the present month they were shaken out and re-potted, using gritty loam, and well-decayed manure, and potting rather firmly. When potted they were stood outdoors in a sunny position, as they were not too advanced in growth to be affected by sunshine. The growth they made was stout and strong; they wintered without any of the foliage damping off, and when they flowered the blooms were larger and the foliage finer than in the previous season. The plants were healthier and stronger, and free from green fly, a pest they are so liable to if at all sickly. I was looking at our stock the other day: the old foliage has all ripened off and the young growths are just on the move, so the sooner they are taken in hand the better. We shall not again try the planting-out system, being quite satisfied that the other plan is the best. Callas like abundance of water, hence they should not be potted too full, and when in bloom in the conservatory they should stand in pans.—*George Potts, August 2nd.*

The Orchid Grower's Calendar.

Cool House.—Where there is any quantity of Odontoglossum crispum to be re-potted, it is necessary to make a start with the most forward of them, or by the time they are all finished the season will be far advanced.

The weather certainly up to a few days ago has been all against meddling with any kind of Orchid; but we have at last had some rain and the temperature has in consequence gone down considerably. The initial business then should be to get as much peat and moss ready for use as possible, so that when the start is made the operator will not have to stand still for want of material. Convenient sized pots too should be got ready, not forgetting the crocks for drainage. In the meantime the grower will be letting his plants get moderately dry before bringing them on to the potting bench. This is, I think, a most important point in the culture of Orchids; a point, however, which I think is often overlooked. No man that understands his work would think of potting a soft-wooded, or hard-wooded plant for the matter of that, when it is in a soddened condition.

When the plants are doing well and have plenty of good healthy roots they will not require much of the old material taken away, but will be benefited by being put into a pot, one, or perhaps two, sizes larger, whilst others that may not be doing so well will, with a little picking out of the old material, go back into the same size pot. Even the mere addition of a bit of fresh moss has a beneficial effect.

Instead of peat we are using for Odontoglossums "polypodium." It takes a good long time to get ready unless you are not particular about the rhizomes (of which there is a great quantity) growing. I, myself, very much object to Ferns and Orchids growing together in one pot, and therefore have it carefully picked over. Being of a more spongy nature than is the best peat, it should not be pressed in quite so firmly, or the water will not pass away freely, and in consequence it becomes in time coated with a kind of lichen; especially so is this the case where the moisture is excessive. In time it covers the whole, preventing the water passing through the compost and the air getting at the roots.

After the potting is done—should the weather keep bright—it will be necessary to shade the newly-potted plants somewhat heavily, or they may lose some of their old leaves. We never mind plants losing three-year-old leaves as this shows the bulbs have carried out their proper functions, rather than to any mismanagement. Grown under conditions of much shade they retain their foliage longer; but this with Odontoglossums is certainly not evidence of good culture; the spikes from such plants are puny and the flowers small.—*C.*

VEGETABLE CALENDAR.

Lettuce.—Advantage must be taken of the present damp weather to plant out large breadths of Lettuce

for late autumn and early winter use. A position sheltered from west winds should be selected, to prevent the plants getting injured when nearly full grown. As this crop will be required for lifting into frames or other protectors, it is necessary to get the highest development, and to this end the ground should be well enriched with well-rotted dung, and the plants regularly watered during spells of dry weather. Another sowing may also be made at the present time for planting in vacant frames and under handlights, in which to finish up their growth during the winter. For this sowing, the best kinds of Cabbage Lettuce will prove the most useful.

SPINACH.—A first sowing for a winter crop may be made on the first favourable opportunity. Where the land is very dry, it is a good plan to dig it and sow immediately it is turned up. As this crop will have to stand the heavy rains of autumn and winter, it is very necessary to select a piece of friable, well-drained ground to secure good results. If the drills are watered with some Nitrate of Soda, 2 ozs. to a gallon of water, it will give the young plants a vigorous start. Another sowing should be made at the end of the month.

ONIONS.—Sowings of these should be made both for early spring use and drawing young for salads. In the former case an open sheltered position will tend to promote growth during the winter months, and give strong plants ready for transplanting early in spring. As the earliest will come from the seed bed, this should be carefully prepared, by deep digging; at the same time a good dressing of soot and burnt refuse will promote early growth and give a strong plant before winter. In the case of plants grown for drawing young, small beds will be most convenient, and several may be sown in succession during the next six weeks.

CAULIFLOWERS.—The early spring crop will require sowing about the 20th of the month, and a succession may be sown a fortnight after. A warm aspect should be selected for the first crop, and if the second can be made in a turf pit, or where protection can be given, the plants may remain undisturbed through the winter. The principal point is to get sturdy plants, and this will be best secured by sowing thinly and allowing plenty of room between the rows in the seed beds.

TURNIPS.—Any vacant land under trees, not too heavily shaded, may be sown with White Stone, Chirk Castle, or other hardy variety of Turnips. Should the weather prove open and mild, some useful roots may be secured in spring. In any case a useful crop of Turnip greens will be secured. The thinning and hoeing of earlier crops will require regular attention to secure a good supply of roots for winter use.—*J. R.*

THE FLOWER GARDEN.

ONE of the disadvantages that pertains to the generally adopted plan of summer bedding is that the plants have scarcely become established in their flowering quarters when the march of the seasons brings the idea of propagation with it. Another year's plants have to be thought about, and in cases where a good deal of stock is required it is not possible to drive off the operation for too long. August finds most of the owners of country houses in residence, and garden and tennis parties in full swing. Under such circumstances the gardens are, of course, expected to look their gayest, and sweeping, mowing, and tidying up generally fill up a large amount of time. As the cutting about of bedding plants necessary for obtaining cuttings would, to a large extent, ruin the appearance of the beds for a time, it is not unnatural for the gardener to put off doing this for as long as possible.

Bearing in mind, however, that it cannot be reckoned with certainty that frost will keep off for many weeks longer it is advisable to make a start with cuttings of zonal Pelargoniums by the middle of the month. If only a few cuttings of each variety can be spared then these should be taken, and this early batch supplemented by others presently. Dibbling the cuttings into an outdoor border is a plan that is followed by some cultivators in preference to putting them in pots, which is the more usual method. The cuttings root very freely out of doors, but the lifting and potting up in the autumn usually give them a heavy check, so that for all practical purposes pots or boxes are to be preferred.

CARPET BEDS.—Although carpet bedding has been very much cried down by those who affect to despise anything artificial there is no doubt that it still possesses a great hold over the affections of the general public. There is certainly this to be said for the carpet bed, that it is more independent of the weather. In a dull, cold season when other plants do not flourish the carpet bed is always gay, and after heavy storms of rain, when Pelargoniums and tuberous Begonias are knocked to pieces, and Calceolarias bedraggled with mire the carpet bed always looks fit. Just now the plants will be needing a little pinching in order to keep them within bounds. If this is not done the distinctive lines become lost, and the design of the bed obscured, when, of course, it is robbed of a good deal of its merit.

BOX EDGINGS.—After all that has been said against it, and despite the fact that it harbours slugs and other vermin there is nothing that looks better than a well kept box edging. Growth is now calling for the application of the shears. Any cutting that is done should be seen to on a dull day if possible.

HOLLYHOCKS.—It is not too late to put in eyes of these to furnish plants for next spring planting. These eyes may be obtained in abundance from the firmer side shoots thrown out by the main stem. A single leaf may be left to each eye, both for convenience of handling and to assist the young plant. Make up a bed of sandy soil in a cold frame, cover it with a layer of sand, and dibble in the eyes closely together. Keep the frame close and shaded, and syringe the eyes regularly each day. A goodly percentage should then take root.

ROSES.—After the first flush of bloom there is a dearth of Hybrid Perpetuals now in the flower garden. This will give an opportunity for giving the trees a picking over, and also to get the garden engine to work among them, by which their appearance will be much improved. Budding may be vigorously prosecuted. It is not always a disadvantage to bud late, for better buds can often be procured, the wood from which they are taken being better matured. Briers that were budded about three weeks ago should now be looked over, as most likely the ligatures will require loosening.

SCILLAS AND NARCISSI should be planted without delay, for the bulbs have nothing to gain by being kept out of the ground, but on the contrary are losing a good deal.—*A. S. G.*

Gleanings from the World of Science.

THE undermentioned subjects were discussed at the meeting of the Scientific Committee of the Royal Horticultural Society, on the 27th ult.

Hybrid Orchid.—Mr. Veitch exhibited a new hybrid, Epilaelia ×, between Epidendrum radicans and Laelia purpurata. The former grows to from 7 ft. to 8 ft. in height, but the hybrid is only about 18 in. Its leaves more resemble those of Laelia, nor does it root so freely as the Epidendrum. The The flowers are larger than those of the latter parent, and scarlet, but with a much broader and blotched lip, approximating that of the Laelia, though the deep mauve colour of this species is entirely wanting. Mr. Veitch observed that it is remarkable that the pollen of Epidendrum radicans is potential in crossing Laelia, Cattleya, and Sophronitis, but not with itself. Dr. Masters remarked that this hybrid thus corroborated Reichenbach's statement that the two parents were allied.

Apples Diseased.—Dr. Bonavia inquired as to the nature of a disease which so commonly attacks Apples. Dr. Masters pronounced it to be most probably Fusicladium dendriticum, which attacks Apples and Pears, causing them to crack. Mr. Veitch observed that it generally occurs when the tree is in a poor condition, and recommended a renewal of soil in the autumn to strengthen the growth.

Wheat-eared Carnations.—Some examples of this well-known peculiarity were received from Mr. Colvile Browne, of Hextable, Kent. Mr. Veitch observed that whenever Carnations were grown in large quantities for market, some plants generally appear among them with this malformation. Dr. Masters added that it was said that the immediate cause was the attack by mites at the apex.

Twin Apple Leaf.—Mr. Browne also sent a specimen in which two leaves were apparently united half-way up, and back to back. An examination of the distribution of the fibro-vascular cords showed that there was only one petiole, a section of which was crescent-shaped, with three or four cords on each half. These coalesced higher up into two distinct bands, from which the cords supplied to each of the twin blades arose. It was analogous to a foliaceous stamen of Jatropha, described by Dr. Masters (*Teratology*, page 255).

Lantana Attacked by Insects.—Specimens were received from Chiswick covered with a white mealy bug known as Orthezia insignis, *Douglas*, and called the "Kew bug."

Seeds germinating within a Melon.—A specimen was received in which this peculiarity had occurred. It is not infrequent in Cucumbers, Oranges, and the Papaw. It was observed that the cotyledons were green, though in the absence of light within the fruit. Such occurs also in Pistacio Nuts, Mistleto, pods of Cassia fistula, &c. Professor Church remarked that it probably arose from some modification of the rays of light which were capable of "greening," although their energy was altered in character. It is observable that plants turn green under all the coloured rays of the spectrum, though Ferns will be green in total darkness if the temperature be adequate.

Pelorian Calceolaria.—Mr. Henslow showed two flowers of the ordinary yellow bedding-out plant, which had assumed the sleeve-like shape instead of the usual slipper.

Cypripedium two-lipped.—Dr. Masters showed a specimen with this malformation, the flower being apparently also changed as to the number of its parts. It appeared to be really synanthic, like the Cattleya shown at the last meeting.

Rosa rubrifolia.—He also showed a spray of this red-leaved species, received from Mr. G. Paul, having the gall, "Robin's pincushion," likewise intensified in colour.

Hybrid Aristolochia.—Dr. Masters showed a blossom of the first hybrid ever raised in this genus, between A. gigas (form) and A. elegans from Bolivia. It will be more fully described elsewhere.

Cream-coloured Vallota.—He also exhibited blossoms of this variety. A white one is known to have existed, but is apparently lost to cultivation. It was suggested that crossings should be made with the present one, so that possibly the white variety may re-appear.

Chemical Analyses of Orchids.—Prof. Church, having carefully considered Mr. Smee's second paper on the chemical processes which are supposed to take place in Orchids, observed that it was somewhat difficult to follow the author's observations, as there was a want of systematic cohesion throughout the paper, some parts appearing to be rather irrelevant and others open to question. Thus chemists are not agreed upon the composition of chlorophyll, and if they were there would be in consequence no special light thrown on the cultivation of Orchids. In his observations upon the presence of nitrogen in sewage grass Mr. Smee had altogether omitted any mention of nitrates, and no conclusions can be drawn from the absolute quantities given, as they bear no relation to the actual quantities employed, but not stated in the experiments. The diagram supplied by Mr. Smee Prof. Church thought interesting, as approximately representing the gradual loss of earthy salts as one of the causes of decline and death. With reference to his observations on phosphates in connection with the flowering process, it is well known that phosphates generally increase the inflorescence, while nitrogen enhances the foliage and deepens the green colour of chlorophyll; but Mr. Smee's remarks upon the decomposition of phosphates are extremely doubtful. It has been found in all experiments that ammonias in which phosphorus has replaced nitrogen have always proved fatal to plants. Mr. Smee's experiments on scents, as being formed in the flower itself, are well founded. Lastly, the suggestion that thorough analyses should be made of all parts of Orchids was advisable, if practicable; but such would require very accurate work on definite lines. Such only would give valuable results.

HINTS FOR AMATEURS.

Budding Roses.—In a previous issue the operation of budding was referred to with a promise that it should be further discussed in a subsequent issue. The operation is, of course, a ridiculously easy one—to those who know how to do it. Everyone does not possess this knowledge, however, and it is in the hope of awakening the interest of these and inducing them to attempt the experiment that these notes are penned. The first thing to do in budding standard or half standard briers is to select good briers with one or two good stout growths. The next thing is to obtain a supply of good buds. To get good buds is half the battle, since the operator, who is careless in this respect, has heavily discounted his chances of success. The shoots of the current year from which blooms have been obtained usually furnish the best buds to work with as the wood is sufficiently matured. Green, immature growths will not furnish good buds.

The only tools that are necessary are a good sharp knife with a smooth wedge-shaped handle, of some make of the kind known as budding knives, and a supply of raffia for tying purposes. A water-can about half full of water should also be kept near the operator, for as each shoot furnishes a number of buds, and will thus be a considerable time in use, it will be well to keep the shoots bearing the buds in water, otherwise their vitality will be very much impaired.

Preparation of the Bud.—It is in this part of the programme that the greatest care and skill is needed. The tender bark tears and bruises easily, which, of course, greatly jeopardises the chance of success. In selecting the buds choose those that are plump, full, and firm, but which are quite dormant. Once the bud is selected the next thing to do is to remove it from the branch bearing it with part of the bark attached. Each bud is borne in the axil of a leaf, that is, in the angle formed by the junction of the stalk of the leaf with the branch. The guarding leaf must first be removed, or more correctly, part of it, for about ¾ in. of the stalk (petiole) must be left both to act as a shield to the little bud to prevent it from being inadvertently knocked off and to serve as a handle, by which the bud may be the more easily inserted in the place prepared for it.

In cutting the bud away, the knife should be started about ½ in. above it, the blade of the knife passed in nearly to the middle of the branch and then turned downwards, passing underneath the bud and coming out again about 1 in. below it. A piece of wood is thus taken away with the bark and the bud. The first-named may easily be pulled away by the fingers, and after a little trimming the bud is ready for insertion.

The incisions on the Brier are easily and quickly made. Catch hold of the branch of the stock firmly and upon its upper side near to its junction with the main stem, make a longitudinal cut about 1 in. in length. Then make another at the end of this to cross it at right angles and continue it about half-way round the stem. The two cuts together thus form a T, the foot of which is quite close to the junction of the branch of the brier and its main stem. Reversing the knife, the handle should now be used to lift up the bark from the wood, thus leaving plenty of room to slide the prepared bud in. When properly inserted the latter should face the same way on the stock as it did on its parent stem, and the edges of the bark of the brier should overlap that of the bud on both sides.

Tying in.—This is an operation that calls for no great amount of skill, but it is often badly done, because people will persist in tying the poor buds in too tightly, and thus strangling them. All that is wanted is to keep the lips of the wound in place, when nature will do the rest. Commence therefore at the base of the longitudinal incision and work upwards, binding with moderate firmness, and leaving the point of the bud peeping out from its swaddling clothes. On coming to the transverse cut, any part of the bark of the bud that protrudes beyond this point may be cut off and the binding carried on past the cut, where it may finish.

If these points are deftly and quickly carried out, clean cuts made, good buds chosen, and neatly cut out, and the tying properly executed, the percentage of losses should be small. We do not advise shortening of the shoots of the briar in any way for the present. This can better be done in the autumn.

Layering Carnations.—Nurserymen and Carnation specialists who are in the expectation of heavy orders for Carnations, and who have to get these orders despatched early to their destination, have to start layering their Carnations early in the season, almost before the blooms are off the plants, in order to give the layers time to root so that they may be lifted and ready for distribution betimes. With the amateur grower who has only his own wants to think about and his own requirements to cater for, such haste is not necessary. It is getting rather late in the season now for layering it is true, and no more precious time should be lost; but it is not yet too late. The layers, if fairly healthy and strong, will be rooted by the autumn, and will be ready to lift before very severe frost is to be expected.

Now although the layering of Carnations is such a very easy and simple job, it is not every amateur who cares to undertake it. We are acquainted with two or three at least who feel constrained to call in the services of a neighbouring gardener to do that which they might easily perform themselves.

A few brief hints may be of value to those who would like to do the layering themselves, but who distrust their powers to accomplish it. First of all the old plants should be gone over and the old flowering stems cut clean away. Many of the weak spindly growths, including all those that spring high up the flowering stem, may follow. These would be of no use for layering, for their height above the ground renders it extremely difficult to get them down anywhere near the soil without breaking them.

Some light sandy soil, such as that which has been previously used for growing pot plants, should next be obtained, and passed through a sieve to clear it of all stones and sticks. A layer of this about 1 in. in depth may be spread around each plant for a radius of about 1 ft. This distance will take in all the layers, which are rarely longer.

The next thing is the pegs. These usually may be easily cut from old Pea sticks, birchbrooms, or a neighbouring hedge. They should be about 4 in. in length, and be furnished with a good stout hook. The new wire layering pins are very handy and excellent articles, and as they can be used many times over are not at all dear. They can be purchased from any vendor of horticultural sundries in large or small quantities. If there is any difficulty whatever in obtaining good wooden pegs in sufficient quantities we should advise the Carnation grower to invest in a few of these specially made pegs.

The most important tool, however, is the knife. It should be thin bladed, and capable of taking a keen edge. As a rule, budding knives are all good for the purpose.

Now as to the act of layering proper. Catch hold of the shoot in the left hand, lifting it up and inwards towards the central axis of the plant. Commence on the under side of the shoot about 1 in. below the lower leaves, and immediately below a joint (node) and make an incision. Pass the blade of the knife into the centre of the stem and turn it upwards making a longitudinal cut. Carry this through the node and upwards for about 1 in. in length. A tongue is thus formed. The shoot may now be pressed downward and the tongue pushed into the soil that has previously been placed round the plant. It is of importance to keep this tongue open, for if it closes the wound will heal and roots will not be made. The tongue once pushed in the ground the layer may be kept in place by one of the pegs referred to, so placed that it presses upon the point where the wound was made.

All that is necessary now is to see that the layers are kept supplied with water. A hot and dry August is very trying to the layers, and frequent soakings with clear water will be of service.

If stout healthy layers are chosen, the cuts made clean, the tongues prevented from closing, and pegging down firmly done, there should be very few losses indeed; and a good measure of success should even repay the veriest tyro at his first attempt, after which stimulus he may go on to do better things.—*Rex.*

Peas and Oil-seeds are reaped in the month of April in Bengal; early Rice in September; and the great Rice crop in December. Thus there are three harvests during the season.

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Adiantum farleyense.—I had a plant of this handsome fern given me about six weeks ago. It has been in my greenhouse amongst a mixed collection of plants, but has not done at all well. Please tell me what I can do with it, as I should be sorry to lose it now.—*M., Hendon.*

Adiantum farleyense is really a stove fern, and we are not at all surprised that it should fail to do in an ordinary cool greenhouse. We question very much if you will be able to do anything with it unless you can contrive to give it more heat. If you can rig up a small close frame near to the pipes you might manage to do something with it, otherwise you must make up your mind to lose it when winter comes if not before.

Planting Narcissi in Grass.—*J. Flecther*: You will find it easiest to plant your bulbs by making holes in the grass with the crowbar, dropping in a little sandy soil or road scrapings, then placing the bulb on the top of this and filling up with other soil. This is a quicker plan than cutting pieces out of the turf, planting the bulbs and replacing the turf, and besides, it does not cut the grass about so much.

Plantains on Grass.—*T. R.* is grumbling about the number of Plantains in his lawn, and wonders wherever they all come from. Naturally he wants to know how to get rid of them, and is in search of the easiest way to effect this desirable end.

Go over the lawn and cut off the crown of the Plantain below the level of the grass and lay a pinch of salt upon the cut crown or root that is left in the soil. If no rain comes to wash the salt away it may be reckoned that the salted root is killed entirely, but if rain comes shortly after, another application will be necessary. By perseverance, and a little backache the lawn may be cleared entirely of the weeds.

Violas.—I have kept my Violas watered pretty freely all through the hot weather, and they have made plenty of growth. May I give them liquid manure, and must I thin the growths as I have seen recommended?—*T. Browning.*

If the plants get too thick and crowded you may thin the growths with advantage certainly. This will give room for the younger shoots. Liquid manure will increase the size of the flowers and is to be recommended.

Wild Convolvulus.—*James F.*: The Bindweed is Convolvulus sepium, a very troublesome weed in many gardens. It is not at all particular what it climbs round, and if it were not such a nuisance one could admire the large snowy-white flowers. You may check its growth now by pulling away its trailing, twisting stems whenever you see them. The work of destruction must be completed in the late autumn or winter. Fork the ground well over and get out of it every particle of the white roots that you can find so you shall be free of it another year.

Potting up Balsams.—Our local flower show is to be held in the first week in September, when a prize is offered for Balsams in pots. I have some good plants growing in the garden now, and should like to lift some of them and pot them up if they would stand it. Please tell me what to do.—*Cottager.*

The Balsams will lift easily enough if you are careful to leave plenty of soil round the roots. Pots 8 ins. in diameter will be large enough, and ordinary garden soil may be used for potting if you like. Put a few crocks in the bottom of the pot for drainage purposes. If you can stand the plants after potting in some shady place so much the better. There they should stay for about a week, during which they should be sprinkled daily. If you follow these instructions the plants should take no hurt.

Lifting China Asters.—Please tell me if China Asters can be lifted from the open ground to flower in the window.—*Cottager.*

As easily as possible, but the plants should not be too far advanced. Just as the buds are showing prominently is a good time. Shade the plants for a

few days after lifting in the same way as we have recommended for the Balsams. A great point is to give the plants that it is intended to lift from the open ground a good soaking with water on the day previous to that on which lifting is contemplated.

Pears.—*R. Bryson*: You should have thinned the Pears a long time ago when they were only the thickness of one's little finger. It is too late to do this now, for the thinning would not help the crop much, although it would take some of the strain off the tree. Give the latter a good dose or two of farmyard manure if you can get it. This will do it all the good in the world.

SUTTON'S BULBS.

"Doing things in good time is the main secret of successful gardening," and the issue of "Sutton's Bulbs for 1897" is a timely reminder that for an efficient display of flowers in the dark winter days and the early weeks of spring we are largely dependent on Hyacinths, Tulips, Narcissi, and other Dutch bulbs. As decorative subjects, these flowers offer advantages that can be claimed for no others. They are not injured by a forcing temperature and yet are so hardy as to endure with impunity the rigours of our severest winters. Horticultural appliances are not essential to success, and amateurs can produce excellent results even on lead flats in large towns. By planting at short intervals it is easy to ensure a prolonged and brilliant show of bloom in greenhouses and conservatories. Later on the beds and borders will yield an exhibition of splendid colour that cannot be surpassed by the costly system of summer bedding.

Messrs. Sutton's lists of Bulbs have evidently been compiled with great care, and the task of making a selection is rendered light by a brief but accurate description of each variety. Those who are not familiar with these flowers have also the choice of a number of Collections, adapted for various purposes, which offer to amateurs the benefit of experts' knowledge in suiting the requirements of any home or garden.

The illustrations are not only more numerous but they are more suggestive than ever. Almost all are from photographs, and as object lessons they will be appreciated both by amateur and professional gardeners. The cultural notes deserve attention for terseness and freedom from technicalities; and the work is bound in a cover adorned by two most charming landscapes, reproduced in natural colours.

For the magnificent strains of Begonia, Cyclamen, and Gloxinia the Reading Firm has long held an established reputation. At the Royal Horticultural Society's great Temple Show in May last the attention of the Princess of Wales was arrested by the superb display of Gloxinias, and Her Royal Highness graciously expressed to Mr. Sutton her desire that part of the exhibit should be sent to Marlborough House.

The accompanying illustration, lent us by Messrs. Sutton & Sons, is one of many represented in the Catalogue, and which have been reproduced from photographs of pot plants of Daffodils. The variety here shown is Narcissus poeticus ornatus, extensively used for forcing purposes, for bedding and for naturalising in the grass. It is the earliest variety of the Poet's Narcissus, which is at all popular or grown to any extent. The broad sheets of it on the grass at Kew last spring were the admiration of thousands of visitors. Many other of the photographs in the Catalogue are even finer.

Vandalism at Tenby.—There is a beautiful belt of trees that has existed for generations skirting the High Street and Norton, Tenby, a beautiful watering place known to many holiday makers. Quite recently a number of the trees have been lopped and disfigured, while the undergrowth has been cut. It does not appear who is responsible for the ordering of this stupid piece of work; but it is quite evident that education has not yet reached its limits in diffusing a correct knowledge of the "art that does mend nature." A committee was appointed to examine the trees and make a report; but instead of this it is believed the committee commenced the lopping on their own responsibility.

CARNATIONS AT MONTAGUE NURSERY.

The flush of the Carnations in the open ground is now over for a season; but space prevented us from using our notes, made some time, ago in the Montague Nursery, Tottenham, where Mr. F. Gifford makes a speciality of border Carnations. He has now been carrying on business here for some years, and Pinks and Carnations being his favourite flowers he would naturally enough devote a considerable amount of attention to them.

He commenced putting in pippings of Pinks on the 23rd June, and a finer lot of rooted cuttings we have never seen. So thick were the rows that almost every cutting must have rooted. A large breadth of them had already been planted out by the time of our visit. Her Majesty and Albino are two of the varieties grown in quantity. The latter is a beautifully pure white and refined Pink, which received an Award of Merit from the Royal Horticultural Society in June last.

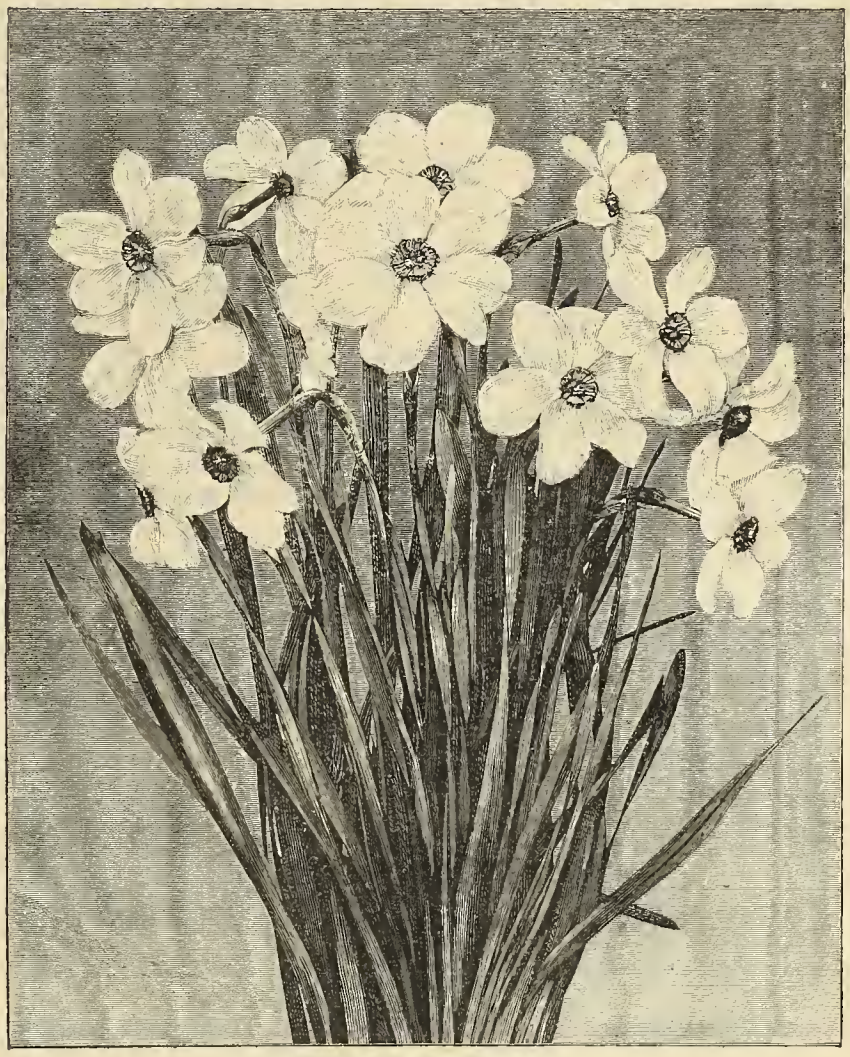
Of Carnations Mr. Gifford has a plantation of some 4,000 plants of named varieties, a very large proportion of which are of his own raising. He has something like 2,000 seedlings that are now well through their flowering stage, while he has a plantation of 3,000 seedlings in their permanent quarters for next year's flowering. We passed through those in bloom and noted some promising varieties, some of which will be tested another year before distinctive names are given them. A brilliant scarlet variety was notable for its enormous size as well as fragrance. Several clove-scented border Carnations have emanated from the Montague Nursery. Very promising are those with salmon and old-gold flowers with a dark red edge; dark crimson lines on a white ground; large and handsome orange-salmon; pure white and fine form; also crimson, yellow, purple, red, pink, rose, and shell-pink varieties. One variety opens like the well-known Miss Joliffe and fades to a delicate flesh colour.

Of the named varieties we can only notice the best, which are characterised by beautiful colour and freedom of flowering. Most of them were raised by Mr. Gifford, who is well-known amongst specialists. Bret Harte is maroon-crimson: Wanda is scarlet, shot with crimson; W. J Fish, glowing scarlet, with refined petals; and Clive Brook, deep scarlet, with good foliage. Edith Leadenham is the favourite white here, and the best for border work, being far superior to Helen Terry. It grows 2½ ft. high and produces such a quantity of large white flowers that it stands out conspicuously over the rest. It has good grass and must become a popular variety when it gets to be known amongst those who require large quantities of cut flowers. Cottage Maid has rather smaller flowers than the previously named, but very neat, refined, and pure white. Donybrook has larger scarlet flowers, but less bright than those of W. J. Fish; the grass is strong, and this is a characteristic of many of the varieties grown here.

A neat flower, with refined petals, is Senator Wolcott, the colour being bright scarlet. It is a strong grower. The latter applies to Luke Ellis, which has bright carmine flowers, shaded with scarlet; and to Andrew Noble, which has bright salmon flowers of good form, and glossy, smooth petals. The rosy-cerise flowers of Fred Roe are rich in hue and very freely produced. Leander is one of the strongest growing yellows and flowers freely. Torfreda is a clear yellow variety of moderate height and carries its flowers erect, so that they are effective on that account. John Davidson is a salmon-clove, the fragrance being very strong.

The broad, glaucous leaves of John Morley are very striking, and the flowers are crimson, flaked with maroon, and very good of this particular type. Pelham is a tall grower with velvety, maroon-crimson flowers. A choice variety is Lady Cook with primrose flowers and a carmine wire edge. Sir Wilfred Laurier is a beautifully refined, pure white florists' flower, but not so tall a grower as Edith Leadenham. Hon. G. H. Reid is a beautifully built flower, heavily edged and striped with crimson-blood on a yellow base. The plant is of medium height and very free. The same may be said of W. M. Thompson, with orange-salmon flowers, striped with bright scarlet. R. L. Stevenson has fawn flowers striped with scarlet-lake, of medium size and produced with great freedom. The flowerless shoots (grass) are remarkably tall. Frederick Harrison has golden-yellow flowers, with narrow, carmine markings. It is a strong grower and flowers freely.

The flowers of Mrs. C. W. Townley are heavily



Narcissus poeticus ornatus.

margined with blood on a white base, and are the darkest of this particular type, that is, of those having a white ground. A smooth and good shaped flower is Sarasate, the colour being scarlet, with a maroon flake. Daybreak is white with a fine scarlet edge, and very pretty. A singular and even pleasing flower is Lorna Doone, being rose with a white flake, and quite contrary to the usual arrangement in a florists' flower, the ground colour of which is white, or should be, with darker flakes or markings. The variety in question grows strongly and flowers freely. Sarah Grand is a white flower with a few rose stripes.

An old and well-known border flower is Alice Ayres, with a few carmine stripes on a white ground. It is of strong constitution, and has stood the test of border culture for 15 years. Germania is still one of the most refined of florists' flowers, and is very dwarf when grown as a border flower, but carries the blooms well up. Corunna is another yellow which does best in pots, but even outside grows 2½ ft. high and flowers very freely. Other well-known sorts are grown here, but being highly refined florists' flowers they do not grow very strongly in the open ground.

The nursery lies on a slope, all the upper portion consisting of gravelly soil overlying London clay. The Carnations are entirely confined to the gravelly soil, upon which they thrive remarkably. The lower portion consists of the ancient bed of a stream, and here the gravelly soil has all been carried away leaving the London clay of the coarsest description exposed at the surface. Very little of this is cultivated, for few things would grow upon it unless ameliorated by the introduction of good loam. Some other plants are grown in the nursery, both herbaceous and shrubby, but chiefly the former, so that as we stated above, the Pinks and Carnations are the speciality here. Needless to say they are well done, for Mr. Gifford is a florist of long standing. His men were busy layering the Carnations; and we were surprised that the layers were being so lightly covered, but were assured that they like the sun, and root better by being near the surface, if watered in dry weather.

CULTIVATION OF THE CARNATION.

1. Time for Planting.—From the middle of September until the end of October is the best time. In the spring, whenever the weather is favourable, is also suitable for this work. When Carnations are planted too early in the open ground they sometimes suffer from the effects of drying winds.

2 Preparation of the Ground.—This should be done in September, or sooner, by trenching it to the depth of 15 or 18 in., working some decayed manure in during the process. A good medium clay loam is best, and one rather inclined to be heavy than light; but I have grown Carnations admirably on light sandy soil—in this case some clayey loam mixed with leaf mould and decayed manure was placed round the roots.

3. Planting.—This should be done as soon as the plants are received, the ground having been previously prepared. Carry the box containing the plants to the bed, and plant them out as they are removed from the moss and papers. The plants should be 6 in. from the edge of the bed and 15 in. asunder in the rows. Plant to the first pair of leaves; the roots should be well into the ground, and some fine soil worked in amongst them, pressing it in with the fingers. After planting, mulch the surface of the soil amongst the plants with decayed manure; this arrests evaporation from the soil, and acts as a protective agent in winter.

4. Treatment after Planting.—The plants, if well put into the ground, do not usually require any support; but slender, tall plants may require a slight stick to hold them upright. Any plants that may become loosened, or even thrown out of the ground by alternate frosts and thaws during winter, must be pressed in with the fingers when the soil is soft.

5. Pot Culture.—All the successful exhibitors of Carnations grow a considerable number of plants in flower pots. The layers are potted up in the autumn in small flower pots, large and small sixties, two in the larger size and one in the smaller. The potting soil ought not to be too heavy; a good compost is formed of four parts loam, one of leaf-mould, and one of decayed manure, with sand to keep the material in a porous condition. After potting them, place in a garden frame, kept rather close for a few days; and if they are potted up early it may be necessary to shade from bright sunshine.—*James Douglas, F.R.H.S., Edenside, Great Bookham, Surrey.*

SOCIETIES.

GLOUCESTER.—*July 27th, 28th and 29th.*

The Gloucester Flower Show Committee held their show this year, in connection with the Agricultural Society's show. This is only the second year of the society, which aims at quality rather than quantity, and confines the competition to flowers and foliage plants. Fruits and vegetables are excluded, but there are differences of opinion as to the advisability of this course. Numerous smaller parish shows are, however, held for the exhibition of other garden products. The exhibits were arranged in a spacious marquee decorated with gaily-coloured bunting, where everything could be seen to the best advantage. The classes were mostly all open.

The most striking and effective feature of the exhibition were the groups of miscellaneous plants, arranged for effect in a space not exceeding 200 sq. ft. Six competitors entered the field for the valuable prizes offered, and such a magnificent display, it was admitted, had never before been seen in Gloucester. Mr. James Cypher, Queen's Road Nursery, Cheltenham, secured the premier award for a tastefully arranged group of choice Orchids, Crotons, Ferns, Tuberoses, and various other subjects, surmounted by arches of cork containing Orchids and other exotics in bloom. Visitors were immensely pleased with the novelty of the exhibit. Mr. Wm. Vause, Somer's Place, Leamington, was a close second. T. P. W. Butt, Esq. (gardener, Mr. G. W. Marsh), Arle Court, Cheltenham, took the third place; and Mr. H. Whitehead, Heathfield Nurseries, Gloucester, was fourth.

Mr. J. Cypher again took the lead for twelve stove or greenhouse plants, as well as for six Palms, easily holding his own against his competitors. He also had the best floral display. Mr. W. Vause and Messrs. Roberts & Starr, Gloucester, were his keenest competitors. The last named had the best Ferns. Messrs. D.&W. Croll, Dundee, had the best twenty-four Roses. Mr. A. W. P. Pike, Windsor Place, Cardiff, had the finest collection of Carnations and Picotees. Mr. H. Miller, Quedgeley, Gloucester staged the best collection of Sweet Peas. Mr. John E. Herbert, F.R.H S., Wootton, Gloucester, showed the best six Begonias.

The show was opened by Lady Dorington, accompanied by Sir John Dorington, in the presence of a large and fashionable gathering of county and city folk. Her ladyship was welcomed by Alderman Estcourt, and being heart and soul in love with horticulture, made a very appreciative speech at the opening ceremony.

LIVERPOOL.—*July 31st and August 2nd.*

Owing to pressure upon our space last week, only some of the exhibits at this show were noticed, and we again revert to the matter. Last year the summer fixture was omitted with the hope that the diminished exchequer might be somewhat restored; that was done to some extent, and in respose to the desire of many of the subscribers, the old order of things was arranged, but with the unsatisfactory result of a diminutive entry, the numbers for the present year being about 300 against 400 two years ago. The exhibits were staged in a T shaped marquee of some 400 feet in length the upper parts being 300 feet.

For a single Palm, J. Waring, Esq. (gardener, Mr. J. Pattison) won with a noble plant. The same exhibitor took the lead for six exotic Ferns, not named. For single tree Fern, J. A. Bartlett, Esq. (gardener, Mr. T. Gowan) won with a fine Dicksonia squarrosa. For a single Fern, not tree, Mr. Cromwell scored with a grand Davallia fijiensis. For three Ferns, J. W. Wilson, Esq. (gardener, Mr. F. Field) took the lead.

For one Orchid, Mr. T. Gowan won with Saccolabium Blumei majus; for the pair (cool house) O. H. Williams, Esq. (gardener, Mr. Thos. Wilson) won with Lycaste Skinneri Cowan's Variety, and Oncidium crispum. For four varieties, E. Prior, Esq., was first; and Mr. J. Bracegirdle was second. Pelargoniums, Fuchsias and similar plants were well represented.

For twenty-four Roses (amateurs) Mrs. Cope, Woolton (gardener, Mr. T. Carling) secured first honours with small bright blooms. Mr. McColl was second. For twelve varieties Mr. T. R. Bulley, New Brighton, took the lead. For six light and six dark varieties, Messrs. A. Dickson & Sons, were first.

For the most tastefully arranged four-feet box, Thos. Gee, Esq. (gardener, Mr. P. Greene) won with a pretty combination. For twelve bunches stove and greenhouse flowers, Mr. Carling was first with a grand lot of choice varieties.

The fruit section accounts to a considerable extent for the reduction of entries; and like other shows in the North the quality was certainly on the undesirable side.

For four bunches Grapes, two black and two white, Mr. T. Elsworthy won with Madresfield Court, Muscat of Alexandria, Black Hamburgh, and Buckland's Sweetwater. Two bunches of Black Hamburgh, J. Bright, Esq. (gardener, Mr. J. Skitt) was to the fore. For two bunches of Muscats, Sir J. A. Meyrick, North Wales (gardener, Mr. J. Gray), was first. For two bunches of any other black, Mr. T. Elsworthy won with Madresfield Court, Mr. Gray winning for any other white with Foster's Seedling.

For six Peaches, Peter McGuffie, Esq., Woolton Hall (gardener, Mr. T. Stephenson), won with large Royal George, and for six Nectarines, Mr. G. Leadbeater was in front. Mr. R. Pinnington took the lead for a scarlet-fleshed Melon.

For two dishes of Peas, F. L. Bahr, Esq. (gardener, Mr. J. Salisbury), had the best. For four dishes of Potatos, Mr. W. Lyon took the lead; and Mr. B. Ashton for the two dishes. For three dishes of Tomatos, Mr. J. Stephenson won with Perfection, Duke of York, and Plentiful.

Mr. Carling won with the single dish, with Duke of York, and he also secured first honours for four pots carrying fine fruits.

NORTHAMPTON.—*August 2nd and 3rd.*

The sixteenth annual show of the Northamptonshire Horticultural Society, was held by the kind permission of J. Cooper, Esq., J.P., in the Delapre Park. It is usually held on Bank Holiday and the day after, when great crowds of people are attracted from various parts of the country. About £300 were offered in prizes, and though the entries were not so numerous as formerly, little fault could be found with the quality. The judges were Mr. A J. Smith, Mentmore; M. J. Hudson, Gunnersbury House; Mr. J. Holland, Springfield, Northampton; Mr. H. Collins, Berry Wood; Mr. J. Palmer, Cliftonville, Northampton; and Mr. W. T. Rollings, St. John's Hospital.

Open to the United Kingdom.—The class for twelve stove or greenhouse plants contained some splendid exhibits, and good prizes were offered. The place of honour was secured by Mr. J. Cypher, Cheltenham, who had splendidly flowered specimens. He was followed by Mr. W. F. Finch, Coventry, and by Mr. W. Vause, Leamington, in the order named. Competition was not keen in the class for a miscellaneous group of plants arranged for effect in a space not exceeding 240 square feet, there being only two groups put up. Mr. J. Cypher took the lead, his opponent being Mr. W. Vause.

In the same open division J. A. Johnston, Esq. (gardener, Mr. David Gibson) Coombe Cottage, Kingston-on-Thames, secured the premier award for a collection of fruit, showing grand samples of Black Hamburgh, and Muscat of Alexandria Grapes, Windsor Castle Melon, Downton Nectarine, Royal George Peach, Lady Sudely Apple, Morello Cherries, and Pears. The Marquis of Northampton (gardener, Mr. J. Heyes) Castle Ashby, was second; and Earl Spencer, K.G. (gardener, Mr. S. Cole) Althorp Park, had to take the third place. Prizes were offered for a collection of twelve kinds of vegetables in the open class, and the premier honours were taken by B. V. Vernon, Esq. (gardener, Mr. James Dymock) Stoke Bruerne Park, Towcester. He had grand dishes of Autumn Giant Cauliflower, Satisfaction Potato, Intermediate Carrot, Best of All Runner Bean, Perfection Tomato, Moore's Cream Marrow, Giant White Celery, Snowball Turnip, Duke of Albany Pea, Sutton's Peerless Cucumber, Ailsa Craig Onion, and Blood Red Beet. The arrangement of these vegetables was splendid. He was followed by Sir H. Wake, Bart. (gardener, Mr. J Kightley) Courteenhall, and by Earl Spencer, respectively.

S. S. Berger (gardener, Mr. W. Eyden), Stevenage,

had the best twenty-four varieties of Roses. Messrs. J. Perkins & Son, Market Square, Northampton, followed; and Messrs. T. Perkins & Sons, The Drapery, Northampton, took the third place. The latter came to the front for twelve Tea Roses. Mr. S. Mortimer, Swiss Fursery, Rowledge, Farnham, took the lead for twenty-four Dahlias.

Open to Gentlemen and Their Gardeners.—Mrs. Phipps (gardener, Mr. J. Copson), Collingtree Grange, had the best six stove or greenhouse plants. Earl Spencer showed the best eight table plants, followed by S. Loder, Esq. (gardener, Mr. W. Pearce), Floore, Weedon. The latter took first for exotic Ferns. Mrs. Phipps had the best Coleus, Pelargoniums, Cockscombs, and took other prizes. The Marquis of Northampton took several other prizes. The Rev. Dr. King, Gayton, had the best twelve Roses. Mr. F. Beard was first for Fuchsias and twelve Dahlias.

There was a fair display of fruit. The first prize and the Silver Medal of the Royal Horticultural Society for a collection were taken by the Marquis of Northampton. Mrs. Middleton (gardener, Mr. J. R. Wilson), Hazelbeach Hall, put up the best black Grapes. Lord Annaly (gardener, Mr. A. V. Jordan), Holdenby House, took the same place for white Grapes F. Bostock, Esq. (gardener, Mr. J. Holland), Springfield, Northampton, took the lead for Peaches; and Mrs. Middleton for Nectarines. Prizes were also awarded for Apples, Pears, Strawberries, Raspberries, and Currants.

Considering the dryness of the season Vegetables of excellent quality were staged. Sir H. Wake, Bart., J.P., took the first prize and the Bronze Medal of the Royal Horticultural Society for a collection of nine kinds. S. Loder, Esq., secured the leading prize for three dishes kidney Potatos. W. Dunkley, Esq., was first for round varieties. The Marquis of Northampton had the best Onions; Earl Spencer, the best Cauliflowers; and Mrs. Phipps the best Peas.

Numerous classes were also set apart for amateurs throughout the county, and competition, generally, was good for plants, cut flowers, fruit and vegetables. There was a division for cottagers, another for the town and county, and for artisans and cottagers of the borough. There was a fair number of non-competitive exhibits.

Special prizes were offered by Messrs. Sutton & Sons, Reading, for a collection of vegetables. B. V. Vernon, Esq., Sir H. Wake, Bart., Mrs. Phipps, and W. Dunkley, Esq., took the prizes in the order named. Messrs. E. Webb & Sons, Stourbridge, also offered prizes for vegetables. B. V. Vernon, Esq, was again first, followed by F. Douglas, Esq., Collingtree. Messrs. T. Perkins & Sons and Messrs. Pearman & Co., also offered special prizes.

MIDLAND CARNATION AND PICOTEE.

August 5th and 6th.

As might have been supposed most of the leading lights of the Carnation and Picotee world foregathered at the Botanic Gardens, Edgbaston, Birmingham, on the occasion of the annual show of this progressive and energetic body. So considerable indeed has been the progress of the last twelve months that the membership has substantially increased and the business yield in the matter of numbers of exhibits and exhibitors were proportionately greater. Of the latter there were seventy-three or seventy-four separate growers represented, as against fifty odd last year, and it is only fair therefore to surmise that the Midland society, and those connected with its working, are doing a really sound and progressive work in developing interest in these choice and pretty flowers.

The society is fortunate in having a suitable site for their show at the Botanic Gardens—the conservatories of which form a really very suitable place for a show of a special form of culture such as the Carnation and Picotee. Not only within these houses was there a veritable floral feast both in the way of the permanent specimens of plant life — as well as the exhibition proper—but the surrounding gardens out of doors, with the lovely grassy slopes to the valley grounds below, all helped to enchant the visitor and the lover of the beautiful in nature. The out-door beds were many of them exclusively planted with Carnations, a very fine bed of Uriah Pike just below the memorial rock garden being specially worthy of note, whilst a little further on was an equally fine batch of the yellow Germania.

Within the conservatory the entries generally were of wonderful quality considering the exceptionally dry and scorching season through which we have been passing; it was said, however, that the fixture being a week later than usual, coupled with the potent factor in the matter of weather, had to some extent missed the zenith of the blooms grown round about Birmingham. Be that as it may, however, the local growers gave an excellent account of themselves.

The yellow grounds, fancy, and self varieties were especially rich, many of the blooms being characterised by perfect development of form and exquisite colouring. White grounds have suffered a good deal from adverse weather conditions, and were much inferior as a whole, to the yellow grounds. Among Picotees, the varieties most in favour appeared to be "Voltaire," a delicate yellow, with magenta fringe; and "Golden Eagle," with its dainty edging of rosy purple. Border Carnations were shown in great numbers, but in some instances were not up to show form. The bouquets, sprays, and table decorations formed a charming feature, the graceful arrangement and delicious blending of colours marking high artistic attainment. Mr. A. W. Jones and Mr. R. Sydenham were the winners of the cups offered to the growers who achieved the greatest success in the general competitions. Both these growers gained the distinction for the second consecutive year, and the trophies now become their absolute property. Mr. Sydenham has announced his intention of replacing the Cup he has won with another in the competition, for which he himself will not take part. The following were among the chief awards:—Twelve flakes or bizarres: first, J. Edwards, Manchester; second, T. Lord, Todmorden. Six ditto: first, C. F. Thurstan, Wolverhampton; second, A. R. Brown, Handsworth. Twelve Picotees: first, R. Sydenham, Birmingham; second, T. Lord. Six ditto: first, A. W. Jones, Handsworth; second, F. W. Goodfellow, Walsall. Twelve yellow grounds or fancies: first, A. W. Jones; second, R. Sydenham. Six ditto: first, C. F. Thurstan; second, R. C. Cartwright, Birmingham. Six yellow-ground Picotees: first, A. W. Jones; second, Thomson and Co., Birmingham. Twelve selfs: first, A. R. Brown; second, R. Sydenham. Six ditto: first, A. W. Jones; second, C. F. Thurstan. Twelve selfs, fancies or yellow grounds: first, Thomson and Co; second, A. W. Jones. Six ditto: first, G. Chaundy, Oxford; second, R. C. Cartwright. Six flakes or bizarres and six Picotees: first, R. Sydenham; second, J. Edwards. Three flakes or bizarres and three Picotees: first, D. Walker; second, W. Bellamy. Six Carnations or Picotees (amateurs): first, G. F. Spittle, Edgbaston; second, H. Hunter, Walsall. Single blooms—scarlet bizarres: first, R. Sydenham; second, Thomson and Co. Crimson ditto: first and second, J. Edwards. Pink and purple ditto: first, A. R. Brown; second, R. Sydenham. Scarlet flakes: first, D. Walker; second, J. Edwards. Rose flakes: first, J. Whitham; second, T. Lord. Purple flakes: first and second, R. Sydenham.

Heavy red-edge Picotees: first, R. Sydenham; second, A. R. Brown. Light ditto: first, A. W. Jones; second, R. Sydenham. Heavy purple-edge Picotees: first, A. R. Brown; second, R. Sydenham. Light ditto: first and second, A. R. Brown. Heavy rose-edge Picotees: first, A. W. Jones; second, T. Lord. Heavy scarlet-edge Picotees: first, C. Head, Hebden Bridge: second, R. Sydenham. Light rose or scarlet-edge Picotees: first, T. Lord; second, Thomson & Co. White or flesh selfs: first and second, C. F. Thurstan. Yellow, buff, or terra-cotta selfs: first and second, A. R. Brown. Pink, rose, or scarlet selfs: first and second, T. Lord. Dark selfs: first, A. R. Brown; second, J. Brocklehurst, Manchester. Yellow-ground Picotees: first, R. Sydenham; second, F. W. Goodfellow. Fancy Carnations: first and second, A. W. Jones. Twelve border Carnations, or Picotees; first, G. Lindop, Longport; second, J. Walker, Thame. Six varieties, border Carnations: first, H. W. Weguelin, Torquay; second, W. Barsby, Leicester. Twelve varieties border Carnations: first, M. R. Smith, Hayes; second, Thomson & Co. Six varieties border Carnations: first, H. W. Weguelin; second, W. Barsby. Six pot Carnations: first, Thomson & Co.; second, R. Sydenham. Shower bouquets: first, M R. Smith; second, W. F. Gunn, Olton; third, Miss B. Mayell, Acock's Green. Sprays: first, M. R. Smith; second, R. W. Proctor & Son, Chesterfield; third, Thomson & Co. Three button-holes: first, R. Sydenham; second, Mrs. Lovatt, Newport, Salop; third, R. C. Cartwright, Birmingham. Table decorations: first, Miss B. Mayell; second, Miss Swinden, Birmingham; third, Miss A. G. Kemp, Edgbaston; extra prize, Mrs, Lovatt. Six pots Benary's varieties: first, R. Sydenham.

Nine varieties Sweet Peas: first, R. Sydenham; second, J. Sceaney, Harborne. Epergne of Sweet Peas: first, Miss A. G. Kemp; second, Mrs. Lovatt; third, W. L. Sheffield, Edgbaston. Twelve varieties Sweet Peas: first, A. W. Hulse, Beech Lanes; second, V. B. Johnstone, Tettenhall. Six varieties Violas: first, Mrs. Lovatt. Twelve varieties herbaceous blooms: first, J. Walker; second, Mrs. Lovatt. Charles Turner Memorial Cup (for most successful exhibitor in first thirty-three classes); A. W. Jones, 57 points. Society's Challenge Cup (for large and trade growers): R. Sydenham, 74 points.

The following awards were made for non-competitive exhibits:—Silver-gilt medal: J. H. White, Worcester, collection of herbaceous plants. Silver medals: Hewitt & Co., herbaceous and other plants; B. R. Davis, Yeovil, double Begonias; H. Eckford, Wem, new varieties of Sweet Peas; W. and J. Birkenhead, Sale, collection of Ferns. Bronze medal: W. F. Gunn, hardy border plants.

The premier prizes were awarded to the seven premier flowers in the exhibition, viz., bizarre Carnation, flake Carnation, heavy edge Picotee, and best fancy Carnation, as follows:—Bizarre Carnation, J. Edwards; flake Carnation, R. Sydenham; heavy edge Picotee, R. Sydenham; light edge Picotee, A. W. Jones; yellow-ground Picotee, C. F. Thurstan; self Carnation, Thomson & Co.; fancy Carnation, A. W. Jones.

Medals were awarded as follows:—Silver, for highest points in Classes I., III., V., VII., VIII., X., and XII., won by R. Sydenham; Bronze, for next highest in same classes, won by Mr. A. W. Jones; Silver, for highest in Classes XXXIV. and XXXVI. (this is not decided yet, two exhibitors having the same number of points); Bronze, in Classes XXXV and XXXVII, won by H. W. Weguelin, Torquay; bronze, in single bloom classes, won by Mr. R. Sydenham.

The judging was entrusted to the undermentioned experts:—Open classes: Messrs. J. Ball, Slough, and J. Whitham, Hebden Bridge; single blooms, Messrs. T. S. Hedderley, Nottingham, and P. Simonite, Sheffield; bouquets, sprays, and table decorations, Mrs. G. J. Johnson; miscellaneous exhibits, Messrs. R. Dean, London, W. Spinks, and B. Latham. The secretarial duties were very ably rendered by Mr. Herbert Smith, assisted by Mr. Wood, whilst Mr. G. Pressly contributed yeoman service in various other departments, to the satisfaction of everybody concerned.

In the absence of the Lord Mayor of Birmingham, Mr. Richard Dean, of London, presided at the luncheon, which took place at two o'clock in a spacious marquee erected in the grounds, and a short toast list was gone through. In submitting the "Health of the Judges" Mr. R. Sydenham referred to the immense and undeniable progress their society had made, which had produced the very fine show they had that day, and created for the judges engaged a very hard task. Some exhibitors, perhaps, might be dissatisfied, but this was only natural perhaps, and only in keeping with the old saying, "that a mother always thought her own children the best." So it was with growers and exhibitors, who had sometimes a pronounced predilection for their own blooms.

In introducing the name of Mr. Ball, with whom he coupled the toast, he described that gentleman as one of the oldest and best florists in the country, one who could refer with just pride to a venue of fifty-one years in the service of the same firm. Mr. Ball responded, referring with evident satisfaction to Mr. Turner's success at the Hamburg show, which has already been fully reported in last week's Gardening World. Mr. Whitham also responded.

Mr. Richard Dean proposed success to the "M.C. and P.S.," echoing the sentiments of every lover of the beautiful flower, and expressing a great feeling of disappointment when he expected to find an inferior lot of exhibits owing to the season, instead of which they had come to judge a marvellous sight, particularly in the yellow grounds and selfs. He

congratulated them on a growing exhibition. Compared with the Regent's Park show, the Midland certainly held its own, and now that Oxford had discontinued, the centre of gravity would be towards Edgbaston. It was interesting to recall the specimens grown in the fifties such as Admiral Curzon, Sarah Payne, Rifleman, and others, and to observe the vast improvements in the flower with which the names of Mr. Martin R. Smith and others were so closely associated. Congratulating the winners of the two cups, he coupled with the toast the name of Mr. R. Sydenham, who was received with applause.

Mr. R. Sydenham said he recollected with a considerable amount of interest his first visit to the late Mr. Dodwell some nine years ago and recounted how he first became engrossed in the study of the Carnation, declaring that from the study of flowers could be derived a pleasure such as could be obtained from no other source. He referred with pleasure and satisfaction to the increased number of exhibitors from 25 at their first show to 73 or so to-day, and amongst all that competed he congratulated Mr. Jones specially in winning the Amateur Cup. He considered the flower one that might be easily grown with success. It was eminently suitable for town cultivation, and he expressed great personal gratification in taking the Challenge Cup. In concluding he submitted the "Health of Mr. Jones" the winner of the other Cup.

That gentleman responded and the meeting closed with a vote of thanks to the chair in which the elements outside joined in thunderous applause.

ROYAL HORTICULTURAL.—*August 10th.*

The meeting on Tuesday last was quite characteristic of August in being quiet. The principal features of the exhibition were Dahlias, Gladioli, Lilies, Cannas, and hardy herbaceous plants. Orchids were not numerous, but Messrs. J. Veitch & Sons, Ltd., Chelsea, had a small group, of hybrids chiefly. Laeliocattleya callistoglossa ignescens, L. Clonia, and Cattleya Atalanta were all handsome hybrids, rendered more valuable by their flowering at this season. A very handsome variety is Odontoglossum Pescatorei Harrisianum, with numerous violet purple blotches at the base of the segments.

Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking, exhibited a grand piece of Platyclinis filiformis (Cultural Commendation), Eulophia guineensis, Masdevallia infracta purpurea, and Nanodes Mathewsii.

Messrs. Hugh Low & Co., Clapton, staged a group of Cattleyas, also Oncidium jonesianum, O. lanceanum, O. Papilio, O. haematochilum, Cattleya bicolor, Cypripedium Charlesworthii, and various other species and hybrids, making a well-flowered little group (Bronze Banksian Medal).

Messrs. F. Sander & Co., St. Alban's, exhibited an interesting lot, including Sobralia Holfordii, S. xantholeuca, Odontoglossum krammerianum, O. bictonense album and various others all well-flowered.

J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford, exhibited Cypripedium callo-rothschildianum, C. Neptune, C. A. de Lairesse and C. massianum, all with hugeflowers. He also had a fine piece of Renanthera Storiei.

T. Statter, Esq. (gardener, Mr. R. Johnson), Stand Hall, Manchester, showed a very good form of the blue Dendrobe (Dendrobium Victoriae Reginae). R. I. Measures, Esq. (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell, showed Laeliocattleya andreana. E. Ashworth, Esq., Harefield Hall, Wilmslow, showed Laeliocattleya elegans schroderiana. Sir F. Wigan (grower, Mr. W. H. Young), Clare Lawn, East Sheen, had eighteen flowers which came off one plant of Laelia elegans, of the Turneri section.

Messrs. J. Veitch & Sons, Limited, set up a very large and comprehensive group of annuals, including Lavatera, Chrysanthemum, Helichrysum, Godetias, Clarkias, Stocks, Calliopsis, Phlox, Drummondi, Larkspurs, China Asters, Gaillardias, Verbenas and several perennial species of Gypsophila. The scarlet flowers of Cacalia coccinea were noticeable on account of their rich colour, all were in the freshest condition possible (Silver Gift Banksian Medal).

Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, exhibited an extensive group of Lilies set up with Asparagus stems, and interspersed with various varieties of Crocosmia. Lilies included Lilium auratum, L. speciosum, L.s. Melpomene, L. tigrinum splendens, L. superbum, L. longiflorum giganteum, L. Batemanniae, L. speciosum album novum, some Gladioli and Kniphofia. The whole made a very effective display (Silver Banksian Medal).

Mr. Thos. S. Ware, Hale Farm Nurseries, Tottenham, set up a large collection of hardy herbaceous plants, including Rudbeckia purpurea, Lilium tigrinum splendens, L.t. Fortunei, Veronica longifolia subsessilis, Delphiniums, Gaillardias, Phloxes, Sunflowers, Scabiosa caucasica, Veratrum nigrum and various other useful border plants (Silver Flora Medal).

Mr. M. Pritchard, Christchurch, Hants, also had hardy cut flowers set up in large bunches. Many of these were useful border subjects (Silver Flora Medal).

Messrs. J. Veitch & Sons, Limited, brought up a collection of ornamental trees and shrubs in flower and fruit, including Thuya wareana aurea, Hypericum floribundum, Hydrangea quercifolia, Eugenia Ugni variegata and many others.

Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain), sent up a group of Cannas and Gladioli in many fine varieties. He also had Lobelia Carmine Gem, and L. Crimson Gem. Crinum Powelli album was also fine (Silver Banksian Medal).

Messrs. Dobbie & Co., Rothesay, N.B. and Orpington, Kent, set up a small group of African Marigolds, Lemon Queen and Prince of Orange (Bronze Flora Medal).

Mr. S. Mortimer, Rowledge, Farnham, Surrey, staged twelve stands of show and fancy Dahlias including all the best of those sections; also Cactus Dahlias in many fine varieties all properly named (Silver Flora Medal).

Mr. J. Walker, Thame, Oxon, had a similar though smaller exhibit of Dahlias, which were in excellent trim (Silver Banksian Medal).

Messrs. Barr & Sons, King Street, Covent Garden, set up a bold group of Delphiniums, Gladioli, Lilium auratum rubro-vittatum, Statice latifolia, Sunflowers, Phloxes in great variety and various other subjects (Silver Banksian Medal).

Messrs. Kelway & Son, Langport, Somerset, set up a large collection of Gladioli arranged in a radiating manner on vertical boards, all along one side of the Hall, and very forcibly recalling an arrangement of Jubilee flags. A narrow tin box contained water for their support (Silver Gilt Banksian Medal). The arrangement was certainly novel and attractive. They also had some Gaillardias and Rubus phoenicolasius.

Messrs. Hugh Low & Co., had a group of the new Orchid-flowered Cannas, including America and other fine types. The group was surrounded by a line of Statice in pots (Silver Banksian Medal).

Messrs. J. Cheal & Sons, Crawley, Sussex, staged some stands of Cactus, pompon and single Dahlias; they also had a stand of new varieties, including a pompon Cactus named Profusion.

Messrs. A. W. Young & Co., Stevenage, Herts, exhibited Gloxinia flowers, Dahlias, China Asters, and trusses of Pelargonium, King of Denmark. They also showed Carnations. J T. Bennett Poë, Esq. (gardener, Mr. Downes) Holmwood, Cheshunt, exhibited a box of cut flowers of a beautiful Verbena named V. Tresserve and a basket of the uncommon Calceolaria alba with white flowers, closely resembling berries at a short distance. Mr. James Stredwick, Silver Hill, St. Leonards, staged some fine Cactus Dahlias, including Daffodil, Jubilee, and Miss Agnes Box.

At a meeting of the fruit and vegetable committee, Messrs. Geo. Bunyard & Co., Maidstone, set up a fine collection of Apples, Peaches, Pears, and Apricots. Amongst the Apples, Beauty of Bath, Gladstone, Lady Sudeley, Red Quarrenden, Red Juneating and Okera were highly coloured (Silver Knightian Medal).

Lord Foley (gardener, Mr. J. Miller), Ruxley Lodge, Esher, exhibited eighteen dishes of fruit, including fine Figs, Melons, Peaches, Apricots, &c. (Silver Banksian Medal).

Mr. Wm. Smythe, The Gardens, Basing Park, Alton, Hants, exhibited a hybrid Bean between a Dwarf Bean and a Scarlet Runner. A cultural commendation was accorded to Mrs. Abbott (gardener, Mr. George Kelf), South Villa, Regent's Park, N.W., for a box of Royal George Peaches in grand condition. F. F. Bladon, Esq. (gardener, Mr. J. Moody), Sutton House, Sutton, Hull, staged a dish of Tomatos named Sutton Beauty. Mr. Wadds, Cliveden Gardens, Maidenhead, exhibited some most prolific stems of the Blackberry Kittatiny.

Mr. G. Wythes, Syon House, Brentford, got the second prize for Apple Lady Sudeley, and also for Pear Jargonelle, as the best flavoured of their kind in season.

ROYAL BOTANIC SOCIETY.

School of Gardening to be Started.

Mr. C. Brinsley Marlay presided yesterday at the fifty-eighth annual meeting of the Fellows of the Royal Botanic Society, held in the museum of the society, Regent's Park. The report stated that the council had decided to open a school of practical gardening, and to hold examinations and grant certificates to gardeners. This scheme had already been officially recognised by the Technical Education Board, who were sending pupils to the classes and had voted an annual grant of £100 towards their maintenance. During the year 1896-7 152 new Fellows had joined, and the number on the books was now 2,000.

The Chairman, in moving the adoption of the report, said that the renewal of the lease had been promised by the Office of Works and Forests at an annual rental of £450 for the maximum term of thirty-one years. In order to satisfy the Department it had been necessary to show that the society's position was financially sound. With this object the council and some leading Fellows had raised a guarantee fund to meet present liabilities, and to wipe out the debt which had been going on for some time, and was due to reasons over which the present council had no control. He was happy to say that the prospects of the society were brighter than they had been.

Mr. J. S. Rubenstein welcomed the report as the most satisfactory one that had been submitted during recent years. They had not been informed whether the admission of the public on Mondays and Saturdays had been a success. He believed that the experiment had been most successful, and that all the prophecies uttered against it had proved erroneous.

Sir J. Blundell Maple's Scheme.

Sir J. Blundell Maple, M.P., said that it should be known that the Government in granting the new lease made it a condition that for two days a week the public should be admitted during fourteen weeks in the year. He hoped that the council would be inclined to turn its attention towards putting the society on a business platform. They had a debt of £20,000 which should be cleared off. They should make the gardens attractive, and he suggested that they should erect a small club-house where the Fellows and their friends could lunch and dine. A suitable building could be put up for £3,000, and they might impose a subscription of a guinea. The Welcome Club, Ranelagh, and other places proved how popular these clubs were, and one so centrally located as in their grounds would be successful. He was altogether a business man, but liked to interest himself in the public good, and did not wish the society to be under any liability in this matter. He was willing to lend them the £3,000, which he thought would do all that was required, at the rate of six per cent., to be paid over the thirty-one years, which would bring him back the money. If the place was built there were plenty of good purveyors in London who would run it and hand over ten or fifteen per cent. of the profits. He believed that it would prove very attractive, and would not be surprised to see it pay £2,000 a year.

Mr. Stephens, Q.C., said there were two sides to the question of the admission of the public. One was that the receipts on the two pay days, when no special attractions were provided, taking the whole year through, were exactly £75. That hardly illustrated the theory that the public flocked there in their thousands, attracted merely by the gardens. The money lost on the Saturday promenades, when a band was provided, was £48 10s. 6d. The more they threw open the gardens for general payment the more they diminished the money value of the particular payments on which they relied.

The Chairman said the Council would consider Sir J. Blundell Maple's proposal. It was not yet clear that the great body of the Fellows would like it, and the council had no right to take any steps against their wishes. He thought that the suggestion should be laid before each Fellow, who should be asked to give his opinion upon it. The report was then adopted, and the members of the council for the year were elected.—*Daily Chronicle.*

GLASGOW PARKS AND THEIR SUPERINTENDENT.

No city in the empire, probably, is so well supplied with parks and open spaces for the health and recreation of its inhabitants as Glasgow. *The Bailie*, for the 4th inst., gives a concise history of the parks and the dates of their acquisition, the oldest being Glasgow Green, which dates back to 1662. The greater number of the parks, however, have been acquired during the Victorian Era, say during the period from 1852 to 1897. The most recent addition is Tollcross Park, of eighty-two acres, which has been added to the list this year. The late Mr. Duncan M'Lellan whose death we recorded less than three months ago, was chiefly instrumental in laying out a large number of the parks, but since his installation as superintendent, Mr. James Whitton has laid out several of the newer parks and is still hard at work, his wide experience of west country climate enabling him to be very successful. A full page portrait of him appears in *The Bailie*, together with a concise history of his career both in private establishments and as superintendent of parks at Glasgow. Mr. Whitton is nothing if not up-to-date. At present he proposes the construction of a lake for boating and skating, a ground for volunteer reviews, a golf course, fields for general sports and a "ride" or "Rottenrow" for the city equestrians. London and the authorities that be will have to look to their laurels, if they must not be outdone by Glasgow.

THE AMBURY.

This disease is peculiar to Cabbage worts, being due to the attacks of a fungus named Plasmodiophora Brassicae, the spores of which infest the roots of all the Cabbage tribe, including Turnips, thus causing clubbing. Now there are but few of those who cultivate this class of plant, to however small an extent, who are not more or less troubled with it at times. The repeated growing of the same kind of crop for a number of years in succession, favours the multiplication of the fungus by affording it food which meets its natural requirements. Where there is ample space to frequently change the Cabbage worts on to fresh ground, this disease will not give the cultivator any great deal of trouble, as a rule. Many remedies have from time to time been advocated. I have previously to this called attention to the use of red lead, but not from personal experience. On this occasion I do so, for having to grow a crop of Cauliflowers on a piece of ground badly infested with it, I thought I would give this remedy a fair trial. So I resolved to pot up the young plants in a compost with red lead in it, the proportion being 4 ozs. of red lead to a bushel of soil. This was thoroughly well mixed, and when the plants were well established I planted them out without breaking the balls. The previous crop was Turnips, almost worthless owing to ambury; so I submit this was a fair test of the merits of the remedy. The result has been most gratifying, for having now used up most of the crop of Cauliflower, and having carefully examined every plant, I have not found the slightest evidence of the presence of the ambury.—*W. B. G.*

COMPLAINT OF A TOMATO PLANT.

"Oh dear! dear! what a sad fate it is to belong to an amateur gardener," cried a Tomato plant growing in a pot in a greenhouse.

"Grumbling again," replied a neighbouring plant. "Now what is the matter?"

"The usual thing, I am hungry and thirsty."

"But I am not, why should you be?"

"I wonder how many times I have told you that it makes a great difference growing in a border where you have plenty of moisture."

"Yes, I have nothing to complain of. I am very happy, and I heard our mistress tell a friend yesterday, how pleased she was with me, and that the seed from which I was grown, was her own saving."

"Ah! that accounts for the extra attention you receive. I, unfortunately came from Sutton's. How well I remember my poor mother saying she hoped none of her fruit would be saved for seed, and sold to amateur gardeners. She was a magnificent plant herself, and 15 lbs. of Tomatos were cut from her. Alas! the fruit of which I was an ovule, was saved for seed, and last January when our mistress wrote to Sutton's for some of their 'Perfection,' I with my sisters was sent."

"Well, how did she treat you at first?"

"Oh, not badly at all, we were sown in a pan of nice loamy soil, covered with a clean piece of glass, and put in a warm greenhouse. We were soon tired of being in the dark, and showed ourselves in a few days. We grew rapidly, and just when we were getting in each others' way, she kindly potted each of us in a 60. Three weeks from that period, my troubles began. I had filled the pot I was in with roots, but although I pushed them through the drainage hole, not the slightest notice did she take. 'She was so busy she did not know which way to turn,' I heard her often say; consequently we suffered. At last one wet day, she turned her attention to us. She put us in large pots, but oh! how wet and dirty they were, she seemed to think far more of wiping the outside than the in. She put very few crocks for drainage; I know, I, personally have only one piece, so you can perhaps now understand my constant state of thirst. The soil she used was wet, and she did not pot us firmly, knowing of course nothing of capillarity; it was also far too rich to start with. After being starved so long, we, or rather I, (for I should only answer for myself) greedily took in all the nourishment I could. Of course I grew tall and lanky, and my first bloom did not appear as low down the stem as she wished. I have now set three bunches of fruit, but I am afraid that is all I can do, and the question is, will they ever swell and ripen, when I have neither enough to eat nor drink."

"But she certainly waters you every day, for I hear her."

"My dear Challenger, I don't deny that she does, but I get no benefit, for it drains away as fast as she gives it. In an hour afterwards I am as dry as before."

"I had some nitrate of soda yesterday, did she not give you any?"

"Unhappily no, although I was famishing for it. I heard her say to herself, 'Oh, I shan't waste any on Sutton's plants, they are not my saving.' My leaves curled up with suppressed merriment as I thought what Sutton's people would say if they could see the way I had been treated."

"Well, I must say it is rather hard lines not to have given you any nitrate; I had also potash and phosphorus last week."

"Oh! don't tell me of all the good things you get, no wonder you do well, and that she is proud of you. Fortunate one! growing in a deep moist border, and all your leaves left."

"Why, you don't mean to say that yours are gone?"

"She has cut off the greater part, said they shaded the fruit, so I am not only deprived of nourishment at the root, but I cannot take as much CO_2 as I require from the air."

"Poor thing, I really am extremely sorry for you, I had no idea you had such good reasons for grumbling. But we must be quiet now, for here comes our mistress with the watering can."—*Solanaceae.*

GARDENING MISCELLANY.

DELPHINIUM BELLADONNA.

In spite of all the recent improvements amongst Delphiniums, this still holds a prominent position on account of its pleasing bright sky-blue flowers. Large or well established plants throw up stems about 3½ ft. or 4 ft., but young ones are much dwarfer, and flower equally freely. There is a large bed of young plants in the Montague Nursery, Tottenham, where Mr. F. Gifford grows it for the sake of cut flowers, which are highly esteemed amongst his customers, who ask for them again and again. The variety first flowers in May. The large bed or plantation here was planted as small, single crowns in March. The first flowering was in May, after which the stems were cut down. The whole bed was in full bloom for the second time at the end of June. Some of the plants were cut over, and will bloom for the third time, thus keeping up a succession till October. The variety can be recommended as a good border plant, or for beds, or for the purpose of cut flowers, according to the requirements of the establishment.

COPROSMA BAUERIANA VARIEGATA.

When this plant was comparatively new to us, it was more sought after than at present. Some twenty-eight years back it was rapidly increased by our nurserymen, there being a demand for it for bedding-out arrangements. It may occasionally be found now in use for that purpose; but I opine that to the large majority of gardeners it is fast becoming an unknown plant. I call attention to it as being for greenhouse decoration one of the very best variegated plants we have. A well grown plant with its shining green leaves, and decidedly marked variegation constitute it one of the most admirable of greenhouse shrubs; and where from the necessities of the situation flowering plants are scarce during the winter months, this from its almost unique brightness will serve to enliven the place. It is just one of those things which those with limited space should secure, because it may be turned outside for the summer months, when flowering plants are more plentiful.—*W. B. G.*

VERONICA HYBRIDA NEWRYENSIS.

This is a shrubby species with a habit similar to that of V. ligustrifolia, but taller, much more free in growth, and more bushy. The flowers are of a soft lilac but soon fade almost white, and are produced in abundance towards the apex of the shoots. The spikes are 1½ in. to 3 in. in length. A bush of it about 2 ft. high has been flowering for some time past at the south end of the rockery at Kew.

GREVILLEA ALPESTRIS.

The beauty of New Holland plants is often overlooked for the purpose of greenhouse decoration amidst the crush of soft-wooded subjects so much required for cut flowers. There are something like 160 species of Grevillea, mostly from Australia. G. alpestris is a dwarf species, and highly ornamental on account of its bright red or scarlet and yellow flowers which are produced in profusion at the ends of short, drooping lateral shoots. The clusters are moderate in size though numerous, and serve to give the plant an elegant appearance. The species forms a dwarf, upright bush, flowering in May in a cool greenhouse, or earlier in a warmer house. The small oblong-lanceolate leaves are comparable to those of a Myrtle rather than to the better known G. robusta, so largely used as a foliage plant in this country. The latter in its native country grows to be a tree of some size, and G. alpestris seldom exceeds a yard in height, but may be flowered when only 9 in. to 12 in. high. A coloured plate of it is given in *Revue de L'Horticulture Belge* for July.

OBITUARY.

Mr. John W. Lawrence.

Many of our older readers will, we are sure, regret to learn of the passing away at Chambersbury, Pa, U.S.A., on July 26th, in his 66th year, of Mr. John W. Lawrence formerly well known in this country as gardener at Farnham Castle, Surrey. Mr. Lawrence was gardener at Farnham Castle for some twenty-five years, and in the old South Kensington days of the Royal Horticultural Society was an occasional exhibitor of specimen Orchids, illustrating the highest cultivation. Many old Orchidists will doubtless still remember a very remarkable example of Dendrochilum filiforme which he once exhibited in the old Council room, and the like of which we have not seen since. He was an excellent gardener and highly respected by all who knew him.

Mr. Alfred Sutton.

We regret to announce the death of Mr. Alfred Sutton of Greenlands, Reading, who died at his residence on Saturday morning last at the ripe age of 79 years. Mr. Sutton was for 50 years an active member of the firm of Sutton & Sons, but retired from the business, together with his brother Mr Martin Hope Sutton, the founder of the firm, who survives him, nine years ago when the business was entirely made over to their sons, the present partners, He was more particularly interested in the floricultural part of the work, whilst his brother devoted himself principally to the agricultural and seed growing departments. In his private life he took the deepest interest in all religious movements, especially those established for the benefit of young men. He was one of the founders and chief supporters of the

Reading Church of England Y.M.C.A. He was a warm supporter of missionary work at home and abroad, especially the Church Missionary Society. At the present time three sons are working as medical missionaries in Quetta, Bagdad and South Africa respectively. He built three mission rooms in populous parts of the town, also the coffee house known as the "British Workman." He was a Sunday school teacher and superintendent, and for some years a Churchwarden of St. John's Church. He took a great interest in education and was a member of the School Board for 15 years from its formation, when he was elected at the head of the poll. He was a staunch supporter of the Royal Berkshire Hospital and for many years was a member of the Board of Management. Politically the deceased was a Conservative, but he took no active part in party politics. Mr. Sutton was a J.P. for Reading, and as a mark of respect to his memory and to note the passing away of one of Reading's oldest and most honoured residents, the bell at the Municipal Church of St. Lawrence was tolled. His widow and ten children (seven sons and three daughters) survive him.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[*Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.*]

Roses on their own Roots.—*R. Williams*: Prepare as much ground as you require in a shady position behind a north aspect wall. Dig in some leaf soil and sand, or what will answer as well, sift some old potting soil from beneath the potting benches and spread that over the ground before digging. Take off side shoots sufficiently well ripened to be firm, and with a small heel of the old wood. Take out straight trenches in the prepared soil and insert the shoots about 5 in. in the soil. The cuttings should be prepared by cutting off the lower leaves, and topping them if so soft as to necessitate this operation. If too soft they might flag to such an extent that they would never recover. Cover the base of the cuttings with soil, and tread firmly. Then fill up the trench and dig over to the next one, and so on till all the cuttings have been put in. They should be ready for transplanting next spring so as to give them more room.

Passion Flower Constance Elliott.—*A. F. D.*: If the plant ripens any fruits you might collect the seeds and sort them. Plants raised from cuttings would probably flower sooner, and they would be more true to name perhaps than seedlings. Take shoots getting fairly firm and prepare them in the usual way by cutting them across at a joint. They need not necessarily be tips of shoots. Insert them firmly in pots of sandy loam and peat. Put them in a moderately warm house and cover them with bell glasses till roots are emitted.

Names of Plants.—*Sigma*: 1, The glaucous-leaved plant is not a Rush, but a grass, namely, Elymus arenarius; 2, Hieracium umbellatum filifolium; 3, Hippophae rhamnoides. The young vigorous shoots are not spiny, only the short ones on stunted bushes. Convolvulus Soldanella was also interesting.—*J. C. W.*: 1, Malva moschata alba; 2, Veronica longifolia rosea; 3, Campanula rhomboidalis; 4, Malva Alcea.—*W. Calder*: 1, Helenium pumilum; 2, Tropaeolum aduncum: 3, Nerium Oleander var.; 4, Nierembergia gracilis; 5, Osmunda regalis palustris.—*J. Herd*: 1, Mimulus cardinalis; 2, Pentstemon barbatus; 3, Spiraea lindleyana.—*J. Alexander*: 1, Asplenium fontanum; 2, Asplenium Adiantum-nigrum; 3, Polypodium Dryopteris; 4, Aspidium aculeatum; 5, Asplenium Ceterach.—*H. J.*: 1, Salvia patens; 2, Alyssum maritimum variegatum; 3, Abutilon megapotamicum variegatum; 4, Lathyrus latifolius.—*W. L.*: 1, Cypripedium barbatum var.; 2, Dendrobium formosum giganteum; 3, Odontoglossum crispum var.—*A. T.*: Cupressus pisifera plumosa; 2, Cupressus obtusa; 3, Cupressus nutkaensis; 4, Juniperus sabina; 5, Tsuga canadensis; 6, Pinus Strobus.—*S. G.*: 1, Tilia petiolaris; 2, Jasminum revolutum; 3, Aristolochia Sipho; 4, Spiraea salicifolia; 5, Cotoneaster microphylla; 6, Lycesteria formosa.—*P. Golden*: Quercus Cerris var.—*M.C.*: 1, Pimpinella Saxifraga; 2, Heracleum Sphondylium; 3, Achillea Ptarmica; 4, Rhinanthus Cristagalli; 5, Polygonum Persicaria; 6, Epilobium montanum. No. 1 and 2 should have been in fruit and a leaf sent along with each.

White flowered Bog Plant.—*T. Herd*: The plant is Parnassia palustris or Grass of Parnassus. You should have no difficulty in growing it provided you plant it in a boggy or wet position in peaty soil. Failing this you should grow it in pots in a cold frame facing the north, at least during the summer months. Drain the pots well, then make up a compost consisting of about equal parts of peat and loam, or rather more peat than loam, so that it may be kept all the cooler. In hot weather it would be a good plan to cover the soil with sphagnum to keep it cool and moist. As a rule there is no difficulty in keeping the plant under such conditions. Give it plenty of water during the summer months, and keep it cool.

Spring Bedding Annuals.—*W. Brown*: It is now rather late to sow in the open ground, but if you sow in boxes and transplant the seedlings before they get in any way crowded, they can be brought on rapidly. They should be of good size and quite ready to put into the beds by the time the summer-flowering subjects are lifted.

Communications received.—H. W. Adnitt.—W. W. Naunton.—C.—H. Cannell.—J. Mayne.—A. E. Stubbs.—A. Outram.—J. Kipling.—J. Y.—A. S. G.—L. D.—A. J. L.—H. J.—W. D.—A. West.—T. B.—A. L.—M.—A. H.—H. C.—S. J.

TRADE CATALOGUES RECEIVED.

JOHN DOWNIE, 144, Princess Street, Edinburgh.—Bulb Catalogue.

E. H. KRELAGE & SON, Haarlem, Holland.—Bulb Catalogue; also Novelties and Desirable Plants.

JAMES VEITCH & SONS, Ltd., Royal Exotic Nursery, Chelsea.—Catalogue of Bulbs; also Catalogue of Fruits; and List of Select Strawberries.

LONDON SEED TRADE.

August 10th, 1897.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Seed Market, Mark Lane, report an increased demand for Trifolium and Mustard after the recent rains; both articles are in good supply. Rape is very scarce and continues to advance in price. New English Italian is of excellent character and low in price. Tares are reported a large crop from all districts. New Rye unchanged.

COVENT GARDEN MARKET.

August 11th, 1897.

FRUIT.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Apples.....per bushel	2 6	7 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve		
Nova Scotia Apples per barrel		
Filberts..... per 100 lbs.	30 0	
Grapes, per lb	1 6	3 0
Pine-apples —St. Michael's each	2 6	8 0
Plums per ½ sieve.....	5 0	7 6
Strawberries, per lb.		
Tasmanian Apples per case		

VEGETABLES.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle	4 0	5 0
Beans, French, per per half sieve	4 0	5 0
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 0	3 0
Endive, French, doz.	1 0	2 0
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket		
Small salad, punnet	0 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips .....per bun.	0 3	.

CUT FLOWERS.—AVERAGE WHOLESALE PRICES.

	s. d.	s. d.
Arum Lilies. 12 blms.	2 0	4 0
Asparagus Fern. bun.	1 6	3 0
Asters (French) per bunch	0 9	1 0
Asters, various, doz. bunches	2 0	4 0
Bouvardias, per bun.	0 4	0 6
Carnations doz. blms.	0 6	3 0
Carnations, doz. bun.	3 0	6 0
Chrysanthemums dozen blooms	1 0	3 0
Cornflower, doz. bun.	1 0	2 0
Eucharis ...per doz	1 6	3 0
Gardenias ...per doz.	2 0	4 0
Geranium, scarlet, doz. bunches	3 0	6 0
Lilium longiflorum per doz.	2 0	4 0
Lily of the Valley doz. sprays	1 0	2 0
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Orchids, doz. blooms	1 6	12 0
Pansies 12 bun.	1 6	2 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	4 0	6 0
Poppy, various, doz. bunches	1 0	3 0
Pyrethrum doz. bun.	1 6	3 0
Roses (Indoor), doz.	6	1 0
" Tea, white, doz.	0 9	2 0
" Niels	1 6	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	1 0	2 0
Pink Roses, doz.	2 0	4 0
Roses, doz. bun.	3 0	6 0
Smilax, per bunch ...	1 6	3 0
Tuberoses, doz, blooms	0 3	0 4

PLANTS IN POTS.—AVERAGE WHOLESALE PRICES

	s. d.	s. d.
Arbor Vitae per doz.	12 0	36 0
Aspidistra, doz.....	18 0	36 0
" specimen	5 0	10 0
Asters, doz. pots	2 0	4 0
Cockscombs, doz. pots	2 0	3 0
Coleus, doz. pots.....	2 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, invar. doz	6 0	24 0
Ferns, invar., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0
Fuchsias, per doz. ...	4 0	6 0
Heliotrope...per doz.	3 0	4 0
Hydrangeas per doz.	8 0	12 0
Ivy-leaved Geranium, per doz.	3 0	6 0
Lilium Harrissii, per pot	1 0	2 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz	4 0	9 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...21	0	63 0
Pelargoniums ...doz.	6 0	10 0
Scarlets .....per doz.	1 6	4 0

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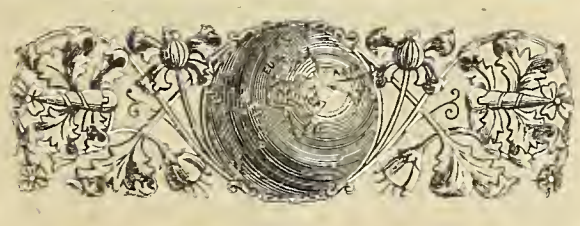


"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.
Edited by J. FRASER, F.L.S.
SATURDAY, AUGUST 21st, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, August 23th.—Special trade sale of Dutch bulbs by Messrs. Protheroe & Morris.
TUESDAY, August 24th.—Royal Horticultural Society; meeting of committees at 12 o'clock.
Royal Oxfordshire Show.
Brighton Show (2 days).
WEDNESDAY, August 25th.—Cheltenham Show.
Kingswood, St. George, and West Gloucester Show.
THURSDAY, August 26th.—Swanley Show.
Sale of Dutch bulbs by Messrs. Protheroe and Morris.
FRIDAY, August 27th.—R.H S. of Ireland Show.
Falkirk Show.
Sale of imported and established Orchids by Messrs. Protheroe & Morris.

THE FLOWER SHOWS.—Judging from those which have come under our notice, flower shows have been taking place at the rate of a hundred a week, or more, for the last three or four weeks in various parts of the British Isles, but particularly in the more populous districts of England, as might be expected. The dwellers in towns like shows, but are better supplied in this respect than the inhabitants of the more rural parishes and villages. To these latter places the flower show, coming as it does only once a year, is a notable event. Such people are not so likely to get satiated with flower shows as those who annually visit a large number for some purpose or other. Some take it as a matter of daily business, but others rail at the custom in its entirety, and ask of what use are modern flower shows. They even affirm that exhibitions are worthless from an educational point of view; but that we consider is too sweeping a statement to make. True, some people may visit a hundred shows and see practically nothing, but that sort of thing occurs in all vocations. It depends as much upon the visitor as upon the show itself, as to whether anything can be learnt or otherwise.

Even exhibitors may be successful so frequently at the shows they attend annually, that they become remiss and lax in their efforts till younger hands steal a march upon, and displace them. This in itself goes to show that younger, and probably more enthusiastic, exhibitors are learning something. The result is beneficial in many instances even to the shows themselves by inducing fresh competitors to come forward, for in healthful rivalry vital force is renewed and prolonged. Instead of the old hands trotting out their last year's plants in the full assurance of securing the awards as a matter of course, an element of uncertainty stimulates the exhibitor not merely to maintain his previous excellence, but to improve upon it. To take a first prize in good competition means good cultivation, and in that the community at large should be benefited. It is sometimes stated that exhibitions encourage the production of flowers or vegetables that are worthless for anything except exhibitions. That, of course, is a matter for the judges, and if due to conventional methods of judging, should be rectified or amended from time to time. Public taste may have something to do with it, as for instance in the encouragement of large Chrysanthemum blooms: but surely the cultivation of such things is merely an endeavour to meet a legitimate want for which the public has to pay in some way or other. Private tastes and authority can always play the part of the conservative party in keeping such things within legitimate bounds. The multiplication or plurality of shows is reckoned an evil; but many local shows are a necessity in order to reach the various classes of the community which never go far from home to attend shows or anything else. Where one good show would answer the purpose of two small or bad ones, it is a point for local authorities to discuss and ameliorate by amalgamation. It is good, however, to reach all classes of the community in every part of the country by some means or other, for by so doing, a maximum number of the population gets an opportunity for becoming interested in gardening in some form or other. If all the shows in the country were suddenly brought to a termination, gardening would suffer immensely, and soon become reduced to a state of stagnation by apathy and indifference.

We see no indication of this, however; and if through lack of vitality or other cause, some societies cease to exist, others spring into existence and maintain or even increase the number. Besides general shows a large number of special shows exist, and their number even increases. The failure to revive a Pink show was exemplified a few years ago; but some fresh stimulus to its cultivation on fairly broad lines will have to be given before such a show can be resuscitated. Carnation shows lagged for a time, now those that exist are being better supported, while new ones are being inaugurated or discussed in order that people in various parts of the country may be reached. Rose and Dahlia shows are numerous; but some interest attaches to special shows which have relatively a much smaller hold upon the community generally. The Viola show held recently at Regent's Park is an instance. Another was the Fuchsia show held at Broadbottom, Hyde, Cheshire, at the beginning of the month. Carnations and Hollyhocks made another exhibition at Loughborough, Leicester. A Gooseberry show seems to have been the speciality of Swalwell, Durham, for generations; as Leeks have been at Howdon, Northumberland.

Kent Apples and Pears promise well in point of quality, though the yield, more particularly of Pears, is reported to be thin. Owing to the lack of rain all the fruit is small.

Fall of a Patriarch.—Chapelizod, Ireland, is lamenting the loss of the old Elm which has graced the village for upwards of 200 years.

Royal Horticultural Society.—The next fruit and floral meeting of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, on Tuesday, August 24th, 1 to 5 p.m. A lecture on "Plums" will be given at 3 o'clock by Mr. A. H. Pearson.

Messrs. Clay & Son, Stratford.—We learn that the partnership hitherto subsisting between Mr. Samuel Clay and his son, Mr. Samuel Charles Clay, has just been dissolved. The business will be continued with no alteration in its title, by Mr. S. C. Clay, whilst the venerable founder of "Clay's Fertilizer," will, we hope, enjoy a well earned rest from business cares.

A Hitch in the Proceedings occurred at the Clutton Flower Show, when an illuminated address was to have been presented to the Countess of Warwick. The crowd was so great as to be beyond control, so it is stated, and the address has been forwarded to her ladyship. "The best laid schemes o' mice and men gang aft agley!"

Strawberries from Plougastel.—Over in Brittany the growers of Plougastel grow about 1,000 tons of Strawberries annually, a great proportion of which is sent to this country. Two steamboats ply between the coast of Brittany and Plymouth during the season. They have made twenty-four voyages this season carrying into Britain nearly 1,500,000 pounds of Strawberries.

Proposed Carnation Society.—Several important Carnation shows are already held in various parts of the country, yet the flower is so growing in the estimation of the people that, in the minds of many, the existing shows are not sufficient to properly bring the Carnation before the admiring public. At all events, there is an earnest intention on the part of a number of interested people to establish a Carnation Society in the neighbourhood of Southampton where, of course, the flowers are mostly past their best before the shows at London, Birmingham, and elsewhere in the Midlands and North are held. Those who feel interested in this new venture should communicate with Mr. Wm. Garton, Junr., Argyll House, Woolston, Hants.

Orchids at the Salerooms.—Flowering specimens are not so plentiful just now as in May and June, but many continue to put in an appearance at the Sale Rooms of Messrs. Protheroe & Morris, Cheapside. A piece of Odontoglossum Pescatorei, bearing two panicles of bloom, found a purchaser at 15 gs. The flowers were white, spotted with violet on the sepals and lip. A very pretty, bigeneric hybrid between Cattleya Loddigesii Harrisoniae and Laelia pumila praestans, fetched 5 gs., but at other times we should have expected it to bring twice or three times that amount. The habit of the plant is dwarf. The sepals and petals are purple, and the orbicular, wavy lamina of the lip of a rich purple resembling Laelia pumila praestans, while the pale yellow disc resembles that of the other parent.

Mid-Devon Horticultural Society.—Lord Portsmouth is the life and mainstay of this society, for without his support it would soon come to grief. The annual exhibition is held in his beautiful grounds at Eggesford Park, and continues to be one of the leading holiday events in North Devon. In addition to the flower show there are many other attractions to draw the general public, of which there was a large attendance at the recent exhibition, favoured as it was with brilliant weather. There were 160 entries against the 140 of last year; and taken from a quality point of view the show was the best the society has ever had. A fine display of tuberous Begonias was brought from Lord Portsmouth's nursery and arranged by the gardener, Mr. J. Vicary. At the luncheon Mr. Littleworth proposed the health of Lord and Lady Portsmouth, who visited the show in the afternoon. His lordship, who is president of the society, said that he and Lady Porismouth were pleased to help the show in every possible way, and that it seemed generally popular, owing no doubt to the many attractions which the committee provided.

Some things were said by an exhibitor at a recent local show who has probably had a unique experience —at least we hope it is unique. The exhibitor in question had bestowed a great deal of attention upon some choice Apples with which he was confident of going one or two better than his neighbours. Shortly before the show these Apples were stolen. After the judging was concluded he found that a neighbour had taken first honours with what he confidently asserted was the stolen fruit. We do not know if steps were taken to prove the theft, but it would doubtless be a matter of some difficulty to swear to Apples.

Big Gooseberries.—The season of 1897 has been a bad one for big Gooseberries. Swalwell, in Durham, is known as one of the places from whence the biggest Gooseberries have been sent, and is locally said to be as "famous for 'grozers' as Howdon is for Leeks." A Gooseberry show was recently held here in a room at "The Highlander," and although the berries showed some falling off in size and weight as compared with last year, they were yet fine samples. Mr. Henry Ellison, of Winlaton Mill secured the first prize with a berry that weighed 22 dwts. 19 grs. This is the weightiest berry of which we have heard this season from north of the Humber, and yet the falling off may be perceived when we remember that the first-prize berry last year plumped the scale at 31 dwts. 9 grs.

Woodside Flower Show.—One of the finest annual flower shows in the neighbourhood of Aberdeen, N.B., is that held at Woodside. This season it took place on August 7th in Stewart Park. There were upwards of 800 entries—a number considerably in excess of last year. Fuchsias, Liliums, Pelargoniums, Petunias, Begonias, and Ferns were all first class. Roses were a fine display, and herbaceous plants were capital. Vegetables and fruit were fair, for the season has not been one of the best, the spring having been cold and late. The show was opened by Captain Pirie, M.P, who was accompanied by the Hon. Mrs. Pirie. Councillor Wilkie presided and introduced Captain Pirie. The latter gentleman in the course of his remarks observed that the society had been in existence for fifteen years. He also mentioned the spirit of friendly rivalry which animated exhibitors at this and similar gatherings, and said that nothing would more ennoble the human race than the love for nature. He advised the ladies present to make their homes all the prettier and the happier by garnishing them with cut flowers and plants, and he recommended the husbands present to cover the walls of their houses with creepers, and the children would then always have a happy recollection of home.

Broughty Ferry Horticultural Association.—The monthly meetings of this energetic and very much alive society are always full of interest. The programme of arrangements for the current year has included exhibitions, and lectures by various gentlemen on Gladioli, Strawberries, Odontoglossums, Herbaceous Plants, and Vegetables. A special meeting was devoted lately to a visit to the Dalhousie Rose Nurseries of Messrs. D. & W. Croll, Broughty Ferry. The various members were delighted with the feast of Roses spread out to their gaze. The Broughty Ferry Roses are in every way the equals of the Colchester ones, and higher praise than this it is not possible to give. They may confidently be expected to give a good account of themselves until the end of the season, which will mean about the close of October. All the Roses are on the Dog Rose stock, and are subjected to severer pruning than in East Anglia, where the Manetti stock is most in request. The Messrs. Croll took upwards of thirty first prizes last season at various shows throughout England and Scotland. All sections of the charming flower and varieties, old and new, receive skilled attention at the hands of the firm's capable manager, Mr. Simpson. Amongst other happy ideas which have been put in practice, a plan of assisting Roses to winter in safety is worthy of comment. Directly after budding the briers are pegged down flat on the ground. This checks the sap flow into the heads of the briers and sends it into the buds instead, the union between bud and stock being thereby much expedited.

The Yorkshire Gala.—Our readers will remember the disaster which befel the grand exhibition which is held annually at York under the above title. The exhibits were all in place and ready for the judges when a fierce gale sprung up and levelled all the tents, one after the other, working such havoc amongst the exhibits as has seldom been seen, and which nobody ever again wishes to see. Out of pity for the great loss caused to the exhibitors the Council of the Yorkshire Gala are distributing cheques by way of recompense for the trouble and disappointment caused by the gale of the 16th June.

Park Place, Henley-on-Thames.—The fifth annual reunion of past and present employés at the above establishment was held on August 4th, and proved yet another item in the chain of successes that these annual functions have proved. Some well known faces were absent from the gathering, but others that have hitherto been wanderers put in an appearance. This year the battle on the cricket field had a different result from that chronicled on former occasions, for victory rested with the men of the past by a good margin of runs. Mr. Stanton presided at the lunch, and was heartily congratulated all round on the improved state of his health. In reply, he gave it as his opinion that "it is far better to wear out than rust out." Mrs. Noble, Mr. Leonard Noble, Mrs. Cochrane (*née* Miss Noble), and various friends of the family were present.

A Rare Plant in India.—Several correspondents of *The Times of India* have been discussing about the name of a rare plant growing in a garden at Mazagon, in the Bombay Presidency of India. Dr. Kirtikar made it out to be a Zamia, but Dr. Rozario, in contradicting, said it was called Arctostaphylos Altensteini by the late Mr. Dalzell. Dr. Kirtikar could not agree about this, seeing that the plant under dispute was a member of the Cycadaceae, and that Arctostaphylos belonged to the Ericaceae. In both these statements he is correct. Dr. Rozario knows that it was introduced to India from Mozambique by the late Sir Roger de Faria, a friend of his grandfather. The plant in question must now be of considerable age, and of good size provided it has thriven satisfactorily. Judging from the hints given by the various disputants, THE GARDENING WORLD has little hesitation in saying that the plant in question is Encephalartos Altensteini, so that both doctor. were on the track of it but failed by a slip of memory The plant is said to be unique in the Bombay Presidency. It is a native of South Africa.

The King of Siam at Edinburgh.—After leaving Welbeck Abbey, the seat of the Duke of Portland, the King of Siam and suite journeyed to Edinburgh, arriving there on the morning of the 10th inst. The distinguished visitor, after being publicly received by the City dignitaries, drove to the Balmoral Hotel, where he stayed till 1.30. p.m. He then drove to Riccarton House, about three miles out of the city, the residence of Sir James Gibson-Craig, the convener for Midlothian. Here he attended the marriage of Captain Cumming, the commander of his yacht, to Miss Gibson-Craig. Captain Cumming had been commissioned by the Government to bring the royal Siamese yacht to this country, and the royal visitor really hastened his journey to Scotland in order to be present at the marriage and thereby show his respect for the captain of his yacht. The bride was attended by eight bridesmaids and was given away by her father. Our readers will remember that the well-known hardy Fuchsia Riccartoni was raised here, and existed for some years before it became popular by some one showing that it could be grown out of doors, and was even vastly improved by that method of treatment. Sir James Gibson-Craig is a great enthusiast amongst trees and shrubs, particularly Conifers, of which he has a splendid collection. Many of the trees are rare, others of great height and age, while the more common timber or deciduous trees are giants of their kind. The whole place is thickly embowered amongst these tall ancestral trees. After the various ceremonies and an inspection of the men of the training ship, Sir James escorted the King of Siam over the gardens, which were greatly admired. His Majesty spent three hours at Riccarton House, after which he and his suite returned to the Balmoral Hotel.

Science and progress.—I see that the Scientific Committee have found the Kew bug at Chiswick. Well now that's clever; for I could never tell no man's bug from t'other.—*Snaggs.*

The Cheshire County Council has caused a good deal of ill-feeling amongst various growers of vegetable produce at Macclesfield by causing the produce from the experimental gardens to he marketed. Ordinary producers claim that they, who have a living to get, are undersold by the Council. The question naturally arises has the County Council, as a Corporation, a right to trade? At any rate they have no right to compete with other growers with a view to reducing their profits below the "living" standard.

Jew Agriculturists—Whilst a sale of land was being conducted at South Benfleet, Essex, on Wednesday, August 11th, by Mr. R. Varty the inhabitants of the village were greatly surprised to find themselves invaded by an army of Jews and their families to the number of 200. These included several Rabbis and other high officials from the Synagogue in London. Land to the value of £3,386 was sold during the course of the afternoon, nearly all the plots being bought by the visiting Jews, most of whom were of Polish and Russian extraction. A regular Jewish colony is to be formed, and the site for a synagogue has already been decided upon, and arrangements have been made for the erection of factories and the formation of a number of farms, and it is evidently the intention of these Jewish settlers to become regular agriculturists. They may be congratulated on their good taste in having picked out a very pretty spot in a very pretty country.

Land the Basis of Wealth and Contentment.—Air and land being the principal factor of all health, and contentment being the stepping stone to success, it has now become an easy matter for a few people to secure their own freehold in consequence of a tract of land at Thelma, New Jersey, U.S.A., recently secured by Mr. D. L. Risley, of 63, Chancery Lane, London, and 211, South Tenth Street, Philadelphia. Five acres of farm land, comprising 217,000 sq. ft., especially adapted to raising vegetables, fruits, poultry, &c., for £20, so conveniently situated to Philadelphia, one of the largest cities in the United States, is an opportunity seldom offered to the public in this age of progress. Mr. Risley does not require the cash down for the land, but on the contrary is willing to give first purchasers an opportunity of paying instalments of 4s. weekly. It becomes an easy matter to see the result of such a gigantic principle. Thelma is only twelve miles from Atlantic City, the world-famed summer resort, where thousands of Americans as well as Europeans spend their holidays. It is situated directly on the line of the new West Jersey and Seashore Railway leading to Philadelphia or Atlantic City. Heretofore there has been much idle land in the State of New Jersey, but since the numerous Railways have been built, bringing the land within easy reach of the people, it is no wonder th t the state is becoming more thickly populated every day by an appreciative general public. There is no State in the Union where excursionists more abundantly flock in the summer than in New Jersey: no State is more constantly patronised in the winter, on account of its mild and evenness of temperature. The tract has been surveyed, the farms staked off and numbered corresponding with the numbers on the plan or map, and streets and avenues have now been opened up for travel. The new railway has kindled an important spark of life in this new district, and houses are being erected on different parts of the tract. History tells us that some of the most important business cities of the United States were once upon a time naught but farm lands. The late James A. Garfield, President of the United States, was known as a ploughboy. Mr. W. H. Vanderbilt, the richest millionaire the United States ever produced, started life with a small farm by raising vegetables, fruits, poultry, &c., and shipping to the city markets. The advance in the price of Mr. Vanderbilt's estate was the stepping stone to his success. As soon as a number of these farms have been secured by the first purchasers, Mr. Risley will advance the price on five acres to £40, and ten acres to £80.

Q. What parish in England is most abundantly provided with clergy?

A. Kew. Since every dwelling is provided with a Kew-rate.—*Punch.*

White Orchids.—The colour craze is a great one with most prominent horticulturists. Cultivators without number have striven and are striving to obtain blue in various races of plants. Again in certain sections of Orchids "white" is what is wanted. The little word "alba" added to any plant signifies a difference in its value from that of the type of anything from one guinea to a hundred. A Cattleya that should have been white, and wasn't, was the subject of an interesting action in the

SPIRAEA JAPONICA BUMALDA.

Manchester County Court at the end of last month. The descriptions of various plants which appear on the lists are not always accurate, and at least one purchaser has kicked.

Fruit Trees in Brittany.—The *Nord-Horticole* for August, says that the dry summer of 1896 was followed by a wet autumn and winter, yet the fruit trees, particularly Peaches were seen to be well set with buds. This favourable appearance changed quickly during the nights of May 11th and 12th, when the thermometer sunk several degrees below freezing point, causing considerable damage. One of the chief results was that the Peaches in low lying soils and wet places presented a lamentable aspect. Gumming was very bad, and even young trees had hardly any trace of growth at the end of their shoots. Trees growing in light, peaty soils have scarcely fared any better. The question is mooted whether the growers will not have to change their mode of culture by elevating their trees as standards or half standards.

Edible Lilies.—The Ainos were formerly the dominant race in Japan, but only a few scattered remnants now exist. They consumed only certain species or varieties of Lily, the bulbs of that named Lilium Glehni by F. Schmidt being their principal nourishment. The descendants of the original Japanese extract starch from the bulbs and make it up into biscuits having a hole in the middle by which they may be filed on strings and hung up till wanted. The flavour of wild bulbs is considered very superior to that of cultivated ones. In the matter of nourishing elements in these bulbs, there are 3 per cent of nitrogen, 19 of starch and 2 of dextrine. Sixty-nine per cent consists of water. They would be too bitter if eaten raw, and are usually boiled and seasoned with sugar. The bulbs are considered to have the consistency and flavour of Haricot Beans. They can also be eaten in a salad, or with rice. The species most often utilised as food are Lilium auratum and L. tigrinum.

The Truffle is said to be the most wonderful vegetable in the world, because it has neither roots, stems, leaves, flowers nor seeds.

SPIRAEA JAPONICA BUMALDA.

THE varieties of S. japonica (better known as S. callosa) now in gardens are fairly numerous, but most of them are tall. S. j. alba is a notable exception, being only 12 in. to 18 in. high as a rule. That under notice is 2½ ft. to 3 ft. high, and forms a compact bush bearing cymes of rosy-purple flowers. The leaves are very moderate in size, lanceolate and serrate. The special recommendations of the variety are that it commences to flower pretty early, that it continues to produce fresh growth during a great part of the summer, and with fresh growth a succession of flowers. The accompanying illustration shows the general aspect of a flowering spray. Planters would do well to remember this variety when making fresh plantations. For the front of a shrubbery or for beds on the lawn S. japonica Bumalda is admirably adapted. There is a variegated form of it which flowers as freely as the type.

CRICKET.

PLAYED at Walthamstow, August 13th, and drawn in favour of Hurst & Son.

HURST & SON.

Sampson (capt.), b Richards	23
Squires, b Marlow	52
Portch, b Scriven	24
Delacourt, b Scriven	11
Locke, b Scriven	13
Thake, b Scriven	2
Blyth, st Marlow, b Scriven	14
Jerry, b Scriven	1
Lloyd, not out	0
Collins, lbw, b Kerridge	0
Byes	13
For 9 wickets	153

SPOTTISWOODE C. C.

Marlow, b Sampson	23
Kerridge (capt.), b Sampson	0
Richards, b Sampson	23
Heal, b Sompson	0
Roper, b Portch	4
Kyffin, run out	5
Ballard, not out	0
Clarke, Scriven, Marsham, Shaw	did not bat.
Byes	6
For 6 wickets	61

A VISIT TO MESSRS. DICKSON'S, CHESTER.

To provincials who rarely get as far as London, a visit to the Newton Nurseries, of Messrs. Dicksons, Limited, Chester, is considered a treat. It was on a scorching hot day early in this month that I was a caller; and I could see as I walked up the drive leading to the offices that the drought as well as the heat had exceeded anything we had experienced further north. Men were cutting down the Calceolarias in the ribbon border by the side of the drive, as they had scarcely a respectable flower on them; but the drought had not affected a breadth of Stocks higher up, which were very fine; but many of the Asters here as elsewhere looked rather dismal. Ours and others in this neighbourhood sulked from the first, not from lack of moisture, for most other things have come along cheerful enough under the same conditions. How are your Asters doing this year? or what is the matter with the Asters? are the questions the gardeners and amateurs are asking each other.

The thousands of Carnations in the open quarters had made a brave stand against the seven weeks continuous heat and drought, and my guide obligingly gave me names of a few that anyone might venture to grow under the most adverse conditions. They are as follows:—Mrs. Reynolds Hole, Germania, Alice Ayres, Senator Walcott, Duchess of Fife, Trilby, and Miss H. Terry.

The three most striking plants in the herbaceous

ground were Helianthus rigidus, Campanula grandiflora, and Coreopsis grandiflora. To these may be added Gypsophila paniculata which amateurs and others should sow to mix with cut flowers; for it is really more graceful than the Maidenhair Fern, and far more durable. Near here were several hands engaged in harvesting the Daffodils, of which there must be cart loads. "What do you do with them all?" I ventured to ask. Of course, I expected to be informed, sell them if we can, but not to be told that the demand was great, and that already 100,000 of Sir Watkin had been sent out; the others most in demand being Emperor and Empress.

Crozy's Cannas in one of the houses made a splendid show, the following being the best six:—L. E. Bally, Directeur Leclerc, Duchess of York, Secretaire Rabutot, Mgr. Perrache, J. D. Cahos, Austria, Italia, and Alsace. There were houses of seedling Begonias, single and double of various shades and large enough to satisfy all reasonable beings. I was surprised to see such a number of Palms from 6 in. to 8 ft. high, as I was aware that there was comparatively little furnishing and decorating going on in the quiet City of Chester, but I was assured that there was a steady demand for them from private growers. I am old enough to remember these nurseries when one of the dozens of the present glasshouses would hold all the greenhouse and stove plants. There were no Begonias, no Cannas, and no Palms then. What progress and change, eh!—*W. P. R., Preston.*

TROPAEOLUM SPECIOSUM.

HITHERTO great difficulty has been experienced in flowering this Tropaeolum, popularly known as the Flame Flower, in the south of England. The idea prevalent is that the atmosphere is too dry and warm, and that its cultivation in dry, warm soils, and on walls with a southern aspect would certainly result in failure. All these unfavourable conditions seem to have been ignored at Dover House, Roehampton, the seat of J. Pierpont Morgan, Esq., where Mr. McLeod, the gardener, has established five plants in a narrow border in front of a south aspect wall. A young piece has also established itself as an offset, so that there are six patches of the Flame Flower making the wall glow with a profusion of crimson-scarlet flowers. Evidently we have not yet learnt all that may be known concerning this handsome species, which becomes a weed in many northern gardens, even by the sides of villas, cottages, and railway stations, where its requirements from the owners are nil, beyond support for the slender stems.

FLOWER GARDEN NOTES.

WITH the refreshing showers we have had during the past ten days the beds have filled up nicely, and the occupants look far happier than when under the many tropical days and parching winds we had during the month of July. We have four large oval beds planted with Lobelia Queen Victoria, scarlet, and Hyacinthus candicans, white, with a ground work of silver-leaf Pelargonium and Irisine acuminata, with an edging of the latter. These beds have been very showy, but, unfortunately, the Hyacinthus flowers a bit too soon for the Lobelia, or else nothing could be more pretty.

Two large round beds are planted with specimen plants of Plumbago capensis, with a centre plant of Humea elegans, carpeted with that good old sulphur-yellow Calceolaria amplexicaulis, which was kept pegged down early in the season. These beds have a charming effect, and have been much admired, while two other big beds are planted with seven Calceolaria amplexicaulis trained up pyramid-shape and carpeted with that ever-appreciated Pelargonium Manglesii, edged with Pyrethrum aureum. What with the pale yellow Calceolaria and the beautiful soft light pink flowers of the Pelargonium, these beds are most pleasing to the eye, and in my idea are the prettiest beds I have. Two other similar beds are filled with large-flowered dwarf Cannas, with a ground work of dark Irisine Lindeni; but the first-named are making too much growth and very little flower. To check this another year, all being well, I shall plunge them in pots, as I do the yellow and white Marguerites, which I hope will cause them to flower more freely as well as earlier.

Another bed I would like to mention is one planted with pyramid-trained Calceolaria amplexicaulis and crimson Celosia pyramidalis, and the groundwork filled in with the white foliaged Centaurea ragusina candidissima. This bed is very showy and doing well. It is the first time I have used the Celosia for outdoor work, but shall use it more largely another year. The colours are much deeper than when grown under glass. Smaller beds are filled with Ivy-leaf Pelargoniums, various sorts, Heliotrope, Ageratum, Begonias, Verbenas, Petunias, etc., all doing well.—*J. Mayne, Bicton, Devon.*

A NEW VICTORIA REGIA AT KEW.

VISITORS to Kew this year will have noticed the great depth of the rim of the leaves, or at least the observant few will have noticed this striking characteristic. The leaves if anything are smaller than usual, but more numerous as if to compensate for size. At present there are fifteen fully-developed leaves and two more rapidly approaching that condition. The edge of the leaf is erect in the earlier stages, but later on becomes a little more spreading, but even then is very striking, as the turned-up rim varies from 5 in. to 8 in. in depth. We have seen some of the leaves of the Victoria in former years close upon 7 ft. in diameter, the larger specimens occurring just before flowering. Twelve of those giants were sufficient to fill every corner of the large tank; but seventeen of that size would never find floating room. The flowers are very freely produced, but we have never seen more than one in perfection at the same time. The flower buds are peculiar in not being spiny like those of the type.

In connection with this noble Water Lily we may say that the public interest in it never abates; but at the same time the public never gets more educated. People are impressed with the carrying power of the leaves, but it never seems to dawn upon them that the leaves are by no means strong. They are in fact very tender and susceptible to injury, particularly between the ribs. Visitors to the Victoria house continue to poke their fingers, sticks, or umbrellas through the leaves, thus disfiguring all those which come within reach of them in their foolish attempt to try the floating or supporting power of the same.

ORCHID NOTES & GLEANINGS.

Grammatophyllum speciosum.—Some six or eight species of this genus are known to science, exclusive of those now classified under Grammangis. They are natives of the Malayan Peninsula and Archipelago, and therefore require the temperature of the East Indian house. That under notice was introduced in 1837, and as far as we are aware it has never previously flowered in cultivation. This has now been accomplished by Mr. W. H. White, Orchid grower to Sir Trevor Lawrence, Bart., Burford Lodge, Dorking. A fine plant has been grown for many years at Kew, and that at Burford Lodge has been grown for a number of years before it could be induced to throw up its magnificent inflorescence.

The plant is a huge piece consisting of many long, stout, strongly angled and fluted stems, that exist for many years after the foliage has dropped. The taller ones are 6 ft. to 7 ft. in length, some with leaves and others without. The inflorescence consists of a stout, leafless peduncle, arising from the base of one of the tallest stems, surmounted by a tuft of leaves. The flowers measure 5½ ins. to 6½ ins. across, and are arranged in a raceme mostly towards the apex of the flower stalk, while two are isolated, and spring from the basal portion. The inflorescence overtopped the stem when we saw it on the 14th inst., but many of the flowers were yet in bud, so that the growth of the peduncle was not completed.

Singularly enough the lower flowers were incomplete, the lip being wanting, or in a very rudimentary condition, recalling the fact that some of the lower flowers are also imperfect in G. fenzlianum measurisianum and other varieties. Dimorphic flowers also occur in Arachnanthe Lowei, one or two of the lower ones being larger, with broader segments of a different colour from the rest. Here, however, the flowers seem all alike in colour. The sepals and petals are spreading, oblong, golden-yellow, and heavily blotched all over with brownish-crimson. They are wavy at the margins, the undulations being few and large, though scarcely interfering with the flatness of the flower as a whole The lip is small, erect and yellow, but the interior of the lateral lobes is striated with orange-buff. The terminal lobe of the lip is small, downy or velvety, and purplish-brown.

If this magnificent Orchid had made its appearance at the Temple Show it would have been the "lion" of the exhibition. Its advent in the Diamond Jubilee year is singular, as if it meant to celebrate its own jubilee in cultivation. We may take it for granted, however, that all the original introductions have died and that several importations have been made since then. Whether or not it will continue to flower annually remains to be seen. Possibly it may require an interval of one or two years to recuperate sufficiently to throw up a giant inflorescence again. A peduncle of 7 ft. to 8 ft., with a raceme of flowers, each about half-a-foot across, or nearly, must require a large amount of vital force to produce. We congratulate both owner and cultivator upon this accomplishment, which adds another laurel to the "Art that does mend Nature."

JUDGING AT HORTICULTURAL EXHIBITIONS.

THE season has arrived when the exhibitors of garden produce will be making strenuous efforts to maintain their good name as cultivators, or to get to the front by ousting some veterans. I do not wish to find fault with the adjudicating as generally practised, but would rather give the hint to some of the promoters of large exhibitions, who give tempting awards. Medals, cups and other trophies, are given for special objects, and these specialities should have "special" judgment expended on them. Examples may be taken from some of the large provincial shows, (some of which are under capital management) which give special awards, and such are, in most cases, worthy of the skill and attention they receive prior to the exhibition day. The way they are judged generally prevents a deal of snarling by those who are defeated (it is not possible to stamp this out entirely), as the art of growing, and exhibiting is often viewed with interested eyes only. In one case where a tempting cup was offered the whole of the judges were called to act as a jury (like the system adopted at some Continental exhibitions). Discussion on the exhibits indicated was free and pointed. Reasons for the one elected as first were given, and, as experts among the judges were present, difficulties were easily dispersed. I do not object to the system of employing *one* judge to classes where the properties can be numbered in figures, as in the case of say Roses, Dahlias, Pansies, &c., when they are not mixed up with other things; but collections of stove and greenhouse plants on long tables for *quality and effect*, and collections of fruits and vegetables for special prizes should not be left to one or two individuals whose experience as growers of them has been of a limited character. Adjudicating requires training on lines as cultivating.—*M. T., Carron, N.B.*

PLANTS RECENTLY CERTIFICATED.

THE awards mentioned hereunder were made by the Royal Horticultural Society on the 10th inst.:—

Orchid Committee.

ODONTOGLOSSUM PESCATOREI HARRISIANUM, *Nov. var.*—The flowers of this handsome variety are white, with a number of violet-purple blotches of moderate size at the base of each segment; the markings on the lip are rather smaller than the rest. A healthy piece bearing a panicled inflorescence was exhibited by Messrs. J. Veitch & Sons, Ltd., Chelsea. Award of Merit.

DENDROBIUM VICTORIAE REGINAE.—This makes the fourth plant we have seen of the Blue Dendrobe, and as all of them flowered upon the imported stems, it gives promise that it will flower freely when once established. All the segments in this case were deep purple-blue on the upper half, and white on the lower, the lip being striated with the same colour on the basal half. Award of Merit. T. Statter, Esq. (gardener, Mr. R. Johnson) Stand Hall, Manchester.

CYPRIPEDIUM CALLO-ROTHSCHILDIANUM, *Nov. hyb.*—The name and the appearance would indicate that this Cypripedium was raised from C. rothschildianum

crossed with C. callosum. The leaves are yellowish-green, chequered with darker markings, recalling the latter parent. The sepals strongly resemble those of C. rothschildianum, and so do the petals, but they are broader and more heavily spotted with purple-black. The lip is deep purple, taking after C. callosum. Award of Merit. J. Gurney Fowler, Esq. (gardener, Mr. J. Davis), Glebelands, South Woodford, Essex.

LAELIOCATTLEYA ELEGANS SCHRODERIANA, *Nov. var.*—This is amongst the darkest forms of the species we have seen. It has dark purple sepals and petals. The lip is quite of a different hue, both the terminal and side lobes being of a rich crimson-purple; the tube is much paler. Award of Merit. E. Ashworth, Esq. (gardener, Mr. Holbrook), Harefield Hall, Wilmslow, Cheshire.

NANODES MATHEWSII.—This species has precisely the same habit as the remarkably fringed N. Medusae, but is much smaller in all its parts. The leaves are short, fleshy and imbricate. The flowers are straw-coloured, much tinted with buff, but not fringed. Botanical Certificate. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White), Burford Lodge, Dorking.

Floral Committee.

NYMPHAEA MARLIACEA FLAMMEA.—The flowers of of this Water Lily are of the first size, with very broad petals of a dark purple-red, except the outer ones which are almost rose-lilac. The small anthers are of a rich orange-scarlet. First-class Certificate. J. T. Bennett Poë, Esq. (gardener, Mr. Downes), Holmwood, Cheshunt.

CALCEOLARIA ALBA.—The leaves of this remarkably distinct species are narrowly linear, toothed and strongly resemble those of a Hebenstreitia. They thickly clothe the main and short lateral stems. The flowers are about the size of a Black Currant, but are pure white and freely produced in cymes at the ends of the stems and branches. We believe it would make a handsome bedding plant. First-class Certificate. J. T. Bennett Poë, Esq.

VERBENA TRESSERVE.—The flowers of this variety are of a pleasing light scarlet with a rose centre, and very freely produced when grown as a bedding plant. It is well worthy of extended cultivation. J. T. Bennett Poë, Esq.

GLADIOLUS COUNTESS AMY.—The rosy-lilac flowers of this variety are darker at the edges, with one or two large white blotches on the lower petals. The exterior face of the flower is darker. Award of Merit. Messrs. Kelway & Son, Langport, Somerset.

GLADIOLUS MIKE LAMBOURNE.—Here the flowers are of a rich maroon-crimson, with darker streaks at the edges, and very striking. Award of Merit. Messrs. Kelway & Son.

GLADIOLUS COUNTESS OF LEICESTER.—The flowers in this instance are white, and beautifully flaked or streaked with rose towards the margins of the segments, the two lower of which have a purple line along the middle. Award of Merit. Messrs. Kelway & Son.

PHLOX EUGENE DANZANVILLIERS.—The blooms of this late-flowering Phlox are of a charming soft lilac-blue, with a rayed white eye and white edges. Award of Merit. Messrs. Kelway & Son.

CRINUM POWELLI ALBUM.—The large, irregularly funnel-shaped flowers of this grand Crinum are pure white and freely produced. The variety is the finest of all the hardy Crinums. First-class Certificate. Sir Trevor Lawrence, Bart. (gardener, Mr. W. Bain).

GLADIOLUS G. A. KIUJK.—This belongs to the same type as G. Saundersii, having very large, handsome, triangular flowers. The latter are of a dark purple red or carmine, and the two lower segments are blotched with white, and crimson lower down. Award of Merit. Sir Trevor Lawrence, Bart.

RUDBECKIA LACINIATA GOLDEN GLOW.—In this we have a double form of a well-known Cone-flower. The heads are usually very large and consist of recurved, imbricate, flat, golden-yellow florets, and not unlike a double Sunflower at a distance. Award of Merit. Mr. M. Prichard, Christchurch, Hants, and Messrs. Barr & Sons, King Street, Covent Garden.

PHLOX LA MATILDE.—This late-flowering Phlox is one of the richest, dark, blue-purple varieties we remember having seen. To this particular colour it is an acquisition. Award of Merit. Mr. T. S. Ware, Hale Farm Nurseries, Tottenham.

DAHLIA DAFFODIL.—For a Cactus Dahlia this is of medium size, but very neatly and compactly formed, and consisting of long, pointed, clear yellow florets. Award of Merit. Mr. James Stredwick, Silver Hill, St. Leonards.

DAHLIA MISS AGNES BOX.—This also belongs to the Cactus section, and is of large size with long, sharply pointed, brilliant scarlet florets. Award of Merit. Mr. J. Stredwick.

HOLLYHOCK LEANDER.—The large and full flowers of this double variety are quite in exhibition form. They are cream, tinted with buff and flesh. Award of Merit. Messrs. Webb & Brand, Saffron Walden.

Fruit and Vegetable Committee.

GOOSEBERRY GOLDEN GEM.—The fruits of this variety are of medium size, oval, slightly hairy and bright golden yellow. Judging from their early disappearance, we are pretty well certain that the flavour left nothing to be desired. Award of Merit. Messrs. J. Veitch & Sons, Chelsea.

BLACKBERRY KITTATINY. — This American Bramble is most prolific and evidently well-adapted for culture in this country. The fruits are large, glossy black, juicy, and of soft, pleasing flavour. Award of Merit. Some stems of it about 4 ft. long, and simply laden, were exhibited by Mr. Wadds, Cliveden Gardens, Maidenhead.

THE PLANT HOUSES.

The Stove.

SOME subjects that naturally require a good deal of root room may be standing in need of a futher shift on, especially where the spring shift was not a large one. For obvious reasons it is desirable to keep down the size of the pot as much as possible, but in some cases a little more room may be required. Any potting of this kind should be seen to at once, in order that there may be no cold, unoccupied soil lying round the roots during the winter. Many stove Ferns will benefit considerably by a larger pot, but extra care must be taken not to disturb the roots of these, or the evil done will more than counterbalance the good. Other plants may have their appearance much improved by a topdressing with good soil. All such plants, however, must be well watered before the topdressing is proceeded with, otherwise the new soil will only lie loosely upon the old, where it will remain until it is washed off with the first heavy or hurried watering.

Continue to regulate the growth of various roof climbers as previously advised, and in the case of such subjects as Bougainvilleas and Allamandas, upon which there is a heavy strain, see that they do not lack food in the shape of manurial stimulant.

CALADIUMS.—As these begin to show signs of the advancing season it will be well to remove them to a house where they may be allowed to look as untidy as they like and to finish up gradually. They must on no consideration be suffered to want for water, although manure will no longer be necessary.

Pits and Frames.

While the other plant departments are comparatively quiet just now, there is plenty to do here, for winter is now not far distant, and all sorts of preparations have to be made for it, if the showhouses are to have their complement of bright plants during the dull months.

ROMAN HYACINTHS.—It is a good plan to invest pretty heavily in these. They cost comparatively little, are easily grown, and come in very useful, inasmuch as they force easily and well, and the flowers are always in demand for cutting. The larger bulbs may be put in pots, but the smaller ones will do very well in boxes, since these will admit of a considerable quantity of bulbs being got into a little space. Covering the bulbs with ashes or cocoanut fibre refuse must follow potting in the usual way, so that the bulbs may have ample leisure to root.

FREESIAS.—The usual plan is to leave the old plants in their pots, just as they finished off at the beginning of the summer. Shake out the bulbs from the old soil, and carefully sort them over into several sizes. The very largest and finest may be placed three in a large 48-pot, whilst five of the medium-sized bulbs may be put in a similar pot. The smallest ones, which will not flower this season, may be thickly "sown" in pans or boxes and allowed to grow on for another year. For soil a mixture of mellow loam, leaf soil and dried cow manure rubbed through a sieve with plenty of good river sand, will answer admirably. After the bulbs are potted up they should be placed in a cold frame, and covered some 3 or 4 in. deep with cocoa-nut fibre refuse.

There is not a great deal of variation in the Freesias grown. F. refracta alba is undoubtedly the favourite. It is pure white and very sweet-scented. The type, F. refracta, may be easily distinguished from its variety by the presence of two or three orange-coloured blotches on the lower segments of the perianth. F. Leichtlinii is deserving of more extensive cultivation than it apparently has. The flowers are very freely produced, and are of a light creamy-yellow hue.

GLADIOLUS COLVILLEI, and its superb white form, The Bride, are grand subjects for conservatory decoration during the months of April and May, if gently forwarded under glass. The corms should now be potted up as soon as possible. The corms are small and do not require a great deal of room. Thus a large 48 or a 5 in. pot will hold five. Feeding will of course be necessary presently in order to have good flowers, as the nutriment in the soil contained by such a small pot is soon exhausted. Still it will be far better to do this than curtail the decorative value of the plants by over potting. After they have been potted up, the corms may either be covered with ashes outside in the same way as the ordinary stock of bulbs, or they may be consigned straight away to a cold frame.

TUBEROUS BEGONIAS.—Where it is desired to save seed from any desirable forms that are now bearing double flowers, the plants will have to undergo a sort of preparatory training in order to induce them to produce flowers capable of developing seed. This may be done by subjecting them to a starving process for a week or two. All liquid manure must be withheld and the supply of clear water may also be curtailed. The crossing of various good varieties may be carried on apace. Great interest always attaches to seedlings from home-saved seed, and bearing this in mind it is curious that seed-saving is not more frequently practised. This year's seedlings have just begun to flower nicely, and there will be a deal of weeding out necessary if a high standard is aimed at.

SHOW AND REGAL PELARGONIUMS have now ripened their wood sufficiently to admit of their being cut down. After this has been done the old plants may be placed pot thick in a cold frame to break. The syringe should be plied amongst them morning and afternoon, and the water they will thus receive will be sufficient for them for the present. Later plants, which may not have their wood properly ripened, may be left until the end of the month, but not after that, as the season is getting on. Cuttings in abundance may be obtained from the prunings. These will root fairly well in a cool frame, but the operation is rather a slow one, and we have found that when they are placed on a shelf in a warm pit the results are much better, both for speed and certainty. A few cuttings should be struck each year, as the plants thus obtained are valuable not only on account of their lateness in flowering, but because they are always of a handy size for filling ornamental stands, vases, etc.

NERINES.—For some time past these handsome bulbous plants have been kept quite dry, and they may be allowed to remain so until the flower scapes make their appearance. These are just appearing on the strongest bulbs. The plants should not be flooded with water, but the soil must be gradually reduced to a moist condition. The Guernsey Lily, N. sarniensis, is perhaps the more popular of the two species commonly grown, although N. curvifolia, generally known in gardens as N. Fothergilli, is also highly thought of. Nerines are very easy to grow, and as they do not require potting for several years they may be said to give the minimum of trouble.

GENERAL WORK.—The potting on of the later batches of Chinese Primulas must receive attention. The earlier plants have commenced to throw up flower scapes, and these must be pinched out for a while yet. A good deal of pinching out of flowers will be necessary in the case of the double forms, which are apt to exhaust themselves if not attended to. Watch closely Cyclamens for fly, which usually is present on the under sides of the leaves. Winter-flowering zonal Pelargoniums must have all the buds picked off for a while yet. Over gross shoots should also be pinched in time. Sow Mignonette for spring flowering. Forty-eight and thirty-two pots are handy sizes. Chrysanthemums now stand in need of liberal feeding, and tree Carnations will also benefit by a little stimulant.—*A. S. G.*

HINTS FOR AMATEURS.

As the summer wears on and merges into the ripened beauties of autumn, with the ever lengthening nights and the ever shortening days, with the heavier dews and the lower night temperatures, the flower garden puts on a mellow beauty that is quite distinct from that of other seasons, for there is a glory of the spring, another glory of the summer, and another glory of the autumn. Here, towards the end of the August month we are passing over the subtle boundary that separates summer from autumn, and although we would fain put back the clock of time for some reasons, we know that it is necessary that leafy June and sultry July should be succeeded by golden August and fruitful September. Nature is striving apparently to make us oblivious of the fact that the summer has all but flown, for the days glide on smoothly, and we wake from a pleasant spell of time oblivion to discover with something akin to a shock that bare stubble is now only to be seen in the place of the fields, which but yesterday were "white already to harvest."

To leave the field of moralising and come to matters prosaic we find that the year has been in many respects a trying one. Drought has sorely handicapped the gardener and tried almost beyond endurance the constitution of many of his pets. Many lawns, erstwhile green and smiling, are bare, scorched and brown, and yet instinct as they are with life the dewy nights, and possibly the rains, of September will work a wondrous change. Water may be applied by the medium of hose or can, and yet it never has quite the same effect as the rain that comes from the clouds. This is especially the case with the grass. Plants growing in beds or borders it is quite possible to keep in fair condition during dry weather by regular waterings, but the labour of keeping a lawn or fair-sized grass plot well supplied with moisture, when for day after day and week after week the sun glares pitilessly down, is immense —so immense indeed as to be well nigh beyond the amateur whose grass garden is of any size unless he is situated under the most favourable conditions, and can afford to laugh at the claims of water companies as well as those of everyday business.

It is a capital plan at this time of the year to have a peep at as many of our neighbours' gardens as possible, in order to see if there is any idea good enough to borrow, or any plant new to us that may be employed with advantage in our own gardens. In these matters the lover of gardens is rarely a jealous individual. He or she would, of course, feel very indignant if anyone else dared to copy them in matters of dress or house furnishing, and yet they do not feel at all outraged when Mr. or Mrs. So and So follows them in growing some specially handsome plant or employing others in a particular way —on the other hand they take it in the light of a compliment to their good taste and horticultural ability.

Notes of such a kind taken now may be turned to good account next season.

Galtonia candicans.—Among the flowering element nothing is more conspicuous at this season of the year than the charming Cape Hyacinth. The long racemes of large, pure white, bell-shaped flowers have a most distinguished appearance. The maximum height of the flower scape is between four and five feet, and as the leaves are from 2 ft. to 2½ ft. in length, and produced in a tuft, the plant is possessed of a sufficiently commanding presence. It may thus be planted on the lawn as single specimens with admirable effect. It is more generally, however, planted in beds, but it should always be in association with something else, as a bed entirely filled with it is apt to be somewhat thin, and moreover is not very ornamental during the greater part of the year. Some dwarfer plants are needed both as carpet subjects to cover the ground, and also to yield a display over a longer period than the Galtonias can do of themselves. Violas seem to naturally suggest themselves for the purpose, for they are both good carpet plants and most profuse and continuous bloomers when well looked after. Galtonias also do well when planted with Gladioli. Here the fiery crimson-scarlet of G. brenchleyensis and the pearly-white of the Cape Hyacinth will at once suggest themselves as a capital contrast, as indeed they are. Beds of small and thinly-planted Rhododendrons, Kalmias, Olearias, Osmanthus, and other dwarf ornamental shrubs are much improved by having something planted between the plants, and here Galtonia candicans renders valuable aid to the various Liliums which may be utilised for the the purpose. A few clumps of it in the herbaceous border at a sufficient distance from the edge also answer very well indeed, and a few bulbs may well be spared for this. Any ordinary garden soil will suit Galtonias well, but they naturally prefer a soil which contains a good proportion of peat or good leaf mould.

Heliotrope.—This pretty plant is a great favourite in gardens not only by reason of its beauty but also for its delicious fragrance. Curiously enough, however, there seems to be only one idea common amongst by far the greater majority of gardeners as to how it should be grown. The usual plan is to treat it as an annual, that is to strike cuttings each year, plant them out, and let them bloom until frost cuts them down in the autumn. The shoots are all pegged carefully down so as to cover the ground, and the plants are thus kept apparently dwarf and close to the ground. Plenty of flower is produced, of course, and the effect is good, but this is only one way of growing Heliotrope, and there are several others just as excellent and far more uncommon. Heliotropes make capital specimen plants, and when trained as pyramids, or over wire arches to form screens or arbours they form objects that are very ornamental and graceful in the flower gardens. Such screens or arbours, afford a handy niche for the placing of a rustic or ornamental seat, if the size of the garden allows of such adjuncts. We have recently seen Heliotropes made use of in this way, and were charmed with the result. The cultivation of plants suitable for forming pyramids is simple enough. Cuttings should be taken now in order to obtain a good long season of growth. Insert the cuttings in very sandy soil and place them in a gentle heat until rooted. After they have made plenty of roots, and have begun to grow away freely the points may be taken out. This will induce them to throw out a number of growths which may be trained as desired. The plants must be kept growing all through the winter, an intermediate stove temperature being just what they like. Potting must be seen to as required, but the shift from the cutting stage into small thumbs will give all the room needed until winter is past. By planting-out time next spring the plants will be in large thirty-two sized pots, and will be each carrying a number of strong healthy shoots. For large pyramidal trellises, measuring say 5 ft. in diameter by as many in height, about three plants will be required. These will soon cover the trellis, and flowering will go on at the same time as in the case of the small pegged down plants.

Standard trees are also very ornamental. These may be obtained from cuttings as in the case of the trellis plants, grown on with a single stem until they are of a sufficient height, and then pinched. These may be grown on from year to year, and will thus require to be lifted and potted up each autumn before frost has injured them, which is usually about the middle of September.—*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Wild Briers.—Would you tell me the best time of the year to plant wild briers, and when to bud them?—*H. B.*

The briers should be obtained and planted in November, as early in the month as possible, as new roots are then formed at once. July and August are the months for budding. The exact time, however, will depend upon the condition of the stocks. The bark of both stock and bud should "lift" easily from the wood, otherwise success will not be obtained. If this state of affairs is to be had in July, then this is the best month of the year for budding purposes, although any time up to the middle of August will do well.

Chrysanthemums.—I have a number of Chrysanthemums that are now in large 48-sized pots. The plants are about 15 in. in height, and fairly strong. Will they need re-potting? and if so, is it too late to do it. I had some similar plants last year, and potted them up about the third week in August. They did not flower at all. Was this due to the late potting?—*H. J. H.*

We should not advise you to re-pot the plants now, unless they are very pot-bound, when a small shift may be given. It will be more profitable to feed them well and grow them on in the same pots in which they are at present. The late potting you gave your plants last year was most likely the reason why they did not bloom.

Campanula isophylla alba.—*H. J. H.*: This Campanula can be easily propagated from cuttings taken from the young shoots which are thrown up in great numbers from the base of the plant. It is of no use to put in pieces of the older growths as cuttings, as they will only produce flowers. After your old plants have bloomed they may be cut back a little, and this will induce them to produce the young growths required. The beginning of September will not be too late to insert the cuttings.

Grapes.—The fact that your bunches of Grapes contain a lot of little berries is sure proof that they were badly thinned. These little seedless berries are the result of leaving in the bunches a lot of small miserable stuff that ought to have been cut out, and their places taken by better berries that would have contained seeds or pips in the usual way, and would have swelled to a proper size.

Thinning Figs.—*Enquirer*: If the trees have developed a very heavy crop of young Figs it will be a good plan to remove some of them, as it is impossible that they can all ripen. The size and flavour of those that remain to finish will be improved thereby, and the trees will be somewhat lightened in their task.

Morello Cherries.—*L. L. A.*: All the side shoots or at least as many as there is room for, may be nailed in at their full length. Do not let them cross each other, but let their course be along a strait line, like one of the radii of a fan. The shoots springing from the face of the branches, and growing outwards may be cut clean away.

Strawberries for Forcing.—*Young Man*: The layers must be potted up at once into 6-in. pots. The soil should be fairly rich, and may consist of two-thirds of good loam to one-third of old mushroom bed manure with a good sprinkling of sharp river sand. Pot firmly, and stand the plants on a level bottom where they can be watered easily and quickly.

Marguerites.—I have several white Marguerites that have been flowering very freely all through the summer, but have now become very shabby. There is scarcely a leaf on them, and never a flower. Are they of any further use?—*T. G. S.*

Cut the plants back a little; that is to say, remove the tops from the shoots, knock them out of their pots, and plant them out in the open ground. If you keep them sprinkled they will not be long in breaking into growth, and by the time the frost comes, will have made nice little plants again. They may then be lifted and potted, when they will flower all through the winter. Marguerites are really everlasting flowers if only you treat them well.

Freesias.—*M. N*: The very small bulbs will not flower next year, and it is advisable, therefore, to grow them on by themselves. Get a pan, drain it well and fill it nearly full with light soil. Sow the little bulblets pretty thickly over the surface, and cover them in the usual way. They may thus be grown on to flowering size.

Flower to Name.—*Subscriber*: Aconitum lycoctonum is the name of the flower you send.

Tuberous Begonias. — *Subscriber*: Tuberous Begonias may be kept over the winter by simply leaving the tubers in their pots with the old soil, and storing them in a dry room with a temperature of not less than 40° Fahr. If the plants are now growing in the open ground you may lift them after the foliage and stems are gone, lay them in shallow boxes and cover them with sand. The boxes should be placed in a room of the same kind as the pot plants.

If the pots take up too much room, you may knock the plants out, shake away the soil, and store them in boxes with sand in the same way as the tubers lifted from the open.

Plum Leaves Falling.—What is the cause of the enclosed Plum leaves falling off? They are from young trees, planted last year.– *Subscriber.*

The leaves have been badly bitten by red spider, brought on doubtless by the drought. The trees have most likely not had sufficient water at the root, and this combined with the aridity of the atmosphere is responsible for the plague. Collect the fallen leaves and burn them; also syringe the trees heavily with clear water, and see to the supply of moisture at the root.

DOVER HOUSE, ROEHAMPTON.

There are very few estates of such a size in the suburbs of London as Dover House, the residence of J. Pierpont Morgan, Esq. The place is situated practically on the borders of Wimbledon Common, which consists of ancient valley gravel of a very poor or hungry nature, yet capable of much improvement under the skilled hands of good gardeners. There are something like 75 acres of woodland and meadow, on which the trees have attained a much greater size than one would have expected. To the above must be added 17 acres of shrubbery and pleasure grounds and 6½ acres under garden crops, making a total of 98½ acres. Everything is under the care of Mr. J. F. McLeod, the gardener, and every part of the estate is in excellent order.

Kitchen Garden.

At various times during the season most parts of Britain have been subjected to severe drought, and Dover House has had its share, but at the same time has been favoured with a fair amount of rain. The result is that the crops have done splendidly. Owing to the hungry and gravelly nature of the ground, Mr. McLeod does not practise deep trenching, his object being to maintain the original firmness of the ground, as it conserves the moisture and plants grow well. At the same time he believes and practises heavy manuring, which economises moisture, keeps the ground cool, and supplies nourishment to the plants.

He is still gathering Peas in the freshest condition for kitchen use, and expects to do so for three or four weeks to come. British Queen and Ne Plus Ultra Peas have grown 10 ft. high and are yet in bloom at the tops. Veitch's Dwarf Mammoth are 4 ft. high and in capital order, the long pods containing about nine seeds each, and of good flavour. For each row a trench about 18 in. is taken out and about 10 in. of dung is put in the bottom. Over this a little soil is placed, the seeds sown, covered, and then watered. The trench is not filled up, but left so that the rows of Peas grow in a furrow into which the moisture drains when there is rain. A second watering was given after the plants were in full growth, and that is practically all the attention they have had, besides staking and keeping the ground clean. The rows shelter and partly shade one another, thus keeping the ground cool.

Onions are grown for home use, not for exhibition, so that they have been allowed to grow in lines so thickly that the bulbs now touch one another. They were sown in spring in the open ground, yet we noticed some grand bulbs, indicating that with a little coaxing on the part of the cultivator they would grow to fine exhibition size, even in this poor soil. Cranston's Excelsior has done well. They have been watered, and that is all.

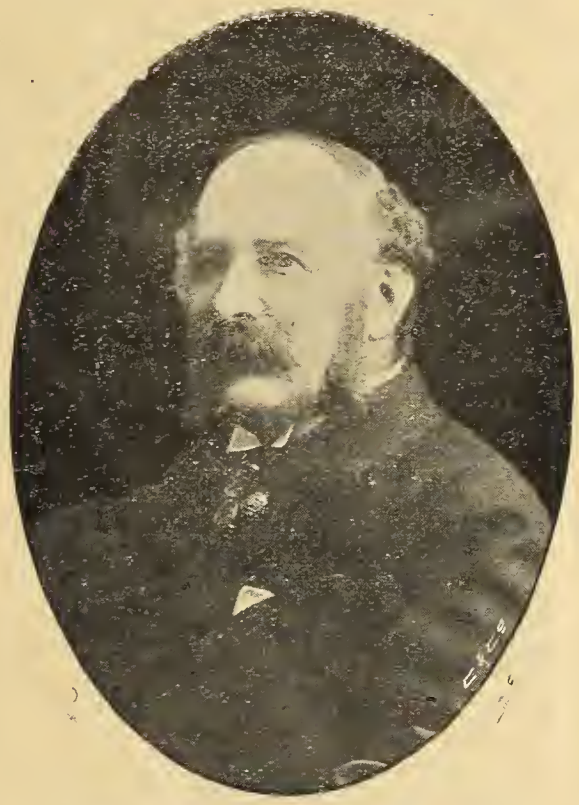
Elsewhere is a piece of ground, consisting of made soil that has been specially prepared, for Carrots. For this root crop the ground is trenched. The sixth crop in as many successive years on this identical piece of ground is a delight to behold. An excellent crop of Tomatos planted round the borders of vegetable ground will soon begin to colour. They are trained to single stems and have no shelter whatever. There are several varieties, including Sutton's Maincrop.

About an acre of ground, on the opposite side of Putney Park Lane from the estate proper, is devoted to vegetables including splendid Brussel Sprouts, Onions, and various kinds of Borecole, including Scotch Kale and other winter greens. The ground here is on the slope lying towards the south, consequently very early crops are obtained. Royal Sovereign Strawberries give splendid crops of large fruits for dessert during the first year. The second season the fruits are so much reduced in size as to be fit only for preserving; then the plants must be rooted up and other plantations made.

Hardy Fruits.

On all hands it is reported to be a bad year for hardy fruit; yet there will be no dearth of Apples or Pears here. Plums and Cherries on the walls are, however, poor. Whether on walls or as pyramids Pitmaston Duchess Pear is thin, but the fruits are generally of grand size. Beurré Diel, Doyenné Boussock, St. Michael, and several trees of Winter Nelis Pears on walls carry heavy crops.

Mr. H. W. Adnitt (See p. 812)



Mr. W. W. Naunton (See p. 812).

Pyramids, large and small, in various parts of the garden, but in borders skirting the various pathways, in a large number of cases bear heavy crops, while the branches in many instances are propped or tied up to prevent them breaking down. The stewing varieties Catillac and Uvedale's St. Germain are in grand condition. The same may be said of Beurré Rance, several trees of Bergamot Esperen, and Marie Louise d'Uccle. Clapp's Favourite is now colouring and presenting a fine appearance. This tree never fails to fruit; and three years ago 390 fruits were taken off it. Splendid crops are also borne by William's Bon Chrétien, Doyenné du Comice, Zéphirin Grégoire, Josephine de Malines, and Brockworth Park. These are really only some of the trees that have given great satisfaction.

Apples are grown as pyramids or bushes and have sustained their part well. Both kitchen and dessert varieties are well cared for, and repay the trouble. Lady Sudeley is already highly coloured, and will soon be fit to gather. Really splendid crops are borne by King of the Pippins, Adam's Pearmain, Old Nonsuch, Celini, Kerry Pippin, Stirling Castle, and Worcester Pearmain, the branches in some cases being tied up. According to many authorities Cockle Pippin is one of the best flavoured Apples. It is also a very old variety, but not much known, probably because it is neither very large nor much to look at in the matter of colour. Other heavily fruited trees are Lord Derby, Court of Wick, Ribston Pippin, and Lord Suffield. The latter has been supplying fruits for cooking for some three weeks past. The fruits of Ribston Pippin are clean and handsome, on a spreading bush of low stature.

In a certain part of the ground, young Apple trees are planted in a nursery as it were, and get transplanted into their permanent quarters as soon as ground is vacant and they have attained a bearing size. A plantation was formed last winter, and many of the trees had to be thinned. Amongst those bearing well are Sandringham, Tower of Glamis, Lord Grosvenor, Red Quarrenden, Beauty of Moray, Lady Henniker, Ecklinville Seedling, and Peasegood's Nonsuch, the fruits of the latter having attained grand proportions.

Raspberries grow amazingly here, such as may be seen in northern counties. Superlative has recently been added to the stock and bids fair to oust all the others. Some years ago several new varieties were obtained, including Baumforth's Seedling, but they proved worthless on this soil. Old and unknown sorts will be discarded as soon as Superlative has increased to occupy the ground. The fruits of the latter attain a splendid size. One spit of soil is taken off the roots and a good coating of farmyard manure placed over them and covered. They are also mulched with manure, to be in turn dug into the ground. The results justify the practice.

Flowers and Beds.

Large quantities of cut flowers are required, so that really useful subjects are grown in greater or less quantity for that purpose. East Lothian Stocks were planted in a long border in the first week of April. Cutting of the flowers was commenced on the 2nd June, and has been continued ever since. The gravelly soil here is evidently well adapted for their welfare; for they are still flowering profusely and their delicious fragrance pervades the atmosphere around. The colours are very varied, and the percentage of double flowers very high.

Around one part of the lawn surrounding the mansion a shrubbery of old and dying Rhododendrons, that had been several times cut back, has been destroyed; the ground trenched and planted in part with fresh shrubbery. About a foot of gravel was removed and some new walks made with it. It was replaced with Banstead and other loam as well as manure, and in the case of a large bed of Azalea mollis a small quantity of peat was added. A Fern rockery has been made and planted in one half-shady place. Gladioli and other flowers have been planted in front of the shrubbery. Several very large beds have also been renovated with fresh loam, &c., in the same way. In one of these double Hollybocks interspersed amongst flowering trees and shrubs have produced a grand effect. Cytisus, in the form of standards, is still flowering in another bed. A herbaceous border on one side of this renovated area is planted with useful subjects for cut flowers, including Galtonia candicans, Chrysanthemum latifolium, C. maximum grandiflorum, perennial Asters, White Heather, &c. A vine of the purple-leaved Vitis Coignetiae is being trained over an arch. Several Clematis, including C. Jackmanni, on a south wall are flowering finely.

The flower garden proper is close to the house. In some of the beds tuberous Begonias are flowering freely, but particularly a small-flowered scarlet variety named Comte Zeppin. The golden-leaved Fuchsia Golden Treasure is very bright. The four central beds consist of mixtures of night scented and other Tobaccos, Ricinus Gibsoni, Cannas, Cyperus longus, and Abutilon Souvenir de Bonn, with silvery variegated foliage, on a groundwork of dwarf Fuchsia

Lobelia, and Sweet Alyssum. There are two small carpet beds. The four corner ones consist of bicolor Pelargoniums, Scarlet Begonias, a band of Iresine and an edging of Lobelia. Various other improvements have been effected in this neighbourhood. On the lawns are a fine spreading Judas tree, a huge purple Beech, and an Ailantus, 60ft. high, and having a massive trunk.

Carnations are grown pretty extensively at Dover House, there being beds and borders of them in different places. Some three years ago there was only one small bed of Old Clove; but last spring as many as 3,000 were planted out. Altogether the layering of 7,000 has just been completed. Raby castle is still flowering freely. Pride of the Garden is an intense rose variety. Brigadier is also grown as well as many of the fine varieties raised by Martin R. Smith, Esq., and Mr. J. Douglas. Pinks are not forgotten. Of Chrysanthemums about 1,300 or more are grown in pots, and being well cared for are full of promise.

One border is devoted to flowers for cutting. Such things as Verbenas, French Honeysuckle, Scabious, Helichrysums, Pentstemons, Early Chrysanthemums, China Asters and Dahlias, are all grown in quantity. Another border in front of one of the glasshouses is devoted to Celosia pyramidalis in a great variety of Colours, also tuberous Begonias, Fuchsia Ballet Girl, &c. The red and white flowers of the Fuchsia are produced in great profusion and are very handsome.

A panelled border of Violas has been most floriferous all the season, and is still very gay in spite of the dry weather. The whole stems are cut away from time to time so as to allow space for the suckers. Varieties grown here are Grievei, yellow; Archie Grant, violet; True Blue, deep blue; The Mearns, purple and white; Duchess of Fife, yellow, edged purple; Sissy Mellows, white, with a violet-purple centre; Wm. Niel, rose; and Wemyss Gold. The last named is of the same type as Bullion (also grown here), but it is a fortnight later in coming into bloom in spring, and has smaller, deeper golden-yellow flowers. It keeps up a succession of bloom till late in the season.

Sweet Peas are grown in a great number of varieties and yield a long succession of bloom for cutting. Such varieties as Countess of Radnor, Princess Beatrice, Scarlet Invincible, Purple King, Painted Lady and others are grown in quantity. Space compels us to defer an account of the glasshouses till later.

WALTHAMSTOW HALL, SEVENOAKS.

"Come in some evening when you have a few minutes to spare and just have a look at the growing crops. No club this time," said Mr. Buckland, the genial head gardener. "Oh, how is that?" I exclaimed. "Well, we have taken in a new piece of pasture land, and on this we have planted our green stuff." It is always a pleasure to look over this place so that the invitation was accepted with alacrity.

Inside the lodge gate your attention is at once arrested by the well-kept lawns and paths, and a row of Mrs. Sinkins Pink running the whole length of the herbaceous border, fifty yards or more—truly a grand sight. Mr. Buckland's method of propagating this splendid border plant is simple in the extreme. About the end of August fair-sized pieces are pulled off the parent plants and dibbled in where they are intended to flower. Should the weather be dry during September they are given a watering, otherwise they are left to take care of themselves.

The borders were gay with fine Delphiniums, English Iris, Iceland Poppies, etc., whilst at the back we noticed a fine batch of Hollyhocks, some of the finest varieties being amongst them. Dahlias too, of the Cactus type are largely grown for indoor decoration, and of Roses there is a good quantity, mostly on their own roots. The climbers, Madame Alfred Carrière, Glorie de Dijon, and William Allen Richardson were a fine sight on the house.

In the greenhouse close by we noticed the new Tomato Cropper carrying well coloured fruit. Cucumbers in frames were looking wonderfully well. Mr. Buckland has none too much glass, but he has the knack of getting a good quantity of stuff from it.

Fruit.—There is a fair sprinkling of fruit. Culinary Apples are represented by such well known varieties as Lord Derby, Warner's King, New Hawthornden, Jubilee, Lord Suffield, Gascoyne's Scarlet, Bismarck, Lane's Prince Albert, &c. Worcester Pearmain, King of the Pippins, Ribston Pippin, Cox's Orange, and Blenheim Orange, are a fair crop in the dessert line. Of Plums, Pond's Seedling seems to be carrying a fairly good crop. The Strawberry season has been very short. The fruit, however, has been exceptionaly good.

The Kitchen Garden.—As a kitchen gardener, Mr. Buckland has no equal in this neighbourhood, and I might say in Kent, for I very much doubt if another garden could be found where so much produce is got from the same quantity of land, and such quality too. Of Potatos there are about twenty sorts, and no matter where you examine them the tubers are of large size and beautifully clean.

Peas.—These considering the drought are wonderful. There are rows of Telegraph and Telephone, a yard in width, loaded with fine pods. The Peas are sown or rather planted (for they are put in very thinly) in trenches prepared as if for Celery; and on light, sandy soil there is no question but that it is a good plan.

Onions (Spring-Sown) at the time of my visit were quite 1 ft. in circumference. The bed had been dressed with nitrate of soda, which Mr. Buckland thinks highly of for growing crops. It should, however, be used with great care; an overdose would do more harm than good. A little and often is Mr. Buckland's motto.

Carrots treated in a similar manner have made good headway, and have quite outgrown an early attack of the Carrot Fly. Half the bed of Beetroot has been dressed with nitrate of soda and shows a marked difference to the half not so treated, the foliage being much darker in colour, and the roots much larger. Beans, Turnips, Celery, and in fact every kind of vegetable is looking the acme of perfection. The secret? Well, no, there is no secret, said Mr. Buckland. The fact is we thoroughly trench our ground as opportunity offers, and give it a fairly liberal dressing of gas lime. This we put on as soon as the crops are off in autumn, and where possible it is allowed to lay a few weeks before the trenching is done. Weeds? Well there are none, which shows that the hoe must have been kept going from morning till night, for no matter what you do they will come unless the ground is kept stirred.

Coming to the starting point, The Lodge, where Mr. Buckland lives, I was invited round to the back to see the Ferns. These were indeed a curiosity. Around the flower beds Mr. Buckland had placed a quantity of inverted bottles to form the edging for the beds. Inside of these have sprung up all kinds of Ferns, Adiantum and Pteris, besides numerous hardy kinds. It should be mentioned that only in the case of white or clear glass bottles has any kind of germination taken place. There are other things of interest so that I must conclude by advising anyone visiting Sevenoaks with a taste for gardening at its best, to give Mr. Buckland a call, and if they do not get an eye-opener I shall be surprised.—*Hortulanus.*

A FINE WYCH ELM.

The Elm (Ulmus campestris) is probably the commonest tree in this country, for nearly every field-hedge and likewise every roadside contains more or less perfect specimens. But the Wych Elm (U. montana), the subject of this note, certainly cannot be placed in the same category, although Loudon states that a variety of it is common in some parts of Essex. However, the one in question is a particularly fine specimen, and occupies, in addition, a noble site in the grounds of Luctons, Buckhurst Hill, Essex, the charmingly-situated residence of Nathaniel Powell, Esq., J.P. As Luctons is perched, so to speak, on the top of Buckhurst Hill, it commands extensive views of Epping and Hainault Forests, and of the valleys of the Roding and the Ching. The soil and elevation evidently suit the requirements of this tree, for the bole, at four feet from the ground, measures nearly twelve feet, while the graceful spread of the branches—judging by their diameter—would be about equal to a circumference of 180 feet. Moreover, the branches sweep the ground in Beech-like fashion. The tree also is proportionally lofty, and fairly symmetrical, although the latter quality might have been augmented if two or three other species had been removed, which would have undoubtedly tended to still greater lateral development. Anyhow, I think these remarks will go to prove that this tree is a noble, if not a unique specimen; and, as it is said, that the Elm takes about 150 years to arrive at perfection, it is just possible that this tree has still a long career before it.

For a sight of this beautiful Wych Elm I am indebted to the kindness of S. A. Sewell, Esq., of Buckhurst Hill.—*C. B. G., Acton, W.*

SOCIETIES.

GRIMSBY.—*August 5th.*

The Grimsby Horticultural Society held their annual exhibition in the People's Park, the use of which they were fortunate in securing. The exhibits were staged in one huge marquee. The fact that half the proceeds of the show were to be devoted to the Hospital and Nursing Institution insured a large amount of public support. The extremely hot weather was tempered by a strong breeze.

There was a very keen competition in many of the classes, particularly amongst the cut and wild flower classes which filled one side of the marquee and gave off a perfume which prevaded the whole. Mr. J. Robinson was awarded the first prize for a miscellaneous group arranged for effect, and his work was admitted to be excellent. He was followed by Mr. T. Campbell and Mr. J. Clark, respectively. Mr. W. R. Marshall came to the front for stove and greenhouse plants. Messrs. E. Stevenson & Son had the best table plants. Mr. J. Smethurst took the lead for exotic Ferns. Mr. G. Marshall had the best hanging basket and the best table of miscellaneous plants arranged for effect. Mr. W. R. Marshall took the lead for Pelargoniums and had several other prizes, including a first for Coleus. Mr. J. Robinson again came to the front with tuberous Begonias. Mrs. Sharpe had very fine Fuchsias, being first.

As already stated the cut flower classes were a leading feature of the exhibition. Messrs. E. Pennell & Son, of Lincoln, took the premier awards for double Dahlias, Cactus Dahlias, herbaceous Phloxes, Roses, hand bouquets, &c. Captain Coredeaux took first prizes for Carnations, French Marigolds, African Marigolds, China Asters, and Stocks. Mr. G. Cottam took the lead for stove and greenhouse flowers, twelve and six bunches of garden flowers, and Zinnias.

Fruits and vegetables also secured a considerable amount of attention. Amongst the former some of the leading prize takers were Mr. F. F. Bladon, Mrs. Whittaker, Mr. G. A. Carr, Mr. J. Sutcliffe, Captain Coredeaux, Mr. J. Fox, Rev. H. Goffe, Mr. G. B. Burrows, Mr. A. Johnson, and Mrs. Long. The vegetables were also notable for quality and competition especially amongst the Potatos. Mr. F. W. Trout took several leading prizes here.

The Ichthemic Guano Company were represented with a very telling exhibit, including samples of their well-known fertiliser in which the growers and other practical men present evinced considerable interest.

CASTLEFORD, YORKS.—*August 7th.*

The Castleford Society caters for the general public with a number of attractions, but plenty of encouragement is given the horticultural section by the offering of numerous prizes for competition in open classes, as well as many others set apart for amateurs and cottagers. Here, of course, all the horticulturally inclined as well as the visitors who came to see and admire the flowers, were to be found. The show on the whole has never been surpassed at Castleford in any previous year, either for the quality of the exhibits or their arrangement. The sunshine of the few previous weeks had brought everything forward wonderfully. Some of the specialists were very severe upon other exhibitors by sweeping the boards in numbers of the best classes.

For twelve stove or greenhouse plants, the Marquis of Zetland took the first award, beating J. S. Sharp, Esq., Almondbury. Messrs. R. Simpson & Son, Selby, had to be content with the third place. J. S. Sharp, Esq., came to the front in the class for a group of plants arranged for effect in a space not exceeding 175 sq. ft. His group was worthy of all praise. He was followed by John Sunley, Esq., Monk Fryston, and Messrs. R. Simpson & Son, respectively. John Sunley, Esq., took the lead for six stove or greenhouse plants in bloom. J. Rhodes, Esq., Syndale Hall, took the lead

in another class for a group of miscellaneous plants, and was followed by the Rev. R. Gardner-Smith. J. S. Sharp, Esq., the Marquis of Zetland, J. Rhodes, Esq., and J. Blacker, Esq., Selby, took several other leading prizes, the latter being first and second in the same class for Begonias.

In the classes for cut flowers Messrs. J. & R. Calan took the leading prizes for thirty-six and twelve Roses, a cross, a bouquet, a wreath, a bouquet of white Roses, a lady's spray, a buttonhole, and Violas. J. W. Wilson, Esq., had the best Sweet Peas.

In the fruit classes Lady Beaumont had the best tray of fruit, white Grapes, Melon, black Currants and red Gooseberries. The Marquis of Zetland, J. Whittaker, Esq., Carlton Green, and the Rev. B. Hemsworth also took leading awards for fruit. Most of the same exhibitors scored very heavily in the classes for vegetables, particularly Lady Beaumont, the Rev. B. Hemsworth, G. Fewsdale Esq., and J. Whittaker, Esq. Mr. G. Exelby, Holgate, York, staged the best collection of vegetables.

HAWICK.—*August 7th.*

THE annual show in connection with the Hawick Working Men's Allotment and Cottage Gardens was held in the Town Hall. The entries numbered 638 for one hundred classes, showing a falling off of over one hundred from last year, mostly in pot plants. Despite the somewhat backward season the display was highly creditable, although it was considerably short of previous seasons in many respects. Cut flowers were beautifully staged and attracted a good deal of attention. Fruit was not shown to any great extent, but there was a strong display of vegetables. A Silver Medal for four distinct bunches of Sweet Peas was carried off by W. A. Wilson, who also won the Silver Medal offered by Mr. A. J. Robertson for Scotch Marigolds. Mr. Edwards, dentist, presented a Gold Medal for the six heaviest Onions, and this trophy was won by Thomas Scott. Mr. Edwards' Gold Medal for collection of vegetables was awarded to A. Kyle; and James Henderson won a similar prize, also presented by Mr. Edwards, in a like competition. The successful exhibits for Mr. Edwards' prizes were sent to the Cottage Hospital. Mr. Cormack Brown gave a special prize in the shape of a portrait of Nansen, painted by the donor, for the youths' collection of native grasses, and this was won by Robert Ruthven. There were some fine plants, &c., on exhibition from Mr. John Forbes, Buccleuch Nurseries, and from Mr. Fraser, Wilton Lodge Gardens. The duties of secretary were ably discharged by Mr. George Mitchell. The judges were:—Messrs. Ireland, The Priory, Melrose; Lunt, Bowhill; White, Kingfield, Penton; and Gordon, Teviotbank.

WESTON-SUPER-MARE.—*August 10th.*

THE Weston-super-Mare and East Somerset Horticultural Society held their twentieth annual show in the beautiful centre known as Grove Park, to which the equally picturesque grounds of Glebe House were added by the kind permission of T. Mullins, Esq., J.P. C.C. Since its founding the society has undergone many phases, some for the better, others for the worse, owing to circumstances which are difficult to control. Thanks to the energy displayed by those who undertook the hard work in connection with the same, the show this year bids fair to reinstate it amongst the leading exhibitions in the West of England. There is now abundant evidence of a desire for friendly competition, as on the above date all the classes were well filled and considerable rivalry existed amongst some of them. The subscribers had, therefore, a good return for their money in quality as well as quantity. The entries exceeded those of last year by 50 per cent. The floral exhibits were arranged in the two largest marquees in the Glebe grounds; while the fruit and vegetables were provided for in the Grove Park.

In the floral department there was a wealth of blossom and colour, rarely approached here. The exhibitors used the best material with the best possible effect. Floral devices, hand bouquets, epergnes, &c., attracted a great amount of attention from the general public. Except in the cottagers' section, the competition for flowers, plants, fruit and vegetables was open to all.

For twelve stove and greenhouse plants, Mr. James Cypher, Queen's Road Nursery, Cheltenham, carried off the leading award in his usual good style, and in the face of strong competition. He was followed by W. Brock, Esq. (gardener, Mr. W. Rowland), Exeter; by Mr. W. Finch, Coventry; and by Mr. G. Hallet, Bath, in this order. The same order of merit was maintained in the class for six stove and greenhouse plants as far as the first three prizes were concerned. Mr. J. Cypher and W. Brock, Esq. were first and second respectively in the classes for a specimen stove plant, a specimen greenhouse plant, six fine foliage plants, and single foliage plant. For a new or rare plant the order was reversed.

W. M. Appleton, Esq. (gardener, Mr. J. Brooks), secured the leading award for Orchids. W. Brock Esq., was first for Maidenhair Ferns, which bore evidence of good cultivation. J. P. Capell, Esq. (gardener, Mr. R. Larcombe) exhibited the best hardy Ferns; but W. Brock, Esq., again came to the front for exotic Ferns. For a group of plants arranged for effect in a space not exceeding 100 square feet. W Brock, Esq, again scored in good competition. He was followed by Mr. G. Hallett and Mr. William Brooks in this order. H. Pethick, Esq. (gardener, Mr. W. Summerhayes), took the lead for a smaller group. Prizes were also competed for in classes for single and double and Ivy-leaved Pelargoniums, Fuchsias, Liliums, Petunias, Balsams, Cockscombs, Gloxinias, Begonias, Coleus, Caladiums, and table plants.

Cut flowers constituted a feature of the exhibition, there being a large number of well-filled classes. Mr. J. Mattock, Oxford, took the lead for twenty-four varieties of Roses, and twelve varieties, and was followed in both cases by Messrs. Townsend & Sons, Worcester. In another class for twelve varieties T. Hobbs, Esq. (gardener Mr. H. Jeans), Bristol, had the most commendatory lot. Dahlias, Gladioli, Asters, Hollyhocks, Pelargoniums, Begonias and hardy herbaceous perennials were also well shown. Mr. A. A. Walters, had the best exhibit of the last named. Mr. F. Hooper, Bath, secured the lead for hardy annuals, and Carnations and Picotees.

Competition was not particularly strong in the fruit classes, yet some good exhibits were staged. V. Stuckey, Esq, (gardener, Mr. James Lloyd), Langport, secured the premier award for the collection of eight varieties, and was also first for a Pineapple and for Nectarines. He was followed by J. Brutton, Esq. (gardener, Mr. A. Crossman), Yeovil; and by J. C. Godwin, Esq. (gardener, Mr. J. McCulloch), Stoke Bishop, in the order named. There were some capital exhibits of Grapes, J. C. Godwin, Esq., being first for Black Hamburgh, and A. R. Bailey, Esq., Frome, for Muscat of Alexandria. J. Dole, Esq. (gardener, Mr. J. Marshall), Bristol, was first for any other Grape. Peaches were of great excellence for size and colour, the first award being taken by the Frome Flower and Fruit Company. V. Stuckey, Esq., took several other leading awards. Messrs. E. Fisher, J. Chedzoy, G. Garraway, J. T. Hebditch and F. Woodland were also first prize-takers for fruit.

The vegetable exhibits were good all round, but the amateurs and cottagers often ran the professionals pretty hard. Mr. G. Garraway, Bath, had the best collection of eight kinds in good competition. Mr. J. Hall, Wells, secured the premier awards for round and kidney Potatos. Mr. G. Garraway also had the best Cauliflowers, dwarf Beans and Tomatos. Col. Armstrong was first for Carrots. E. W. Hill Esq., had the best autumn sown Onions; and J. C. Godwin, Esq., the best spring sown Onions. J. Brutton, Esq., took the lead for Scarlet Runners.

CARDIFF.—*August 11th and 12th.*

The ninth annual show of the Cardiff and County Horticultural Society was opened under most favourable auspices in the Sophia Gardens. It is affiliated with the Royal Horticultural Society. His Worship the Mayor (Alderman E. Beavan) attended at one p.m. in his chain of office. The show was well up to the average of former years, and a new feature was added in the form of an industrial department open to all children in Glamorgan under sixteen years of age.

A leading feature of the show was the miscellaneous groups arranged for effect in a space not exceeding 100 sq. ft. They were accommodated in a large tent, to which they gave quite a tropical aspect. The premier award was taken by John Gunn, Esq., Llandaff, who had a magnificent arrangement in circular form, well furnished with Bamboos, which imparted an airy gracefulness to everything. The group was brightened with Lilies, Campanula pyramidalis, &c. There were more flowers in the second prize group shown by Messrs. Case Bros., who had a square arrangement. Mr. Ralph Crossling, Penarth, was a good third. John Gunn, Esq., also led the way in the class for six stove and greenhouse Ferns; and T. Hilliard, Esq, Cardiff, had the best Fuchsias. The second award in both the above classes was taken by Col. Sir E. Hill, Llandaff. Dr. J. Lynn Thomas, Cardiff, staged the best tuberous Begonias in not less than six varieties. Col. Sir E. Hill came to the front for twelve table plants in 6-in. pots. All of the above classes were open.

Twelve classes for cut flowers were also open. Mr. Ralph Crossling took the lead for twelve varieties of hybrid perpetual Roses, and was followed by S. Treseder, Esq., Cardiff. The order was reversed for twelve Tea Roses, but again resumed for twenty-four hybrid perpetuals and eighteen Tea varieties. For twelve blooms of any one variety of H. P. the award went to Messrs. J. Townsend & Son, Worcester. Mr. Ralph Crossling had the best twelve blooms of a Tea Rose. The Silver Medal of the Royal Horticultural Society for the best exhibit in any of the above classes, was awarded to Mr. R. Crossling for the twenty-four varieties of Roses.

Messrs. Keynes, Williams & Co., Salisbury, took the lead for twenty-four Dahlias in not less than twelve varieties, and their blooms were handsome. They took the same position for Cactus Dahlias in trusses of three. Mr. A. C. Hanbury, Pontypool, staged the best twelve bunches of stove and greenhouse flowers; and Mr. Geo. Shewring took the same position for hardy flowers.

In the open class for a dessert table arranged for eight persons, Messrs. Case Bros. led the way, followed by Messrs. Phelps & Co. In the amateurs' class for a similar table, Miss F. M. Jenkins took the lead, followed by Miss Mabel Hill. The tent in which these were arranged created a large amount of interest amongst both amateurs and professionals. Orchids, Iceland Poppies, Bougainvilleas, La France Roses, Pancratiums, and grand fruits were freely used. Miss Jenkins used Sweet Peas to great advantage. Messrs. Chase Bros. secured the Silver Medal of the Royal Horticultural Society for their table. Half a dozen of the bouquets shown here were superb, the best according to Mr. A. Outram ever seen here.

P. S. Phillips, Esq., Hereford, secured the Silver Challenge Cup for six bunches of Grapes in three varieties. T. M. Franklin, Esq., Cowbridge, was second, but came to the front for black Hamburgh Grapes. George Rutherford, Esq., had the best Muscats. P. S. Phillips, Esq., had the best of any other black Grape. T. M. Franklin, Esq. came to the front for any other white Grape. There were five other classes for Grapes; also four classes for Melons, and classes for Apples, Pineapples, Cherries, Pears, Currants, Gooseberries, Peaches, Nectarines, Apricots, and Plums. P. S. Phillips, Esq., secured the Challenge Cup for six dishes of dessert fruit, and was followed by Henry Pitt, Esq., Abergavenny.

A large number of classes (27) was set apart for vegetables in the open classes. Morgan S. Williams, Esq., Glyn-Neath, secured the Bronze Medal of the Royal Horticultural Society for a collection of nine distinct varieties of vegetables. W. Moore, Esq., Wenvoe, had the best half-peck of kidney Potatos; and Morgan S. Williams, Esq., took the same honour for a similar quantity of round Potatos. He was equally successful for six varieties of Potatos, and a collection of six vegetables.

The prizes offered by Messrs. J. Carter & Co., London, for Carter's Jubilee or Elephant Scarlet Runners, were taken by G. Rees, Esq., Alfred Thomas, Esq., M.P., and A. T. Robinson, Esq., respectively. Messrs. Webb & Sons, Stourbridge, offered prizes for six kinds of vegetables, and the leading award was taken by Morgan S. Williams, Esq. General Lee was awarded first for nine tubers of Wheeler's Alderman Potato. Evan Lewis, Esq., was first for six vegetables, the prizes of which were offered by Messrs. Garraway & Co. All of the above classes were open.

Twenty-nine classes were set apart for amateurs' and gentlemens' gardeners only. John Gunn, Esq., Llandaff, secured the premier award and a Silver Cup, for a group of miscellaneous plants arranged in a space of 50 sq. ft. His group was similar to that

which secured him the premier place in the open class. The Rev. W. J. Buckley, Llandaff, was second with a beautiful arrangement of Orchids, Sea Lavender, and Ixoras. G. Rutherford, Esq., Cardiff, was third. C. Waldron, Esq., had the best group of 25 sq. ft. Wm. Geen, Esq., Penylan, had the best collection of tuberous Begonias.

Certificates of Merit were awarded to Morgan S. Williams, Esq, for his vegetables grown from Messrs. Sutton's seeds; to Ralph Crossling, Esq., for a collection of Cannas; to Messrs. Phelps & Co., for Roses; to Mr. H. Eckford, Wem, for Sweet Peas; to Messrs. Edwards & Son, Nottingham, for rustic basket of Ferns; to Messrs. W. & J. Birkenhead, Sale, Manchester, for Ferns; to Messrs. Clibran & Sons, Altrincham, for cut flowers; to Mr. G. Davidson, Ammanford, for a new Pelargonium; and to Mr. H. Eckford, for four new Sweet Peas.

LADYWELL AND LEWISHAM.

August 11th and 12th.

This, the Ladywell, Lewisham and District Cottagers' Horticultural Society held a most successful show on the above dates at Lewisham. Between 400 and 500 exhibits were staged, all of them being of most excellent quality. Amongst the most successful competitors was Mr. Stevens, of 15, Brunscombe Street, Lewisham, who carried off the prize offered by the Ichthemic Guano Co., Ipswich, viz., an elegant case of silver salts for the best miscellaneous group of plants which had been grown with Ichthemic Guano. Mr. Stevens also carried off the Silver Medal offered by the president of the show and the Silver Gilt Medal of Messrs. Dobbie & Co., of Rothesay; in fact Mr. Stevens gained a prize for every exhibit, scoring forty-eight points out of a possible sixty. The visitors to the show were very numerous and the weather being especially favourable the show went off very well. Mr. Albert Pratt very capably discharged the duties of honorary secretary, and very great credit is due to that energetic worker.

SHROPSHIRE HORTICULTURAL.

August 18th and 19th.

We have this week much pleasure in recording an event which we believe will be read with great interest by friends and admirers of the hon. secretaries of the above society (Messrs. H. W. Adnitt and W. W. Naunton, see p. 809). A wish having been expressed by many of the leading horticulturalists and exhibitors at this society's show for the past twenty-two years to mark their appreciation of the long and gratuitous services rendered by these gentlemen during such period, it was thought the present being Jubilee year, and one in which a great commemorative horticultural exhibition under the auspices of the Royal Horticultural Society would be held in connection with the above society's show, on Wednesday and Thursday at Shrewsbury, that the occasion offered an excellent opportunity for some suitable recognition of such services. Accordingly, an influential committee with Mr. Owen Thomas, treasurer, and Mr. A. Outram, hon. secretary, was formed for the purpose of soliciting subscriptions, which we are pleased to learn resulted in a sum sufficient to purchase for each gentleman a silver flower stand of handsome design.

Before giving an account of the presentation it may interest our readers if we give a short epitome of the origin of this, one of the most important shows held in the United Kingdom, and which in a large measure is due to the indefatigable exertions and assiduous courtesy of these gentlemen in the multifarious duties discharged during the long period before-named. It was in July, 1875 that the Shropshire and West Midland Agricultural Society held their first meeting in the beautiful Quarry Grounds at Shrewsbury. A few weeks previously these gentlemen and the late Mr. Pritchard (a leading nurseryman in the town) consulted as to whether a floral exhibition would not prove an interesting attraction in connection with the agricultural show, and they eventually resolved to try the experiment. They accordingly headed a subscription list with £20 each and immediately obtained the names of several other influential townsmen to a fund for guaranteeing the necessary expenditure in prizes and expenses and thereupon set to work in earnest, formed committees, prepared a prize schedule and engaged the band of the Coldstream Guards, being the first time the Shrewsbury public had had the pleasure of listening to this splendid band. The show resulted in a handsome profit of £409 4s. 2d.

Thus from a small and unpretentious beginning, the society has gone on from year to year with an unbroken record of unqualified success, until it has attained the colossal magnitude it now enjoys in the horticultural world. As an illustration of the growing interest taken by the general public in the display of horticultural products and other entertainments in connection therewith, which are annually provided at this society's show, the following statement of receipts, &c., may prove interesting:—

	Subscriptions.	Cheap Tickets.	Takings at the Gate. First Day.	Second Day.	Sundry receipts, inc'ding interest.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1875	318 18 0	77 10 0	286 15 1	107 9 8	0 19 3	791 12 0
1876	259 10 6	105 11 0	82 4 6	189 5 2	48 14 0	685 5 2
1877	277 13 0	154 12 0	92 1 10	381 3 8	69 19 4	975 9 10
1878	316 2 6	219 15 6	104 7 3	528 6 1	112 19 2	1281 10 6
1879	318 1 0	210 3 8	65 8 2	398 8 10	151 7 3	1206 8 11
1880	388 17 6	217 13 0	121 4 9	653 12 8	135 19 0	1517 6 11
1881	397 1 0	260 19 0	104 17 10	725 2 0	153 16 2	1641 16 0
1882	393 6 6	319 9 6	134 7 0	824 15 0	159 17 5	1831 15 5
1883	400 18 6	396 11 6	156 1 0	1055 7 0	190 13 4	2199 11 4
*1884	400 5 0	301 7 3	154 18 3	678 2 11	206 4 3	1740 17 8
1885	402 6 0	346 18 3	218 9 7	1074 19 0	207 8 1	2250 0 11
1886	403 9 6	372 11 2	216 0 4	1157 1 4	252 6 6	2401 8 10
1887	409 18 6	500 9 6	130 17 8	1142 17 7	253 6 9	2437 10 0
1888	414 9 6	504 10 2	247 1 3	1317 18 0	291 6 5	2775 5 4
*1889	416 18 6	525 1 8	225 12 6	981 4 6	280 9 4	2429 6 6
1890	428 3 0	551 3 9	311 13 9	1317 11 9	354 13 2	2963 5 5
1891	428 7 6	633 3 2	351 16 2	1413 11 4	507 12 4	3334 10 6
1892	414 19 0	667 4 8	434 19 6	1633 14 8	591 7 4	3742 5 2
1893	404 18 0	496 16 10	524 15 8	1459 6 2	745 15 9	3631 12 5
1894	415 13 0	484 3 5	583 11 3	1262 8 9	*730 7 8	3476 4 1
1895	449 2 6	491 15 7	727 0 0	1533 14 3	809 0 10	4010 13 2
1896	444 19 0	547 5 10	679 9 5	1735 4 2	821 4 5	4228 2 10

We think it only fair to supplement the above with a list of donations, &c., showing how the society has disposed of some of its profits year by year for the benefit of the various institutions connected with Shrewsbury:—

	£ s. d.
1878—Donation to Shrewsbury Corporation for Improvements to Quarry Grounds	100 0 0
1879—Erection of Band Stand in Quarry	223 5 2
1881—Erection of Gates at Quarry Entrance	216 9 3
1881—Donation to Salop Infirmary ..	105 0 0
1882—Donation to Fund for Purchasing Grammar Schools	105 0 0
1883—Gates in Quarry Place, and Seats and New Music Stand in Band Stand	155 8 8
1886—Building Lodge at Quarry Entrance	486 6 5
1887—Presentation of Books to Free Library	105 0 0
1887—Railings and Fittings at Quarry Entrance..	112 13 4
1887—Enlarging and Painting Band Stand	304 12 3
1887—Donation to Building Ladies' Cloak Room in Quarry, and .. .. 1888—Painting Inside of Lodge and Band Stand	68 8 0
1888—Donation to Shrewsbury Severn Angling Society for Construction of Rearing Ponds in Dingle	50 0 0
1888—Donation to Shrewsbury Public Baths Fund	300 0 0
1890—Donation to Mayor's Fund for Clearing off Debt on Free Library ..	300 0 0
1891—New Seats in Quarry	77 0 0
1891—Alterations Round Band Stand..	157 10 0
1891—Improvements to Bank of River in the Quarry. Contract	486 16 1
1891—Grass and Lawn Mowers, Rollers, &c., Presented to the Corporation ..	53 8 0
1889 to 1896 — Donations to Band Fund and Small Local Subscriptions ..	358 12 0
1889 to 1896 — Steps to Boat House and Extending Water Supply to Quarry Grounds	63 12 0
1892 to 1896 — Purchase of Land for future Extension of Quarry Grounds.	4,045 9 6
1892 to 1896 — Purchase of Foreshore of River and Recreation Ground ..	1,855 0 0
1897—Cost of Bronze Statue of Charles Darwin presented to the Town ..	1,000 0 0

Let us now consider the "why and wherefore," such brilliant successes have been attained. All will admit that satisfactory results naturally depend upon good management; and *that* this society has had at its *helm* two most able secretaries is beyond dispute. Their suggestions for improvements from time to time have been encouraged and approved by an influential and excellent working committee who have annually provided a liberal schedule of prizes for competition by exhibitors, and to the general public they have given the best of music, and up-to-date talent in the "side shows," and by thus catering for all classes of the community, the society continues to occupy and enjoy an unique position in outdoor fetes of the day.

Without the least flattery, we may fairly assert that the ramifications of this society have been the means not only of encouraging an increasing taste for the innocent and important study of horticulture in its various branches as evidenced by the large number of shows now annually held for many miles round the old county town, but also of considerably educating the musical ear of the public by providing the very best of military bands.

Some of our readers may perhaps object to the introduction of "side shows" in the programme of events in connection with horticultural exhibitions, but we are obliged to admit, however reluctantly, that a show confined to horticulture pure and simple, seldom in these days, draws the populace in sufficient numbers to make it a financial success. These gentlemen were wise in their day, and from the commencement of the society's career they determined to cater for the tastes of the general public, with the result that this society has every year cleared a handsome surplus which, last year, reached over £1,000. This sum the committee have most liberally spent in erecting, on a site opposite the Free Library, a bronze statue to the memory of their fellow townsman, the late Charles Darwin, the greatest scientist the world has ever known, and which was unveiled by the society's president, The Right Hon. Lord Kenyon, in the presence of a distinguished assembly on the 10th inst.

Long may such a society continue to flourish and do good in its beautiful home and surroundings is our earnest wish.

BY TELEGRAPH.

On Tuesday the work of arranging the principal exhibits was in full swing when, owing to the high wind, the large marquee containing the groups and specimen plants was blown down, and considerable damage done to the exhibits in process of being arranged. The principal sufferer was Mr. Jas. Cypher, of Cheltenham, whose large plants were very much knocked about and damaged, and the group which was in course of construction had to be entirely dismantled. Steps were at once taken to erect another marquee, and the groups and specimen plants were transferred thereto. Several other tents were blown down and damaged, but being empty no great harm was done.

On Wednesday the first prize for the large group was carried off by Mr. Jas. Cypher, Cheltenham; Mr. C. J. Mee, Nottingham, was second; and Mr. William Finch, Coventry, was third. For a group of ornamental foliage plants, etc., C. H. Wright, Esq., Oswestry, was first; Mr. Jas. Cypher was second; and Mrs. Gurney Price, Darlington, came in third. The special prizes offered for fruit and vegetables grown with Ichthemic Guano were awarded to Mr. J. McIndoe, Hutton Hall, Guisborough, and Mr. W. Pope, Highclere, Newbury.

In the class for twenty stove and greenhouse plants, Mr. James Cypher, Cheltenham, took the premier honour; and was followed by Mr. W. Finch, Coventry. For six plants in flower, Orchids excluded, Mr. James Cypher took the lead; Mr. Wm. Finch was second; and Lord Harlech came in third. For six stove and greenhouse plants, Lord Harlech came to the front; H. H. France Hay-

hurst, Esq., was second; and Mrs. Juson took the third place.

The society's Gold Medal for the most meritorious flowering or foliage plant not in commerce before January 1st, 1897, was awarded to Mr. Jas. Cypher, for Bougainvillea Cypheri.

For the display of floral arrangements, Messrs. Perkins & Son, Coventry, were first. Messrs. Jones & Son, Shrewsbury, were second; and Miss H. M. Stevens, Birmingham, was third. For the ball and bridal bouquet, Messrs. Perkins & Son, Coventry, took the lead: Messrs. Jones & Son were second; and Messrs. Pope & Sons, King's Norton, took the third position.

For a collection of Gladioli, Messrs. Harkness & Son, Bedale, were first; and Messrs. R. Wallace & Co., Colchester, were placed third. For a collection of Roses, Messrs. D. & W. Croll, Dundee, were first; and were followed by Messrs. Pope & Son, King's Norton. For a collection of Dahlias, Mrs. M. V. Seale, Sevenoaks, took the lead; and Messrs. Keynes, Williams & Co., Salisbury, were second; Messrs. Jones & Sons, Shrewsbury, came third. For a collection of hardy herbaceous flowers, Mr. W. F. Gunn, Olton, Birmingham, was first; and Messrs. Jas. Cocker & Sons, Aberdeen, came next in order; Mr. M. Campbell, Blantyre, N.B., took the third position.

For a collection of hardy bulbous plants, Messrs. Harkness & Son, Bedale, again scored; Messrs. Barr & Son, Covent Garden, were second; and Messrs. R. Wallace & Co., Colchester, were third. For a collection of Carnations, Mr. M. Campbell, Blantyre, N.B., came first; Messrs. Laing & Mather, Kelso, followed; and W. G. Phillips, Esq., came third. In the class for forty-eight Roses, Messrs. J. Cocker & Sons took the premier award; Messrs. D. and W. Croll were second; and Messrs. Harkness & Son came in third. For a decorative dessert table, Mr. J. H. Goodacre, Elvaston Castle, Derby, was first; Mr. J. McIndoe, Hutton Hall, Guisborough, followed; and Mr. Harris, Eastnor Castle, was third; Mr. Gleeson, Stanmore, Middlesex, came in fourth.

In the Victorian fruit class for sixty dishes of fruit, the first prize (£30) and the Gold Medal of the Worshipful Company of Fruiterers were won by Mr. J. McIndoe. The second prize (£25) and the Silver Knightian Medal of the Royal Horticultural Society went to Mr. Dawes. The third prize (£20) and the Silver Medal went to Mr. J. H. Goodacre. For a collection of nine dishes of fruit the first prize and Silver Medal of the Fruiterers' Company went to H. H. France-Hayhurst, Esq., Wellington; Lord Trevor, Brynkinalt, Chirk, was second; the Rev. T. M. Bulkeley-Owen, Tedsmore Hall, West Felton, was third; and C. H. Wright, Esq., Halston Hall, Oswestry, came in fourth. For four bunches of black Grapes, the first prize and Silver Medal of the Fruiterers' Company was taken by the Rev. F. Alderson, Welsh Frankton, Oswestry; Lord Harlech Brogyntyn, Oswestry, was second; and the Rev. J. M. Bulkeley-Owen, Tedsmore Hall, West Felton, came in third; while Mrs. Bright, Liverpool, took the fourth place.

For four bunches of white Grapes the first prize and Silver Medal were taken by C. E. Newton, Esq., Derby; Lord Harlech was second; and W. B. Marling, Esq., Lydney, was third. Other prizetakers for Grapes comprise the Rev. T. M. Bulkeley-Owen, Earl of Harrington, Rev. F. Alderson, Lord Wantage, Mr. W. Neila, and W. B. Marling, Esq. Mr. Foster, Aber Gwyn, Glyn-Neath, gained Sutton's Cup and £5 for collection of vegetables; Mr. W. Pope, Highclere, was second; and Mr. Bowerman, Basingstoke, third. Mr. R. Milner was first in Carter's prizes for vegetables.

An interesting ceremony took place at the luncheon. Many leading horticulturists and other friends of Mr. H. W. Adnitt, and Mr. W. W. Naunton, the honorary secretaries of the Shropshire Horticultural Society, thought the present a fitting opportunity for presenting them with some slight appreciative recognition of their long and gratuitous services to the society. They have ably discharged the multifarious duties of their office for the long period of twenty-three years, and have encouraged an increasing taste for gardening in its various branches, as the information above given will testify. The gentlemen in question were amongst the founders of the Society in 1875; and from a small beginning the show has grown to its present colossal dimensions, and to be one of the principal features of the season in the horticultural world.

The show this year has been held under the auspices and with the co-operation of the Royal Horticultural Society. This being so, and being the Diamond Jubilee year of Her Most Gracious Majesty The Queen, it was considered a most fitting occasion to make the presentation resolved upon. It was made by Sir Trevor Lawrence, Bart., who was acting on behalf of the Royal Horticultural Society. The presentation consisted of a valuable Silver Centre Piece for a dinner table, specially designed for the occasion by Messrs. Mappin & Webb in their well-known excellent style.

A large nnmber of friends in all parts of the country were interested in this presentation, so that the goodwill shown to the recipients was not confined to Shropshire nor its Horticultural Society. Mr. Owen Thomas, of the Royal Gardens, Windsor, acted as treasurer for the numerous agencies at work all over England and Wales. In the absence of other evidence this would be sufficient to testify to the assiduous courtesy to exhibitors and others, shown by the gentlemen in question over so long a period of years. We assuredly delight in offering our congratulations to the recipients.

SEVENOAKS FLOWER SHOW.

THE 30th annual exhibition of fruit, flowers and vegetables was held in "Knole Park," the beautiful country residence of the society's popular president, Lord Sackville.

A better place for holding a flower show could not possibly be found. The park itself is sufficient during the summer months to attract numerous visitors into the town, and with the addition of a good show, a military band (The Blues), and the throwing open of the grounds with their well-kept lawns, fine herbaceous borders, &c., the inducement held out to the public was one which they could not resist; and in consequence they turned up in large numbers, a good gate being the result. The two railway companies too were not slow to recognise the importance of the show by issuing cheap tickets from stations over ten miles distant.

Several large tents were required to properly accommodate the exhibits, which were in most cases—notwithstanding the dry weather—quite up to the average in point of excellence. The large plant tent, 120 ft. by 40 ft., was as usual a great feature of attraction, for in addition to the exhibits for competition there were groups from Messrs. Veitch & Sons, Limited, Chelsea, who had amongst other choice and curious things, Cypripedium harrisianum, Sarracenia chelsoni, Dionaea muscipula, Ataccia cristata, Lilium nepalense, Rhododendrons, &c.

Messrs. Cutbush & Son, Highgate, had an interesting group of decorative plants, whilst Messrs. H. Cannell & Sons, Swanley, were represented by a group of brilliant Cannas of all colours. Mr. Hatton showed a specimen in fruit of the Sago Palm, Cycas revoluta; the plant in question is supposed to be 100 years old.

In the class for six exotic flowering plants, the competition was not so keen as we are accustomed to see it, only two exhibitors entering the lists. Mr. A. Gibson, gardener to T. F. Burnaby-Atkins, Esq., Halstead Place, was first with well-flowered plants of Dipladenia brearbyana, Ixoras, and Allamandas; second came Mr. A. Hatton, gardener to Mrs. Swanzy, The Quarry, Sevenoaks, with good Allamanda, Gloriosa superba, &c.

For a single specimen plant in flower Mr. Gibson was again first with a well-flowered piece of Dipladenia amabilis, closely followed by Mr. Sutton, gardener to the Right Hon. Lord Stanhope, Chevening, Sevenoaks, with Allamanda Hendersonii. For six foliage plants, Mr. J. Mason, gardener to H. J. Wood, Esq., Bidborough, Tunbridge Wells, was first, with fine Croton Queen Victoria, Palms, &c.; second came Mr. A. Hatton, with Allocasia thibautiana, Cibotium princeps, &c., as his best.

GROUPS FOR EFFECT.—These are always a great feature at most shows, and as they fill a good space, committees generally throw out inducements in the way of good prizes, so as to insure plenty of competition. Generally speaking we don't think them quite up to the average. The one adjudged the best by the three gentlemen that were responsible came from Mr. A. Hatton, and, although not one of his happiest efforts, was well set up, the flowering plants and foliage plants being nicely balanced. Mr. Fennell, gardener to W. M. Cazalet, Esq. Fairlawn, Tonbridge, who is a past master at grouping, was second. We generally expect some novel idea from this exhibitor, but this year he depended on the old style of group and suffered accordingly. Mr. W. Tebay, gardener to Mrs. Rycroft, Everlands, Sevenoaks, was third with beautiful Campanulas and Lilies, but insufficient tall plants at the back to show them off. Another year this will be remedied, no doubt, and a corresponding advance made in the positions—at least, this is our prediction.

For a group of Ferns, Mr. Hatton was again first—a position he has held for several years, and one from which he will not be easily deposed. Mr. Heath, gardener to Mrs. Petley, Riverhead, was second with a fresh lot, closely followed by Mr. Hough, gardener to Mrs. Lambarde. In another division for gardeners not employing more than one assistant, Mr. Francis, gardener to A. Laurie, Esq., Rockdale, was first with a miscellaneous group of plants arranged for effect, closely followed by Mr. Heath and Mr. Selby, Ightham.

In the class for six Fuchsias, Mr G. Cowper, gardener to H. Foster, Esq., Hillside, was first with six of the handsomest plants that ever have been staged at this show, and we heartily congratulate him on his success. Mr. Huntley, gardener to the Rev. T. S. Curtis (who, by the way, has hitherto farmed this prize), was not so good as usual, being second.

CUT FLOWERS.—The chief attraction in this tent was the separate tables, 9 ft. by 4½ ft., for table decoration. The prizes offered being pretty good brought out five competitors, all of whom had passable tables. Mr. R. Potter, gardener to Sir Mark Collet, St. Clere, was first with a very light and pretty arrangement of Montbretias, Gypsophila, bronze foliage, grasses, &c., nicely blended. Second came Mrs. Fennell, with a bright and showy table. Mr. R. Edwards, Beechey Lees, was third with a nicely finished table, in style similar to the first prize one. Miss E. Cooke took the fourth award. For a centre piece, Mrs. Searing, Park Wood, Swanley, was first, followed by Mr. Potter and Mr. Edwards in this order. Mrs. Seale, The Vine Nurseries, had the best bouquet and arranged basket, Miss E. Cooke the best spray, and Mr. R. Edwards the best buttonholes. At the head of this tent was, we think, one of the best exhibits in the show. It consisted of baskets, bouquets, wreaths, anchor, fans, &c., and was furnished by Mrs. M. V. Seale, of the Vine Nurseries.

FRUIT.—The best collections of six varieties came from Mr. Earl, gardener to Davigdor Goldsmid, Esq., Tonbridge, Grapes, Peaches, and Nectarines being very good. Second came Mr. J. V. Goodman, gardener to W. G. Lambarde, Esq., Bradbourne Hall, Riverhead, with good Peaches and Grapes; Mr. R. Potter was a good third. Black Grapes were not so well represented as usual; Mr. Earl was first; Mr. C. Noble second; and Mr. T. Robinson, Hollingbourne, third. Mr. Hough was an easy first for white Grapes, with nicely finished Muscats, Mr. A. Gibson coming second. For a collection of Grapes Mr. Earl was again first, followed by Mr. Henson, and Mr. G. Fennell, in the order named. Mr. R. Edwards had the best dish of Peaches; Mr. J. V. Goodman the best Nectarines; and Mr. Fennell the best Plums.

VEGETABLES.—Considering the very dry season, the competition was very good. Messrs. Robinson, Hodgson, and Buckland had the best collections in the principal classes for gardeners; whilst Messrs. Crowson, Reynolds, Wolfe, Ashby, and Galloway were the most successful prize winners in the cottagers' classes.

The arrangements were every thing that could be desired, and reflected great credit on the management, of which Mr. Hancock, at the head in the capacity of secretary, must feel justly proud.

From America, of course, comes the patent plant protector idea. The machine in question is a funnel-shaped glass which may be inverted over the plant, the upper end being closed with a lid controlled by a spring. The spring expands and contracts according to the temperature, and air is put on or taken off automatically.

QUESTIONS AND ANSWERS

**** Will our friends who send us newspapers be so good as to mark the paragraphs or articles they wish us to see. We shall be greatly obliged by their so doing.*

[Correspondents, please note that we cannot undertake to name florists' flowers such as Carnations, Pelargoniums, Chrysanthemums, Roses, nor such as are mere garden varieties, differing only in the colour of the flower. Florists' flowers, as a rule, can only be named by those who grow collections of them.]

Tomatos diseased.—*C.B.G.*: The specimens sent were suffering from what is termed the Black Spot of Tomatos, which is caused by the fungus Cladosporium Lycopersici. This disease does not, as a rule spread very rapidly, nor is it difficult to grapple with, if the Tomatos are grown under suitable conditions. A moist atmosphere favours the fungus, but that condition is unfavourable to the Tomatos and should not now be permitted. Give plenty of light and air on all occasions, so as to maintain a sweet and airy condition of the atmosphere. While this will favour the ripening of the Tomatos it will prevent the spread of the fungus, which requires moisture to germinate the spores and enable them to enter the fruits by way of the decaying style. You will notice that the fungus always enters this way and radiates round the style, unless the top of the fruit is ragged elsewhere and favours an entrance. In the meantime remove and burn all affected fruits so as to destroy the fungus. Such fruits are incurable and therefore useless.

Names of Plants.—*A. O.*: Tecoma radicans.—*J. C. S.*: 1, Filago germanica; 2, Aster Tripolium; 3, Euphorbia exigua; 4, Sonchus arvensis, affected with Uredo; 5, Vicia tetrasperma; 6, Poa aquatica, otherwise Glyceria aquatica; 7, Senecio erucaefolius; 8, Chenopodium polyspermum. — *J. Gage*: It is evidently Eryngium planifolium, but you ought to have sent a good leaf to make certain of the species. —*Sigma*: You have sent at least two species of Epilobium, but most of the seedlings were small and starved by being crowded. That with the 4-lobed stigma was Epilobium parviflorum; the other was E. palustre, though some of the specimens were not entirely typical.—*A. C.*: Erigeron speciosus; 2, Malope trifida grandiflora; 3, Tilia petiolaris; 4, Ribes aureum, often used as a stock for Gooseberries; 5, Symphoricarpus vulgaris variegatus; 6, Chrysanthemum carinatum.—*H. J.*: 1, Masdevallia Veitchi; 2, Cypripedium bellatulum; 3, Oncidium longipes.—*C. Hardy*: 1, Campanula carpatica; 2, Campanula pumila; 3, Mentha rotundifolia variegata; 4, Epilobium rosmarinifolium; 5, Phlox paniculata var.—*F. L.*: 1, Linaria purpurea; 2, Verbascum phoeniceum; 3, Rhus Cotinus, 4, Rhus typhina.—*M.C.*: 1, Caucalis Anthriscus; 2, Anthyllis vulneraria; 3, Lychnis Flos-cuculi; 4, Bartsia Odontites; 5, Geum urbanum; 6, Euphrasia officinalis.—*R.L.*: 1, Blechnum occidentale; 2, Nephrolepis cordifolia; 3, Nephrodium Otaria (aristatum of gardens); 4, Adiantum cuneatum variegatum; 5, Episcia fulgida.

Peaches diseased.—*Charles Etherington*: The root pruning you mention would have no direct result in causing the fruits to assume the ruined appearance presented by those you sent us. The tree was affected, you say, with curly blight in spring, and by this we should understand you to mean that it was attacked by aphides causing the leaves to curl. This might have been the case to some extent, but we suspect that Peach blister, caused by the fungus Ascomyces deformans, was the principal ailment in spring. We should have been pleased if you had sent some of the curled leaves. By placing a section of one of the fruits under the microscope we detected the asci of the fungus in question, by hundreds or thousands. The fruits must have been attacked in the early stages of their growth, so that the affected portions could never afterwards swell. It is a skin fungus, never penetrating to any great depth, as you may determine by cutting a fruit open. All the affected fruits should be cut and burned at once, as they can never be of any use for table. All the blistered leaves, and even the shoots that are attacked and swollen should be cut off in spring and burned. If the tree is very bad the best plan would be to uproot it and burn it; because when once badly attacked the malady is renewed year after year. We should not plant a Peach tree in the same place, at least not for some years. A Pear, Plum or Cherry might be planted there, and Peaches elsewhere.

Auricula seed.—*T.S.*: The best plan is to sow the seed as soon as ripe, because this favours germination more speedily than if the seeds were kept and allowed to become thoroughly dry before being committed to the soil. You had better sow it at once in seed pans or boxes, in a compost of sandy loam and leaf mould. Stand the pans in a greenhouse or frame, and keep them under glass all the winter. Some of the seeds lie a long time before germinating, so that you must not be in a hurry to throw them away. Very often the latest seeds to germinate produce the finest varieties. If moss is inclined to grow on the surface of the pans during winter, give them a good sprinkling of light sandy soil.

Stopping Tomatos out of doors.—*W. J. H.*: No more flowers need be allowed to form after the end of July, as fruits developed from such cannot possibly ripen out of doors in our climate. You might therefore top them about that time every year; and you cannot too soon do it now. After about the middle of next month they make little progress in ripening, unless the weather be very fine.

Communications received.—A. O.—C. L. S.—Sigma, next week.—E. V. G.—F. W. M.—F. Warne & Co.—B. Wells.—R. C.—W. M.—P. T.—John Stoddart.—L. S.—T. O.—W. Monson.—Reader.—Athos.—Rasp.—B., Northallerton, Lancaster.

TRADE CATALOGUES RECEIVED.

W. B. Hartland, Seedsman, Cork, Ireland.—Well-ripened Irish Daffodils and Tulips.

Dickson, Brown & Tait, 43 and 45, Corporation Street, Manchester.—Autumn Catalogue of Flowering Bulbs, &c

W. Drummond & Sons, Ltd., Stirling.—List of Bulbs.

John Peed & Sons, West Norwood, London, S.E.—Catalogue of Bulbs.

Dicksons & Co., 1, Waterloo Place, Edinburgh.—Dicksons' Flower Roots.

J. Carter & Co., 237, 238, and 97, High Holborn, London.—Carters' Bulbs.

Dicksons, Limited, Chester.—Dutch and other Flowering Bulbs, &c.; also Select Roses.

LONDON SEED TRADE.

August 17th, 1897.

Messrs. Hurst & Son, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a good consumptive demand for Trifolium and Mustard. Rape still tends upwards in value. Tares seem to be in large supply and good quality. Rye firmer in sympathy with advance in wheat.

COVENT GARDEN MARKET.

August 18th, 1897.

Fruit.—Average Wholesale Prices.

	s. d.	s. d.
Apples.....per bushel	2 6	7 0
Black Currants ½ sieve		
Red " ½ sieve		
Cherries half sieve		
Nova Scotia Apples per barrel		
Filberts.....	25 0	
Cobbs	30 0	
per 100 lbs.		

	s. d.	s. d
Grapes, per lb	1 6	3 0
Pine-apples —St. Michael's each	2 6	8 n
Plums per ½ sieve.....	5 0	7 6
Strawberries, per lb.		
Tasmanian Apples per case		

Vegetables.—Average Wholesale Prices

	s. d.	s. d.
Artichokes Globe doz.	2 0	3 0
Asparagus, per bundle		
Beans, French, per per half sieve	4 0	5 0
Beet..... per dozen		2 0
Brussel Sprouts, per half sieve		
Cabbages ... per doz.	1 0	1 3
Carrots ... per bunch	0 3	
Cauliflowers.....doz.	2 0	3 0
Celery.....per bundle	1 0	1 6
Cucumbers per doz.	2 0	3 0
Endive, French, doz.	1 0	2 0

	s. d.	s. d.
Herbs .....per bunch	0 2	
Horse Radish, bundle	2 0	4 0
Lettuces ...per dozen	1 3	
Mushrooms, p. basket	1 0	
Onions.....per bunch	0 4	0 6
Parsley ... per bunch	0 3	
Radishes... per dozen	1 0	1 3
Seakale...per basket		
Small salad, punnet	n 4	
Spinach per bushel	3 0	4 0
Tomatos..... per lb.	0 6	1 0
Turnips ..... per bun.	0 3	

Cut Flowers.—Average Wholesale Prices.

	s. d.	s. d
Arum Lilies, 12 blms.	2 0	4 0
Asparagus Fern, bun.	1 6	3 0
Asters (French) per bunch	0 9	1 0
Asters, various, doz. bunches	2 0	4 0
Bouvardias, per bun.	0 4	0 6
Carnations doz. blms.	0 6	3 0
Carnations, doz. bun.	3 0	6 0
Chrysanthemums dozen blooms	1 0	3 0
Cornflower, doz. bun.	1 0	2 0
Eucharis ...per doz	1 6	3 0
Gardenias ...per doz.	2 0	4 0
Geranium, scarlet, doz. bunches	3 0	6 0
Lilium longiflorum per doz.	2 0	4 0
Lily of the Valley doz. sprays	1 0	2 0

	s. d.	s. d.
Marguerites, 12 bun.	2 0	4 0
Maidenhair Fern, 12 bs.	4 0	8 0
Orchids, doz. blooms	1 6	12 0
Primula, double, doz sprays	0 6	0 6
Pelargoniums, 12 bun.	4 0	6 0
Poppy, various, doz. bunches	1 0	3 0
Pyrethrum doz. bun.	1 6	3 0
Roses (Indoor), doz.	6	1 0
" Tea, white, doz.	0 9	2 0
" Niels	1 6	4 0
" Safrano	1 0	2 0
" (English), Red Roses, doz.	1 0	2 0
Pink Roses, doz.	2 0	4 0
Roses, doz. bun.	3 0	6 0
Smilax, per bunch ...	1 6	3 0
Tuberoses, doz. blooms	0 3	0 4

Plants in Pots.—Average Wholesale Prices

	s. d.	s. d.
Arbor Vitae per doz.	12 0	35 0
Aspidistra, doz.....	18 0	36 0
" specimen	5 0	10 0
Asters, doz. pots	2 0	4 0
Cockscombs, doz. pots	2 0	3 0
Coleus, doz. pots.....	2 0	4 0
Dracaena, various, per doz.	12 0	30 0
Dracaena viridis, doz.	9 0	18 0
Euonymus, var. doz.	6 0	18 0
Evergreens, in var. doz	6 0	24 0
Ferns, in var., per doz.	4 0	12 0
Ferns, small, per 100	4 0	6 0
Ficus elastica, each	1 0	5 0
Foliage Plants, var., each	1 0	5 0

	s. d	s. d.
Fuchsias, per doz. ...	4 0	6 0
Heliotrope...per doz.	3 0	4 0
Hydrangeas per doz.	8 0	12 0
Ivy-leaved Geranium, per doz.	3 0	6 0
Lilium Harrissii, per pot	1 0	2 0
Lycopodiums, doz.	3 0	4 0
Marguerite Daisy doz	4 0	9 0
Marguerite Yellow, per doz.	5 0	9 0
Myrtles, doz.	6 0	9 0
Palms in variety, each	1 0	15 0
Palms, Specimen ...	21 0	63 0
Pelargoniums ...doz.	6 0	10 0
Scarlets .....per doz.	1	4 0

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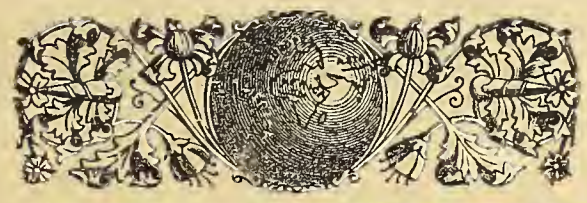


"Gardening is the purest of human pleasures, and the greatest refreshment to the spirit of man."—BACON.

The Gardening World.
Edited by J. FRASER, F.L.S.
SATURDAY, AUGUST 28th, 1897.

NEXT WEEK'S ENGAGEMENTS.

MONDAY, August 30th.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
TUESDAY, August 31st.—Sale of Dutch bulbs by Messrs. Protheroe & Morris.
WEDNESDAY, September 1st.—Glasgow and West of Scotland Show (2 days).
Bath Show (2 days).
Sale of Dutch bulbs by Messrs. Protheroe & Morris.
THURSDAY, September 2nd.—Stirling Show (2 days).
Sale of Dutch bulbs by Messrs. Protheroe & Morris.
FRIDAY, September 3rd.—National Dahlia Society's Show at the Crystal Palace.
Sale of Dutch bulbs and imported and established Orchids by Messrs. Protheroe & Morris.

OOTACAMUND BOTANIC GARDENS.—The report of the Government Botanical Gardens and Parks, Nilgiris, for the year 1896-97 has just been issued somewhat behind time owing to local matters which had to be settled. The report has been drawn up by Mr. Robert L. Proudlock, Curator of Gardens and Parks at Ootacamund, an Englishman and an old Kewite. In the endorsement of the report we are pleased to see that "the Government notes with satisfaction that considerable improvements have been effected in the gardens and parks under the Curator's management during the year under review." The Nilgiri Hills are situated in the Madras Presidency towards the south of India. Being a hill station the gardens are liable to visitations of frost at certain periods of the year, when the more tender subjects have to be lifted and taken to the nurseries for protection. The rainfall may also interest our readers, some of whom find their way to India from time to time in connection with botanic gardens and tea planting. The average annual rainfall at Ootacamund is 47 in., but during the past year 76·07 in. fell, being 29·07 in. more than the average. During twenty-four days of June last, as much as 26·91 in. fell, being more than an inch each day. The monsoon burst with unusual violence, but owing to the gardens being in a valley, but little damage was done.

A garden has been established here for fifty years and has a boundary of nearly three miles, yet curiously enough only about 300 yards of this is fenced, from which we must conclude that the district still maintains a rural aspect. Evidently plants grow here with great rapidity during the wet season, for a considerable amount of labour is necessary to keep down weeds, to root up those of a more rampant nature that, if left alone, would soon take possession of the land. The British Oak (Quercus robur) is fairly extensively planted here, but a considerable amount of pruning has to be effected to get rid of the parasitic Loranthus, a plant allied to Mistleto, which seriously hampers the growth of the trees. The nature of the climate may be gleaned from the fact that one-fourth of an acre of ground in two small valleys has been planted with red-hot Poker (Kniphofia aloides) and Arum Lily (Richardia africana). A vegetable garden is also maintained here. Standard Roses are grown in some quantity, in trenched and manured ground. In some cases the soil has to be deeply trenched in order to get rid of very bad weeds. This applies to lawns as much as to cultivated ground. Fresh sward is secured not by laying turf nor sowing grass seed, but by cutting up a grass named "Hurriali," and elsewhere as "Doab" or "Doob, and planting the cuttings." It is the Cynodon Dactylon of the botanist and recorded as a British plant, being found in South-West England and in the Channel Islands. A grass that is merely of botanical interest in this country becomes of the first importance for the making of lawns in tropical climates.

It is interesting to note that imported plants often prove a nuisance. Stone House Park had become so over-run with weeds that a gang of coolies had to be sent to dig them up. The principal of these were the common Dock (Rumex nepalensis), the Broom (Cytisus scoparius), Acacia dealbata, A. melanoxylon and Oenothera rosea, all of which have been imported to the Nilgiris, except the Dock. To Orchid growers it may be interesting to note that of 268 specimens of plants collected by the Curator for the herbarium, 128 were Orchids. Many plants of medicinal value are grown on trial here to test their suitability for this part of India. Part of the Botanic Garden is utilised as a nursery for the raising of various things for sale or distribution. A recently acquired collection of trees includes Apples, Pears, Peaches, Plums, Apricots, Walnuts, Sweet Chestnut, Persimmon, Blackberry and Dewberry. Some jelly made from the Nilgiri Hill Gooseberry (Rhodomyrtus tomentosa) has been sent to Kew for report, and this appeared in the Kew Bulletin for May and June last. Seedlings of Cinchona officinalis are being raised by thousands and then handed over to the Director of the Cinchona department. Seeds for soldiers' gardens are also distributed from here. The above will serve to give a slight idea of the work carried on in our botanic gardens abroad.

Foxgloves with a regular Top Flower.—A garden race of the Foxglove produces a large and regular flower at the apex of the stem, and very much resembling a Canterbury Bell. Many people are under the impression that the phenomenon is the result of a natural cross between the Foxglove and the Canterbury Bell; nor do they hesitate in affirming that such is the case. Such people are only deceived by outward form and colour; for the structure of the top flower of this race of the Foxglove does not conform to the other supposed parent. The large terminal flower has simply reverted to a regular form such as may have existed ages ago; and its great size may often be due to the union of two individuals. It is also favourably situated to receive a more ample supply of nourishment than the rest.

Mr. G. Hollingworth, gardener to Lord Tredegar, Tredegar Park, Newport, Mon., has been appointed gardener to Miss Talbot, Margam Park, Port Talhot, Glamorgan, S. Wales, in succession to Mr. J. Muir, who, we understand, has been appointed assistant agent to the same lady.

Culture of Hydrangeas.—The *Garden and Forest* announces a new method of growing this popular subject, recalling what occurs in the case of the Chrysanthemum. Cuttings are put in pots filled with fibrous soil, leaf mould, a little white sand together with some hone meal or other phosphatic manure. No side shoots are permitted to grow, the whole plant being confined to a single stem. Liquid manure is given as soon as the flower huds are formed. In this country, however, the mode of culture here given is by no means new nor unknown to market growers and some others.

Flower Swindles.—The cunning hawker is not hehind in taking advantage of the widespread passion for flowers, and more or less ingenious swindles are not uncommon. The demand for the Parsley Fern has been met by the faking of the humble Carrot. Cutting off the crown of the plant and transferring it to a pot he has a Fern, and—the public buys. With zeal worthy of a better cause he sets to work to remedy the niggardliness of nature by giving scent to flowers to which it has been denied. All sorts of flowers are sprinkled with perfume, others are coloured by means of chemicals until they are gay enough to catch the eye, or strongly scented enough to arrest the olfactory nerves of the puhlic. The fostering attentions of the faker should not be too harshly judged, however, for after all he has a praiseworthy motive from a British point of view—viz., to make money.

Shirley Gardeners' Mutual Improvement Association.—The monthly meeting was held at the Parish Room, Shirley, Southampton, on Monday, 16th inst., Mr. B. Ladhams, F.R.H.S, presiding over a fair attendance of the members. Mr. S. Heaton, F.R.H.S., and lecturer in horticulture for the Isle of Wight County Council, gave an address on the diseases of plants. The lecturer dealt with the subject under three heads: (1) parasitic and insect attacks; (2) deleterious gases, &c., in the air affecting nutrition; (3) a redundancy or deficiency of light, air, moisture, and warmth. Careless transplanting and pruning might also cause serious injury, whilst the absence of proper plant food, and an excess of organic matter in the soil were commented on as fruitful sources of diseases. Attention was also called to the value of rotation cropping. As to combating disease, the lecturer recommended in severe cases the destruction of the plants by fire, and light attacks to be treated with spraying or fumigation. He helieved every man should make experiments for himself. At the close of the address a discussion followed, and then a hearty vote of thanks was accorded to Mr. Heaton.

"Favourite Flowers of Garden and Greenhouse."—This handsome work, being issued in weekly parts, is now in a very advanced stage. When completed it will be illustrated with 316 coloured plates, and Pl. 306 appeared in the part which reached us last week, representing the Bird's-nest Fern (Asplenium Nidus). Besides this there are five other plates, namely, Phalaris arundinacea, Selaginella Martensii, Aspidium aculeatum, Aspidium falcatum, and another made up of Briza maxima, Lagurus ovata, and Aira pulchella. Popular names accompany the botanical one. The history of each genus is given in the text, followed hy a description of the principal species. The nomenclature is that adopted by the hest authorities, and the descriptions are concise, and in language that may be understood by any educated person, whether a hotanist or otherwise. Native plants, as well as exotics, come in for notice, hut we are rather astonished at the prominence given to Scirpus setaceus, which, although common in some parts of England, is best known to the botanist. It will never rival S. riparius (Isolepis gracilis) to which it is compared. Nothwithstanding the limits of space we think Selaginella uncinata (caesia) and S. Braunii might have been included, for they are very widely cultivated. We have nothing but praise for the coloured illustrations, which are far superior to those generally issued in popular works of this kind.

Keeping the flowers Awake.—While chloroform and ether put the animal world asleep, Dr. Johannson, of Copenhagen, says that they have a wonderful power of keeping the vegetable kingdom awake. Closed flowers can he re-opened instantly by either of them.

Noah's Ark is to be seen in Petersham Park, close to Richmond Park. It is not the original ark of the original Noah, however, but a hower formed hy the roots of a Horse Chestnut about twenty-five years of age that project out of the ground to a height of some 3 ft. thus making an arch 'neath which the children love to play during the school treats when the park is thrown open.

A Reg'lar Fraud.—Mr. Chamberlain's well-known love for Orchids is responsible for the following. During the progress of a political meeting in the provinces at which the Colonial Secretary was one of the speakers, an old man of the labouring class pushed his way to the front and asked a friend who stood by, "Which is 'im?" "Who?" "Whoy, Chamberlain! Which o' thot crowd's 'im." "That clean-shaven chap there—him with the eyeglass," was the reply. "Is that Chamberlain?" said the labourer in a disappointed tone. "Of course it is! What do'ee think o' him, eh?" Whoy, I thinks he's a reg'lar fraud! That's what I thinks." His companion then began a spirited defence of the great politician. "I knows nowt about politics" remarked the labourer pushing his way out. "They said as 'ow 'e wore a little orchard in his button'ole and – theer, it oint owt but a tater blossom."

Crewe Borough Flower Show.—The annual show of this society was held on the 18th inst. There was good competition for fruits, flowers, and vegetables, but some of the local champions figured largely in the list of first-prize winners. The leading award for four greenhouse plants was secured by Mr. W. Latham, who was also first for two greenhouse plants, two and one specimen Fuchsia. Mr. James Tomkinson, who was twice beaten by Mr. Latham, came to the front for double Pelargoniums and tuberous Begonias. Other first-prize takers for plants were Mr. J. Hough, Mr. Walker, Mr. J. E. Fenna, Mr. W. May, Mr. F. Yoxall, Mr. J. H. Mason, and Mr. A. Baker. Most of these exhibitors figured largely in the classes for cut flowers; and Mr. J. Greenwood, Mr. C. Greenwood, and Mr. J. Barnes were added to the list. Fruit was staged in fair quantity. Leading prizes were taken by Mr. J. Yoxall, Mr. A. Rogerson, Mr. C. Powell, and Mr. J. Sumner.

Ealing Gardeners' Society.—In addition to the annual outing the members of this Society have, during the summer, heen able to visit some of the leading gardens in the neighhourhood, in consequence of the kindness of the proprietors and their head gardeners. This has been felt to be a great privilege; and, as such, has been much appreciated and enjoyed. In fact, these evening visits have proved a great success; for, being on a line with the objects of the society, they also have tended towards educational, as well as horticultural improvement. This new departure of the society has given many young men an opportunity of seeing, for the first time, systems of culture, constructions of buildings, modern machinery, and other details, which must be very gratifying to those who wish to be up-to-date and to otherwise understand the principles of their profession. The visits, so far, have embraced the beautiful grounds of Osterley Park, Isleworth, the historical residence of the Earl of Jersey (gardener, Mr. J. Hawkes), where lawns, lakes, and landscapes do ahound; Spring Grove House, Isleworth, the new and substantial home of A. Pears, Esq. (gardener, Mr. W. Farr), where everything is brand new and on the most substantial scale; and Syon House, Brentford, the river-side mansion of Earl Percy (gardener Mr. G. Wythes), where the extensive park and gardens are so full of glass-houses and famous trees and shrubs, that Kew, on the opposite bank of the Thames, is suggested by comparison. As there are about fourteen acres of grass to be kept cut, a steam lawn-mower is a desideratum, and as this machine was running at the time of the visit, it materially helped to increase the interest in the surroundings. We understand the arrangements were carried out by the vice-chairman, Mr. C. B. Green, and the hon. secretary, Mr. W. Roberts.

GARDENING MISCELLANY.

DWARF BEAN OSBORN'S PROLIFIC.

Whether forced in pots during winter or grown in the open ground this variety is dwarf and fruits freely in proportion as the conditions are favourable. It has given rise to a remarkable crop in the garden of T. Lily, Esq., Ealing Hill Fark, Ealing, once more testifying to its capability and profitableness when properly treated. The ground was trenched and well manured, so that the plants have never suffered in the slightest on account of the dry weather. Mr. John Hay is a good vegetable gardener, and when he has had sufficient time to get the whole of the ground in good order, will make every square yard of it give an account of the labour put upon it.

PHLOX COQUELICOT.

This is the newest highly coloured Phlox we have had sent across the Channel. It differs from the now famous Etna, in being more of a reddish scarlet; poppy red, I believe, would be a good description for it. Mr. John Forbes, Hawick, has it in splendid form just now. It is a very telling variety when seen at a distance, is above the average size and hetter branched than some of the newer ones I have seen of late. I should much like to see the colour and form of good old Coccinea introduced into some of the new dwarf, large flowered varieties. It would indeed be welcomed.—*W. S.*

JASMINUM FLORIDUM.

In this we have a very pretty yellow-flowered species, a native of China, and douhtlessly hardy in many parts of this country, particularly when planted against a wall. A plant has heen flowering for some time past against a west aspect wall at Kew. The pinnate leaves are neat and consist of three to five dark green leaflets. The flowers are moderate in size but bright yellow, starry, and produced in trusses terminating the young shoots. Being of moderate growth, the species would be very suitable for planting against low walls where the taller growers would be inadmissible.

SWEET PEAS.

So much has recently appeared in The Gardening World respecting Sweet Peas that one feels somewhat shy of saying anything further on the subject. I fully endorse all the editor and others have said as to the beauty and value of the improved varieties. I have heen content with a mixture of them, and very beautiful they are. One sowing has to do duty for the season, which it will always do provided they are not allowed to produce seed. Ours have run up to 7 ft. in height at the present time, and bid fair to go much higher. I had a wrinkle given me as to this, namely, the height of the boughs employed, culled, I believe, from a parish magazine—*The Dawn of Darkness*, or some similar production—that the higher the supports the higher the Sweet Peas would go.—*W. B .G.*

TECOMA RADICANS.

This is seldom seen, but at Glenfield, Dennington, growing in front of the house—three stories high—it is perfection, flowering most profusely. Grand trusses of orange-scarlet flowers are most attractive. I often wonder this grand old plant is not more often seen. Mr. Chaston Scace, the owner, I congratulate upon his success in flowering this gem.—*A. O.*

SECOND-FLOWERING OF THE CHINESE WISTARIA.

Wistaria chinensis, although comparatively a common tree or shrub, is always interesting, except perhaps in winter time, when only its long, twisted, gnarled, or knotted branches are in evidence. When these, however, put on their spring garb and become clothed in bluish purple the elegance of the Wistaria is generally admitted. But, still there seems to be something wanting, and that want is only supplied in seasons like the present, when, hy some occult cause, or combination of climatic influences,

a full crop of flowers and foliage results. If, then, the spring effects are much esteemed *minus* the foliage, how much more beautiful are these floriferous appendages *plus* the compound leaves. At least this fact impressed me the other day at Buckhurst Hill, in Essex, where I came across a fine specimen rambling over the entrance lodge to Luctons, the residence of Nathaniel Powell, Esq., J.P., and which was a veritable picture painted lavishly by Nature in pale purple and green.—*C.B.G., Acton, W.*

GLOBE ARTICHOKES FROM SEED.

THIS useful and esteemed vegetable finds a place in nearly every kitchen garden; and in order to make a variety, in the list of vegetables for the kitchen the gardener looks with a kindly eye upon this plant, which rejoices under the name of Cynara Scolymus. If he has a heavy or damp soil to deal with, he is careful to mulch well at the approach of winter and protect the crowns, or, should a period of severe frost prevail, the return of spring will find the Artichokes missing. A plan adopted by market gardeners in this neighbourhood is to nearly cover the crowns with dry litter and dig a trench around the roots, using the soil to cover the litter, so that each plant is doubly protected. It may be this is adopted only in damp situations, liable to floods, as is the field in which I saw these so protected.

Looking through the garden of a friend, yesterday, I observed across a plot a row of Artichokes with an abundance of fine fleshy-looking heads, and my friend informed me they were grown from seed sown in spring. He had, he said, cut a number of heads and there were still plenty left. The length of the row could not have been more than 12 or 14 yards and none of the heads were more than 18 ins. high. It struck me as being a capital plan, where there is any risk of loss, to sow seed and so insure a few plants, even if only a small percentage flower, as Nicholson asserts in "Encyclopaedia of Gardening," but although I could not closely examine these seedlings owing to want of time, I'm sure more than half were throwing flower-heads. I may add the soil is a very light sandy one.—*A. P.*

THE NATIONAL CO-OPERATIVE FESTIVAL.

FROM a small beginning this annual fixture has grown into a large and important exhibition. The tenth flower fruit and vegetable show was held, as preceeding ones have been at the Crystal Palace, on Friday and Saturday the 20th and 21st August. The show is the conclusion of a week devoted to the exhibition of the numerous products of co-operative enterprise, and is organised by the Agricultural and Horticultural Association. The schedule of competitive classes was divided into two sections, both for the purposes of convenience, as well as to ensure the smaller growers and exhibitors having a fair chance in the competition, which they would not do were they to find pitted against them extensive and professional cultivators. Section I. is entirely composed of entries by working people, members of various Industrial Co-operative Societies. In encouraging and helping these to make the best of their gardens, the association is accomplishing a very real and valuable work, in which we wish them an unstinted measure of success. We are glad to be able, moreover, to congratulate the association, of which Edward Owen Greening Esq., is the managing director, upon the success they have already achieved.

This year, the body of the Crystal Palace being occupied by other exhibitions the horticultural exhibits were accommodated in a huge tent, measuring some 500 ft. in length by 40 ft. in width, erected upon the terrace 'neath the shelter of the glass edifice. The weather on both days was somewhat unsettled, and at times very gusty, particularly on Saturday. The tent, large as it was, was none too large to contain the numerous exhibits which were disposed over nearly three hundred classes, some £350 being given away in prize money.

In Section II. the vegetable entries numbered 514, the cut flower entries, 350, those for pot plants, 119, and for fruit, ninety.

Here Mr. C. J. Waite, gardener to Sir Patrick Talbot, Glenhurst, Esher, was awarded the Silver Medal of the association as the most successful exhibitor. He took no fewer than seventeen first prizes, eleven seconds, fourteen thirds, and five fourths—a fine record. His most conspicuous success was perhaps a collection of vegetables offered for the district prizes. In this part of the programme the country was divided up into the following districts: Southern, Western, Midland and Eastern, Northern and Scotland. Collections were shown only from the Southern district, which includes the counties of Essex, Herts, Bucks, Oxford, Berks, Wilts, Hants, Sussex, Middlesex, Kent, Surrey, Beds, and the Isle of Wight. Mr. Waite's first prize lot comprised some grand Scarlet Runner Beans, Potatos, Tomatos, Celery, Cauliflowers, Beet, Carrots, and Saladings, and considering the dry season was wonderfully good. Mr. A. Basile, gardener to C. L. Powell, Esq., Woburn Park, made a good second. Vegetables throughout the show were really first-class. Very conspicuous were some fine lots of Onions, both for size and weight. Mr. R. Chamberlain, Reading, and Mr. A. Basile both received firsts for some capital bulbs. First prizes also went to Mr. Waite for Beet; to Mr. A. Basile for three Cabbages and Cauliflowers; to Mr. R. Wadham, Steeple Aston, and Mr. J. Holton, Oxford, for Carrots and Runner Beans; and to Mr. Chamberlain for Broad Beans.

In the classes for fruit some splendid material was forthcoming. The two bunches of Muscat of Alexandria Grapes shown by Mr. W. Taylor, Forest Hill, for which the first prize in their class was awarded, were deserving of the highest commendation. The best two bunches of black Grapes came from Mr. C. J. Waite. Mr. T. Osman, gardener to L. J. Baker, Esq. led the way for five dishes of fruit. Mr. Basile had the best dish of Pears.

Amongst the pot plants some good Coleuses and exotic Ferns were displayed, the latter particularly being worthy of mention.

Coming to the industrial or number I. section, the quantity of exhibits was immense. Thus there were over a thousand entries for vegetables. These include twenty-nine collections, 208 dishes of Potatos, 135 dishes of Beans, seventy-eight entries of Beet, sixteen of Cauliflower, thirty-nine of Celery, forty-two of Lettuce, sixty-four of Onions, twenty of Parsnips, sixty-four of Peas, seventy-seven of garden Turnips, ninety-one of Vegetable Marrows. Not only number of entries but quality of the exhibits was very gratifying. Of the more uncommon vegetables thirty-four exhibits of Tomatos, bespeak the fact that the Love Apple must soon be reckoned as an inmate of a cottager's garden.

There were no fewer than 637 entries for cut-flowers, and a glance round soon showed the favourites among the industrial classes. The following figures of the entries form a good index to the comparative popularity of the various subjects named:—Asters, sixty-six; Marigolds, sixty-one; Roses, thirty-three; Sweet Peas, thirty-three; Pelargoniums, thirty-four; Mignonette, thirty-four; Zinnias, thirty-one; Stocks, twenty-five; Antirrhinum, twenty-four; Liliums, twenty three; and Carnations, twenty.

The fruit entries comprise no fewer than 145, and include Grapes, Pears, Cherries, and Plums, although, as may be expected, Apples head the list.

The general arrangements of the show were carried out by Mr. G. Waugh, aided by Mr. Frank Bell, and to these gentlemen, as well as to their staff of coadjutors, much credit is due.

The Orchid Grower's Calendar.

CLEANING UP.—We in common with most others have had to use hard water for syringing purposes for such a long period, that the pots and stages have become coated with green, and as cleanliness must always be observed if you wish to succeed with this beautiful class of plants no time or trouble should be spared to get the green removed and everything made sweet, before the fast approaching short days are upon us. The plants too, have become dirty from the same cause, having a white chalky sediment, which is unsightly and should be sponged off with soapy water. We generally put this kind of work off until a wet day when very little can be done outside.

FIRE-HEAT.—The nights having become chilly we find it necessary to have a little heat running through the pipes of each division, not excepting the cool house. This helps the plants to dry up a bit and they are ready for a syringe overhead the first thing in the morning. We find this a much better plan at this time of the year for cool house Orchids when the growths of Odontoglossums are fast making up. But the syringing overhead of Cattleyas, &c., should be discontinued.

MILTONIA VEXILLARIA.—Preparations for the removal of plants that have been located in the cool house during the summer months, to a nice, light place at the cool end of the Cattleya house, should now be made. Carefully examine each plant for thrips, which are very partial to this species, and as they secrete themselves low down in the axils of the growths their presence is readily discernible only to the practised eye. We generally give ours a dipping in weak Tobacco water at this season. The moss has made splendid growth in the cool house, so much so that it has to be pressed down and a sprinkling of small crocks dusted over the surface to keep it down. This we find a very good plan indeed. The white roots, too, that are with this Orchid found mostly on the surface appreciate the treatment.

CATTLEYA GIGAS.—We have for several years managed to flower this fine Cattleya pretty well, and attribute our success to the method adopted in resting the plants. As the growths become fully made up and the roots are running freely through the new compost, we remove them first to the cool house, where they are suspended close to the glass. This serves to keep them plump, and prevents their again starting into growth. In another week's time they will be transferred to the greenhouse and fully exposed to the sun. If very bright, however, it may be advisable to slightly shade in the middle of the day so that the leaves do not get damaged.—*C.*

VEGETABLE CALENDAR.

MUSHROOMS.—To meet an early demand, preparation should commence by collecting a quantity of horse droppings and placing them in an open airy shed, when it will be necessary to turn the whole mass occasionally to rid the manure of its rankness. One part of fresh cow manure will give more body and solidity when making up the beds and will materially increase the size and quality of the Mushrooms. Where shed room for drying the manure is not available, a portion of very dry loam may be mixed with the manure; this will absorb a large part of the moisture, and at the same time retain the ammonia, which is the most valuable part of the manure for this crop. The selection of a suitable position is of some consequence at this season. Next to a properly constructed house a trench 6 ft. wide and 1 ft. deep may be taken out, banking up the sides to secure depth. This trench may be any length according to the quantity of manure. A light framework of wood covered with felting will give all the protection needed at this season, and a final covering of long litter will maintain a steady and equable temperature in the bed.

SALADING.—At the present time special attention should be applied to keeping up a good supply through the winter months, by pricking out in frames and warm positions plenty of the hardier Cos and Cabbage Lettuces. A last sowing of these outdoors may be made in a sunny warm spot facing south, and in front of a wall if possible. Endive plants should be in all stages of development. The earliest are nearly ready for blanching, and with others following a supply will be ensured during most of the winter. Still continue to plant out from the seed beds in any warm positions that become vacant through the removal of exhausted crops. A sowing of turnip-rooted Radishes may be made outdoors, while the long rooted kinds will be better sown in frames after this date. A good bed of Chervil sown now both outside and under glass will keep up a stock through the winter.

PLANTING BRASSICAS.—With the prospect of short supplies during the winter owing to the poor development of most things, it will be necessary to fill up every vacant spot with Coleworts, Borecole, and any other kinds likely to give a few dishes during the early spring months. Encouragement should also be given to growing crops by giving them liberal doses of nitrate of soda or other stimulant in a liquid form. The hoe also must be kept moving amongst them to encourage growth.—*J. R.*

HINTS FOR AMATEURS.

Flowers for Winter.—Flowers of all sorts are much in request during the winter months, more especially white flowers. The damp and cold of late autumn and winter, alas, too often prove fatal to many, and wreaths, crosses and other floral tokens of respect if not wholly composed of white flowers, must at least contain a large proportion of them. As long as we have a winter to look forward to of the stamp that is peculiarly British, so long must all the resources of the cultivator's skill be brought to bear in order that flowers may be obtainable. Science has done much for horticulturists, and the grower of to-day is in an infinitely better position to grapple with, and overcome the difficulties of nature than his predecessor of some 50 years ago. The small amateur cultivator of under-glass plants is to all intents and purposes a modern creation; he could not have existed in the good old times which we are all glad are gone.

Now no one expects that such an one who has only a very limited stock of conveniences, and likewise a limited share of experience, can possibly have his glass-houses, or more often his solitary glass-house, as gay in the winter as in the summer, but still much may be done by choosing suitable subjects, and by carefully feeling the way along as to their treatment. Advice in books and papers is all very well, and a practical man will be able to profit by it, for he will know that no rules that may be given for guidance are ever, or can ever be absolute, but that he must perforce use his discretion in their application to his special needs, and in his particular circumstances. On the other hand the man of little or no practical knowledge, is apt in far too many instances to try and put into practice all he reads, forgetting that a difference in environments may call for a possible modification. The green hand is thus without the helm of practicality which enables the holder to steer his way along with perfect safety and without trouble.

In spite of this there are plants that will grow under almost any ordinary conditions, and these are the ones that the man of little experience must first invest in. We shall from time to time enumerate a few of these.

Roman Hyacinths.—Bulbs naturally form the staple of the plants that may be induced to flower in the winter, and of all bulbs Roman Hyacinths most readily recommend themselves to the notice of the amateur. The present time is most opportune, for all supplies of these should be ordered by the end of August if possible. Most nurserymen advise their customers by a note in their catalogues that orders should be placed with them early. This is sound advice, and not a mere advertising dodge as many believe it to be. Romans complete their growth early, and the first consignments invariably contain the soundest and finest bulbs. Not a few amateurs fall into the error of thinking that if they get their bulbs early and pot them up, that they will all come into bloom early and at the same time, and as they naturally want the show of bloom to extend over a fairly lengthy period they go in for the later ones. It matters not, however, how early the bulbs are received, they will not commence to flower any too early, and the exact period can be regulated with the greatest nicety. It takes a great deal to move nature at the end of the year, and the slower the plants move along, the better will be the quality of the blooms when they do make their appearance; moreover, they can be kept back as long as necessary with the minimum of trouble. The price of the bulbs is reasonable enough and well within the reach of everyone, so that the question of expense need not stand in the way of those who would like to have a good batch of plants.

Pots are the handiest things to grow them in, although boxes are frequently utilised by those who grow large quantities of bulbs merely for the sake of furnishing cut flowers. A potful of Hyacinths is very seldom refused by the ladies of the household for the decoration of dwelling rooms, and the conservatory will look all the brighter for their presence. The pots may be of a size to suit the character of the bulbs. Thus the larger samples may be placed singly in a 48-sized pot, whilst three or four medium-sized ones will go very well into a 32-sized pot. The soil may consist of a mixture of good loam and leaf soil in the proportions of two thirds of the former to one of the latter. To this should be added a liberal sprinkling of sharp river sand.

Potting itself is an operation that requires a little care. To make it too firm would result in distorted growth and failure, and to make it not firm enough would only be a shade better. The soil therefore, must be of medium firmness, the bases of the bulbs should be buried, the necks just peeping above the surface.

After potting comes the period of probation, during which roots have to be made. The usual plan is to cover the pots containing the bulbs deeply with ashes or cocoanut fibre refuse, and leave them in this condition for five, six or seven weeks. If ashes are employed as the covering medium it will be advisable to shield the bulbs by inverting over the crown of each an empty flower pot. This is a very simple expedient, but may prevent a good deal of mischief. The amateur should bear in mind that the covering itself is not essential except in so far as it gives the necessary darkness. Thus, if a dark cellar or cupboard is available the covering with ashes or fibre may be dispensed with. The great objection to cupboards is that they are usually too dry, but this does not usually obtain with regard to cellars.

Primula obconica.—This plant is not unknown to fame, but curiously enough it has been brought into notoriety chiefly by reason of an evil quality which it possesses to some extent, viz., the irritation of the skin which follows the handling of the leaves. There is no doubt that cuticular irritation is thus caused, but it is only a comparatively few people whose skins are sensitive to the effects. On the other hand the beauty and decorative value of the plant are immense, and despite the danger of skin irritation entitle it to a place in the greenhouse. The culture is exceedingly simple, and this need not deter anybody from undertaking it. Propagation may be easily effected by division of the old plants or by seeds. Taking division first of all it will be found that this is chiefly useful for getting a continual supply of flowers. The plants are very free bloomers, and as the umbels of lilac flowers come in admirably for cutting, it usually pays to split up a few of the old plants, and pot the divisions on. The end of March or beginning of April is a good time to split up the old plants. If kept close for a time the divisions soon commence blooming. For flowering during the winter months, however, it is the best plan to sow seed in spring. It is true that the seed germinates rather slowly and irregularly, but a sufficiency of plants may generally be obtained from a packet. Just now the young seedlings are in small 60-sized pots, and as they have filled these with roots they should be transferred at once into their flowering quarters. Either 48- or 32-sized pots will answer. The soil should be light and rich, and may consist of half loam, and the remaining half of leaf soil and dried cow manure, or horse droppings with sand. Pot firmly and keep the plants well down in the pots, but do not bury the crowns under the soil. Place the plants in a cold frame, and keep them close for a day or two. A gentle sprinkling with the syringe on fine days will be of service. All the flower scapes should be picked out as fast as they make their appearance, or the plants will be apt to exhaust a good deal of their strength to no purpose. If cared for in this way strong healthy plants will be obtained, from which the grower will reap a rich harvest of bloom. —*Rex.*

Correspondence.

Questions asked by amateurs on any subject pertaining to gardens or gardening will be answered on this page. Anyone may give additional or more explanatory answers to questions that have already appeared. Those who desire their communications to appear on this page should write "Amateurs' Page" on the top of their letters.

Grapes Cracking.—Two Vines of Buckland's Sweet water that are growing in a house, the rest of which is filled with Black Hamburghs always have the berries cracked. The berries of the Hamburghs do not crack with one or two exceptions. Please advise me as the best means of dealing with these Vines.—*B., Northallerton.*

The cracking is caused by an excess of moisture in the ground, and you must exercise great care in the watering. You may keep that part of the border in which the Sweetwaters are growing drier than that part devoted to the Hamburghs if possible. You must also allow a moderate extension of the laterals, which we assume have hitherto been closely stopped in accordance with the usnal custom. By allowing these growths to develop the extra foliage will form a safety valve as it were, and will take part of the moisture that is now running to the berries and causing them to crack.

Grape Muscat Hamburgh.—*B., Northallerton:* This variety may be grown in the same house as Black Hamburgh it desired, but the colour of the berries may not always be good, as they want rather more heat than those of the black variety to finish well.

Lifting Richardias. — *Lancaster* planted some Richardias out in an open border at the end of June, and wishes to know when it will be time to lift them.

The plants may stay out of doors until frost makes its appearance. As we are not safe from the visitation of frost after about the middle of September the plants should be lifted then.

Bulbs.—Mere size does not indicate a good Hyacinth bulb, *Reader*, for weight and degree of ripeness are much more important. If you have the opportunity of choosing, select well-ripened medium sized bulbs of good weight and depth in preferenc to large coarse and shallower ones.

Vegetables for Exhibition. — *Rasp*: For the second week in September you should have no difficulty in staging nine kinds of vegetables. We may suggest the following:—Potatos, Runner Beans, Cauliflowers, Vegetable Marrows, Tomatos, Celery, Onions, Carrots, and Turnips. A dish of late Peas would, of course, be valuable if you have them in good condition, and a few good close heads of Cabbage would do better, say than poor Celery. In a small collection such as this we should not advise you to include both Runner and Dwarf French Beans.

Carnations.—*Athos*: According to the florist's ideas of floral symmetry the fringing of the petals as seen in that charming variety, Waterwitch, is a defect, and must of necessity count against it when shown against varieties that do not display the fringing.

Chrysanthemums.—*Athos*: The stunted or deformed points of the growths in your Chrysanthemums are probably due to insect attack. Dust the points with Tobacco powder, leave it on for an hour and then syringe or otherwise wash it out with clear water.

Spidery Chrysanthemums.—*W. Monson*: An article on Spidery Chrysanthemums appeared in our issue for November 7th, 1896. In addition to the three varieties there mentioned, Golden Thread, Centaurea, and Mrs. James Carter are well worth growing. The thread-like florets of this section of the Autumn Queen is a distinct break away from the others.

Azalea leaves Falling.—*T. C.*: Thrips are a great plague to Azaleas, and in your case they are probably the cause of the leaves of your plants falling, assisted most likely by a little neglect with regard to water. With such fine-rooted things as Azaleas it is exceedingly dangerous to let them get dry at any time. Syringe the plants well with a strong dose of Nicotine Soap, and wash off with clear water. Subsequently you must keep the plants well syringed.

Strawberries.—*J. Owen*: You are very late in potting up the layers. which should have been in their fruiting pots fully a month ago. Lose no time in seeing to them. Soot may be mixed with the soil at the rate of a forty-eight potful of the former to a bushel of the latter. British Queen is of no value for early forcing, but will yield a good return if allowed to come on slowly in a Peach or orchard house.

Zonal Pelargonium Cuttings.—It is not too soon to take cuttings of bedding Pelargoniums, *W.B.*, so you may start as soon as you like. Many people do not commence cutting the plants about until the last moment, because naturally enough they do not care

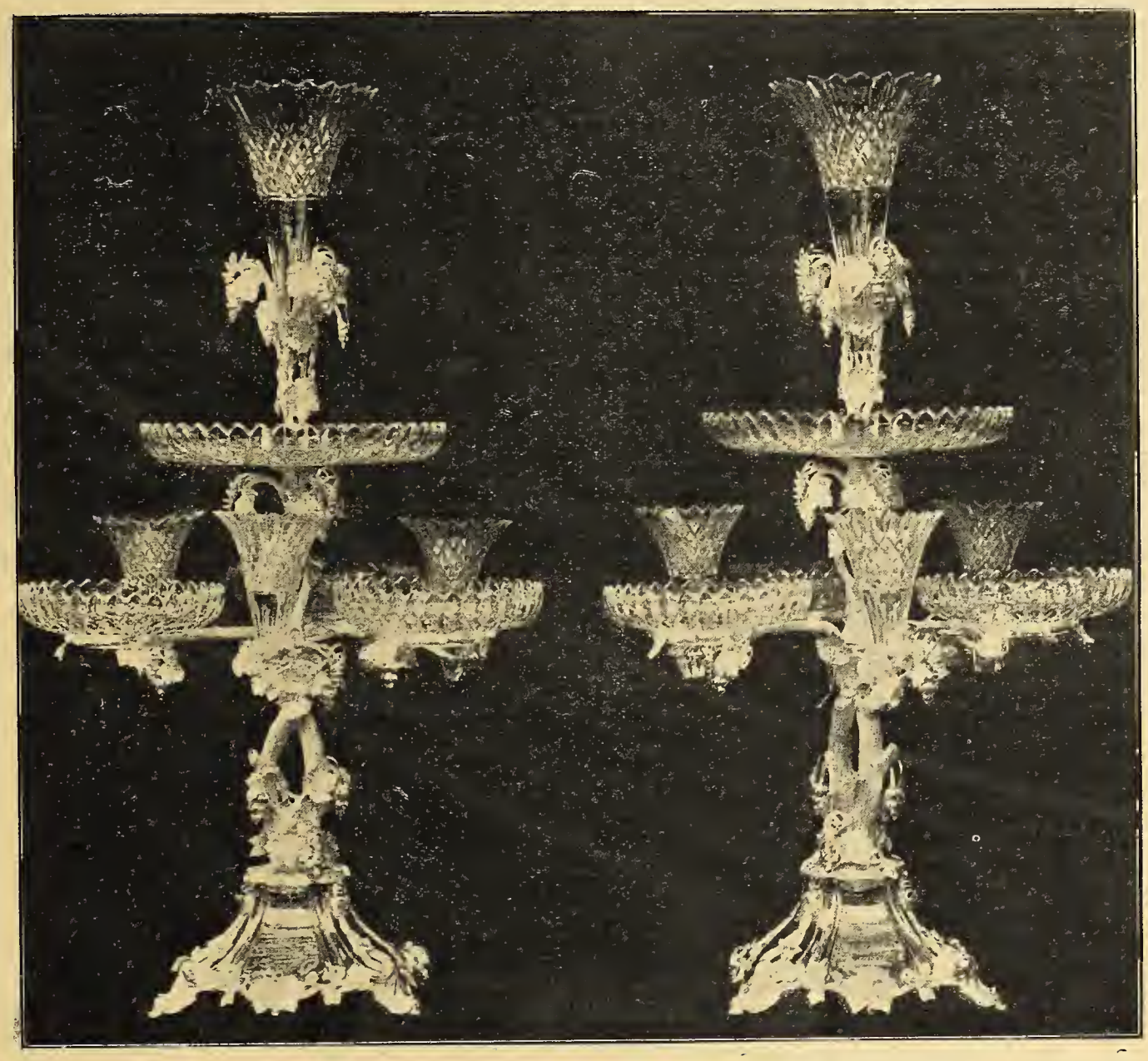
to spoil the appearance of the beds before they are obliged to.

Malmaison Carnations.—*L. S.*: If the layers are rooted the sooner they are potted up the better. A large sixty-pot will be roomy enough. A soil composed of half loam, and the other half of peat and leaf soil with sand will do well.

Seedling zonal Pelargoniums.—*A. R. C.*: As soon as the first flower bud shows pinch the tops out of the plants, and thus throw all the strength into the bloom truss. Feed as you suggest with guano.

THE PRESENTATION AT SHREWSBURY.

We are now in a position to present our readers with the accompanying illustration of the solid Silver Epergnes or Centre Pieces which were presented by Sir Trevor Lawrence, Bart., to Mr. H. W. Adnitt and Mr. W. W. Naunton, the honorary secretaries of the Shropshire Horticultural Society, as a small recognition of their invaluable services to the society during the long period of twenty-three years. The society itself, the exhibitors, and all concerned are to be congratulated that the occasion of the presentation was not likewise that of the resignation of the gentlemen in question, as that would indeed have been a misfortune to the management of one of the finest shows in the country. The photographs show two sides of the Epergnes. As was stated last week they were provided for by the voluntary subscription of numerous friends A committee was formed a short time ago to carry out the wishes of the latter. Mr. A. Outram acted as secretary of this committee, and Mr. Owen Thomas, of Windsor, as treasurer. The Epergnes were manufactured specially by Messrs. Mappin & Webb, 2, Queen Victoria Street, London, E.C.



Silver Epergnes Presented to Mr. H. W. Adnitt and Mr. W W. Naunton.

ORCHIDS AT BURFORD LODGE.

To those who see Burford Lodge, Dorking, the residence of Sir Trevor Lawrence, Bart., for the first time, the beauty of the situation is prepossessing. We have frequently seen it, but each successive visit serves the more to convince us that no more charming or ideal spot for a private residence could be found amongst the Surrey Downs than that at Burford Lodge. There is no need to go to the mountains, for they are at the front door every day. The breadth of a lawn lies between the mansion and the River Mole, which flows under the steepest escarpment of Box Hill, and the latter, no doubt, owes its present form on this face to the river cutting through and carrying away the chalk. This face is ever crumbling down, yet it is clothed with sombre Yews, Beech and a few Poplars to the very crest. On the level ground Elms, Beeches, Horse Chestnuts and other deciduous trees attain a great size and lend additional beauty to the estate.

The garden, though not extensive, is filled with the best of everything, and here one of the finest collections of Orchids in Europe has been got together. On entering the houses Mr. W. H. White, the Orchid grower, said that very few of the plants were in bloom, but we soon found it otherwise. Cattleyas and Dendrobiums were practically out of season, nevertheless they were represented by flowering specimens. For instance, D. Phalaenopsis and D. bigibbum were flowering or preparing to. Two forms of D. secundum were interesting, one having purple flowers and an orange-scarlet lip, while the other was white with an orange lip, the latter being also known as D. bursigerum album.

We were much taken with a variety of the deliciously-scented Aerides odoratum, having rosy sepals and petals, and a yellow lip, the middle lobe being purple. A huge piece of Scaccolabium guttatum in a large basket carried nine of its fox-brush spikes. Burford Lodge is famous for its Calanthes, which were making grand growth. We measured leaves 6 ins. to 6½ ins. across, with pseudobulbs in proportion. They were stood on elevating pans containing water. The flowers of Renanthera matutina had kept fresh for six weeks, though they had been cut for half of that time. Chysis Chelsoni and C. bractescens are troublesome Orchids, yet one has been here since 1879. Interesting are the dark purple flowers of Microstylis bella, having a curiously fringed lip. Underneath the stages of this warm house Fittonia argyroneura and F. Verschaffelti, planted in moss, are making marvellous growth.

The next house entered contained a large number of hybrid Dendrobiums, mostly raised here and making fine growth. The rare D. sanguineolentum had creamy flowers tipped with dark purple. A fine collection of Catasetums presented the strange phenomenon of directing their growths to the light and the roots towards the back of the house, being evidently hydrotropic. Cycnoches maculatum was carrying a grand spike of bloom. A variety of Catasetum christyanum, with brownish-crimson flowers struck us being far superior to the type. Pale but pretty is Eulophia guineensis with its large pink flowers and purple blotch on the lip. Dendrobium Dearei, 3½ ft. high, and D. dalhousieanum in bloom, and Epidendrum radicans, in huge pieces, add interest to the collection.

A sheet of tiffany, hung from the ridge of the roof of this house, forms a permanent shading for one half of the occupants. Here the Cypripediums maintain a healthy green colour. C. Elinor, raised here and certificated in 1895 is finer than the original raised elsewhere. Both it and C. harrisianum superbum carried immense flowers. C. euryandrum, which has been here for the last seventeen years, and C. orphanum, also carried huge flowers. The motile or swinging lips of Bulbophyllum Dearei and B. siamense, are always interesting. Numerous specimens of Phalaenopsis in baskets have grand foliage. P. violacea, P. Esmeralda, and the tiny P. Listeri were in bloom. There were dark and light forms of P.

Esmeralda, some of them being 2½ ft. high. The blooms of Oncidium Papilio were large and handsomely coloured. The most singular thing we noticed was Megaclinium triste, which would cause a sensation if shown in the Temple Gardens. The fully-opened flowers of the spike were nearly black, while the imbricate bracts at the apex were yellow, resembling a snake's head on the move. Handsome was the foliage of Anoectochilus Petola and A. Dawsoni, with a tracery of gold and red, respectively upon the leaves. Oncidium krammerianum carries many spikes. Cypripedium Stonei platytaenium, the £1,000 Orchid, is still happy here.

A cooler house next gave us refuge from the broiling sun; yet it contained a great variety of plants, including large pieces of Vanda amesiana with larger leaves than we have ever seen before. Here also were assembled flowering plants of Cypripedium Godefroyae leucocbilum, C. niveum, the yellow Trichopilia galleotiana, the rosy-purple Epidendrum Ellisii, and a very dark Cattleya schilleriana. Very pretty at this season of the year is the pink Laelia amanda, rarely seen elsewhere.

A charming sight it was to come upon the grand piece of Platyclinis filiformis, carrying ninety-four of its gracefully drooping slender spikes of bloom like golden filigree work, and for which a cultural commendation was worthily awarded at the meeting of the Royal Horticultural Society on the 10th inst. At one time it was kept in the East Indian house, but it proved utterly unsatisfactory there. Mr. White said he had to fall back upon common sense and find where it would grow, and he succeeded, thus furnishing others with a hint to do the same. He hung it up near the glass in a house with Lycaste, Miltonia, Trichopilia, Sobralia *et hoc genus omne*. Flowering along with it were Lycaste trifoliata, Miltonia peetersiana, much like the M. spectabilis type, Trichopilia coccinea, the hybrid Epiphronitis Veitchi, Epidendrum O'Brienianum, E. Wallisii and Cypripedium mastersianum. The two latter carried the same flowers as they did at the Temple Show. Magnificent pieces of Sobralia xantholeuca, and a richly coloured S. macrantha, in a huge tub, were flowering freely. Very pretty is the yellow-flowered Epidendrum xanthinum. Hexisia bidentata is an upright, branching, and beautifully neat species, with bright orange-scarlet flowers. It is a pet of an Orchid. The grower, however, was unstinted in his praise of Polycycnis Lehmanni, which was indeed charmingly pretty and strongly scented. The reflexed sepals and petals were thickly spotted with purple, and the lip white, spotted with crimson and furnished with a beard of long, white hairs.

Another cool house contained many interesting things, including a large pan of Sophronitis grandiflora, which bore sixty flowers when it last bloomed. It does not deteriorate. A healthy piece of Odontoglossum crispum has been here since 1879. O. ramosissimum was pretty, as was a fine form of O. crispum. Oncidium dasystyle has a black crest like a bee or other large insect. O. longipes carried seven to eight blooms on a scape testifying to good cultivation. The hybrid Disa langleyensis is always attractive. All of the plants in this house, particularly the Odontoglots, looked dark green, healthy, and happy.

A surprise was in store for us in one of the large, span-roofed houses, namely, the flowering of the magnificent Grammatophyllum speciosum, as mentioned last week. It is indeed a giant of its kind, and the flowers are very showy. A fine view both of this and Vanda hookeriana was obtainable by looking through the glass of the house before entering. The large flowers of the Vanda were white and handsomely spotted with purple. Most interesting also was the Dove Orchid, with white flowers spotted with purple on the lateral lobes. Cypripedium Euryale, a fine hybrid between C. lawrenceana and C. superbiens, was also in bloom.

An interesting feature of this establishment is the batches of the terrestrial Habenarias, represented in this country by the Butterfly Orchis and its congeners. At Burford Lodge they include batches of the cinnabar-lipped Habenaria rhodochila, the brighter H. militaris, the delicately tinted H. carnea, H. c. alba, and the tall pure white H. Susannae. The popular Laelia anceps and its varieties, are already throwing up their flower scapes in preparation for an autumn campaign.

Another cool house well-filled with a variety of subjects, contained a respectable quota of bloom for this season of the year. Odontoglossum grande and O. schleiperianum were repaying the trouble of a year's attention. The rich rose-purple of O. Uro-Skinneri is always desirable. O. bictonense album was just finishing its flowering period. The flowers of Trichopilia fragrans nobilis are larger than those of the type and as fragrant. Maxillaria Hubschi has smaller flowers and a wider lip than M. grandiflora, but belongs to the same section. An uncommon species is Oncidium spilopterum, having yellow flowers and a purple crest. The same may be said of O. virgulatum. Neither of these Oncidiums excel the graceful beauty of O. incurvum, of which there is a huge piece in an Orchid pan, carrying sixteen of its arching panicles of white flowers, blotched with purple. It should be in every collection of Orchids. The long-spurred and white flowers of D. longicornu are beautifully striated with orange on the lip.

The Masdevallia house contains a splendid collection of this genus together with such allies as Stelis and Pleurothallis. A fine piece of Stenoglottis fimbriata caught the eye on entering the house. The fringed and purple flowers spotted with a darker hue have kept their record unbroken since the Temple Show, the spikes still lengthening and flowering. Masdevallias in bloom were very numerous and included M. Heathii, M. sororula, M. reichenbachiana, the hybrid lilac M. Stella with long tails, M. ludibunda, the carmine M. barleana, and the sensitive-lipped M. muscosa. M. infracta seems to have been the first introduction of the genus recorded, and was made in 1835. A plant has been here since 1880. Richer in colour and more interesting is the darker purple M. i. purpurea. Pretty and interesting in their way are Stellis prolifera, Pleurothallis Grobyi, and P. macroblepharis. The bluish metallic-looking leaves of Masdevallia deorsa hang downwards and refuse to grow up.

In the propagating pit Cypripedium bellatulum, C. b. album, and C. niveum were flowering. They thrive well here. The rarest plant we noted was Dendrobium spectabile, the only plant in England, and which has not yet bloomed. Orchid seedlings of many kinds are growing in pots of various sizes from ¾ in. in depth upwards. These baby Orchids require a deal of attention to prevent their being gobbled up, several at a meal, by some hungry slug. For instance, there are seedlings of Cattleya, Epidendrum, Cypripedium, and others, some of which may make the Orchid fanciers raise their eyes in the near future.

We have not mentioned everything in bloom, but if the above can be seen about the middle of August, it is a sure indication of the richness and extent of the collection. Many of the subjects mentioned are rare or uncommon in collections, and of that as well as the treatment they receive, the worthy owner as well as the cultivator may well feel proud.

SOCIETIES.

SHROPSHIRE HORTICULTURAL.—*August 18th and 19th.*

The annual exhibition at Shrewsbury was again an unqualified success, in spite of the gale which blew down some of the marquees on Tuesday previous to the opening day and injured many of the specimen and other plants being arranged at the time. The takings at the gates beat all previous records. On Wednesday there were 30,000 people, and £752 was taken; while on Thursday 60,000 visited the show and £1,825 1s. 1d. was taken, making totals of 90,000 visitors and a gate of £2,577 1s. 1d., or £162 7s. 6d. over all previous records. With the sale of tickets, subscriptions, and the letting of booths, the grand total of over £4,500 will be reached. With exception of Tuesday's gale everything passed off most pleasantly. The presentation to the honorary secretaries (see p. 823) made a pleasant impression. The Royal Horticultural Society was invited to cooperate, the invitation being courteously accepted by the president Sir Trevor Lawrence, Bart., who said that the Council of the R.H.S. would "cooperate as far as may be desired with the committee of the local society to render the show the success which they are fully assured beforehand that it will be."

We now proceed to supplement our telegram of last week. Lord Harlech (gardener, Mr. Lambert), Brogyntyn Park, Oswestry, showed the best Dracaenas, the broad-leaved varieties put up being clothed to the base with foliage. H. H. France-Hayhurst, Esq. (gardener, Mr. Bremmell), Overley, Wellington, was second; and Mr. C. J. Mee, Nottingham, third. Mrs. R. Darby (gardener, Mr. R. Lawley), Adlote, had the best Caladiums. W. J. Scott, Esq. (gardener, Mr. Carter), Besford House, Shrewsbury, took the lead for Coleus with large pyramidal specimens, well coloured. Mr. A. Myers, Sutton Lane, Shrewsbury, was a close second, but took the lead for Fuchsias in the open class, as well as that open to the county. W. J. Scott, Esq., was second in both cases. The plants were grand. A. M. Barber, Esq. (gardener, Mr. Jones), Wellington, got first for his dwarf double tuberous Begonias; R. Taylor, Esq. (gardener, Mr. Clift), Abbey Forgate, was placed second with large plants of single varieties. J. Parsons-Smith, Esq., Abbotsmead, had the finest Gloxinias. Sir J. W. Pease, Bart. (gardener, Mr. J. McIndoe), Hutton Hall, Guisborough, staged the best twelve plants for table decoration, and was followed by Mrs. Gurney Pease (gardener, Mr. McIntyre), Woodside, Darlington. G. Burr, Esq., Oaklands, had the best six stove and greenhouse plants open to the county and the best miscellaneous collection of thirty plants.

A very fine display was made in the fruit section, there being over 330 bunches of Grapes alone. In addition to those mentioned last week, the Rev. T. M. Bulkeley-Owen (gardener, Mr. Langley) Tedsmore Hall, West Felton, took the lead for Madresfield Court Grapes. The Rev. F. Alderson, (gardener, Mr. Davis), Welsh Frankton, Oswestry, took the same honour for Black Alicant. The Earl of Harrington (gardener, Mr. J. H. Goodacre), Elvaston Castle, Derby, was second, but came to the front for Gros Maroc, Lord Harlech being second. Mr. W. Neild (Cheshire County Council), Holmes Chapel, Cheshire, took first with large bunches of Muscat of Alexandria. The Rev. F. Alderson had the best white of any other variety, showing Buckland Sweetwater. The Rev. T. M. Bulkeley-Owen, Sir Offley Wakeman, Bart, and Mrs. R. Darby took leading prizes in the classes open to the county. G. Burr, Esq., and A. M. Barber, Esq., were first prize-winners amongst amateurs. R. W. D. Harley, Esq. (gardener, Mr. Robinson) Herefordshire, had the best Peaches. Lady H. Somerset (gardener, Mr. Harris), Eastnor Castle, Ledbury took the same honour for Nectarines.

In addition to the three prize winners in the class for nine vegetables, the prizes for which were offered by Messrs. Sutton & Sons, Reading, we may say that the Hon. W. P. Talbot, Esher, Lady Theodora Guest, Blandford, and J. R. Greatorex, Esq. (gardener, Mr. Leith), Mytton Hall, Shrewsbury, took the remaining three prizes in this order.

The prizes offered by Messrs. J. Carter & Co., High Holborn, London, were taken by Miss Talbot, Penrice Castle, Swansea; Col. R. T. Lloyd, Aston Hall; Mrs. Watkins, Shotton Hall, Shrewsbury; Lord Kenyon, Gredington; Hon. Mrs. E. Kenyon, Maesfen, Whitchurch, and H. H. France-Hayhurst, Esq. in the order named. Morgan S. Williams, Esq. (gardener, Mr. C. Foster), Glyn-Neath, Glamorgan, showed the best three dishes of Potatos, in clean samples. He was first likewise for five dishes. Mrs. E. Kenyon showed the first prize lot of three dishes of culinary Peas, the prizes being offered by Mr. H. Eckford, Wem. T. C. Waterhouse, Esq., Prestbury, Macclesfield, had the best Tomatos and Cucumbers. In another class for Peas, Mrs. Heywood-Lonsdale, Cloverley, took the leading place. The Earl of Carnarvon, Highclere, Newbury, took the lead in a class for Runner Beans, and F. A. Brace, Esq. Doverage Hall, was first in another class. The Earl of Carnarvon, staged the best Cauliflowers. The Hon. W. P. Talbot, exhibited the best autumn Onions, and Morgan S. Williams, Esq. took the same position for spring sown A large number of classes for plants, flowers, fruits and vegetables, was set apart for cottagers in the county of Shropshire only, and these in most cases were well filled,

Miscellaneous collections, and groups not for competition were fairly numerous, adding largely to the extent of the show and the interest attaching to the same. A splendid group was exhibited by Messrs. J. Veitch & Sons, Chelsea, consisting largely of plants of comparatively recent origin. Very striking were Nepenthes mixta, N. dicksoniana, Phrynium variegatum, and a splendid collection of Caladiums, which must have been an eye-opener to

those competing for the prizes for Caladiums. The dwarf habit of the plants and rich colour were very noticeable. Messrs. Veitch were awarded the Gold Medal of the Royal Horticultural Society for their group, which was the best not for competition. They also received a Dessert Service for the best display of rare plants.

Messrs. R. Smith & Co., Worcester, exhibited Lilies, Bamboos, Gloxinias and many other subjects. Mr. T. S. Ware, Tottenham, London, had a superb group of tuberous Begonias, beautifully arranged. Messrs. Ker & Sons, Aigburth Nursery, Liverpool, had a fine collection of Crotons. Mr. M. Campbell, High Blantyre, N.B., staged a fine collection of Dahlias. Mr. S. Mortimer, Swiss Nursery, Farnham, also had a beautiful display of Dahlias.

Messrs. Dicksons, Chester, occupied a considerable amount of space with cut-flowers of hardy herbaceous plants, and plants for table decoration. Messrs. Dobbie & Co., Rothesay, N.B., showed a collection of Violas in their usual interesting way, as well as Cactus and Pompon Dahlias, Carnations, &c. Messrs. W. & J. Birkenhead, Sale, Manchester, showed a fine collection of Ferns.

Messrs. J. Carter & Co., High Holborn, London, staged an exhibit of plants and flowers. Messrs. J. Cowan, Liverpool, showed Lilies, Orchids, and Roses. Messrs. J Backhouse & Sons, York, set up a fine piece of rockwork, and had a collection of Bamboos. Mr. H. Eckford, Wem, exhibited Sweet Peas. Messrs. Webb & Sons, Wordsley, Stourbridge, showed a miscellaneous group. Mr. E. Murell, Mr. A. Meyers, and Messrs. Jones & Sons, all of Shrewsbury, also had cut flowers. Leopold de Rothschild, Esq., (gardener, Mr. J. Hudson) sent an interesting collection of twenty-two varieties of Water Lilies, which took the Gold Medal of the Shropshire Horticultural Society and the Silver Gilt Floral Medal of the Royal Horticultural Society.

ROYAL HORTICULTURAL OF IRELAND.

August 19th.

MERRION Square, Dublin, was again the scene of the autumn show of this association. This year, in addition to a splendid show there was the attraction of a visit from the Duke and Duchess of York In anticipation of the coming of their Royal Highnesses a special tent had been erected for their use. This was tastefully decorated with flowers supplied by Mr. Malcolm Montrose, J.P., Montrose, Donnybrook. It is over twenty years ago that the Prince of Wales visited the show, which has really only entertained royalty twice previous to the present year, when happily enough the show is one of the very best on record.

Pot plants were good all round, and the competition was in most cases keen. Mrs. McComas (gardener, Mr. P. Coglan), The Grange, was the successful exhibitor of a group of foliage and flowering plants, and was followed by L. G. Watson, Esq. (gardener, Mr. P. Flynn), Newstead. In a smaller group, Fitzadam Millar, Esq. (gardener, Mr. D. Colohan), Windsor, occupied the premier position. L. G. Watson, Esq., sent the best six exotic Ferns, and R. H. McComas, Esq. (gardener, Mr. W. O'Connor), Homestead, the premier six tuberous Begonias, whilst Mrs. McCann (gardener, Mr. T. Goff), Simmonscourt Castle, was first for six Coleuses.

The Challenge Cup presented by Lady Ashtown for the best stand of forty-eight blooms of tuberous Begonias, twenty-four single, and a similar number of double varieties, was won by Lord Ashbrook (gardener, Mr. J. McKellar), The Castle, Durrow. Lord Ashbrook also won in the classes for twenty-four quilled China Asters, and twenty-four African Marigolds.

Mr. T. Mitchisor, gardener to Col. the Hon. C. Crichton, Mullaboden, won the first special prize offered by Mr. Henry Eckford, of Wem, Shropshire, for twelve bunches of named varieties of Eckford's Sweet Peas. Mr. M. Campbell, High Blantyre, Scotland, showed a grand stand of thirty-six cut Dahlias, winning thereby the first award. Messrs. Alexander Dickson & Sons, Newtownards, were second. From the last-named firm came a superb exhibit of forty-eight cut Roses, for which the society's Silver Medal constituted the chief prize. The premier award stand of twenty-four spikes of Gladioli also came from the Newtownards firm.

Fruit was both plentiful and good, and the fight for the prizes well sustained. Mr. R. McKenna, gardener to Lady E. H. Bury Charleville, secured the leading award for a stand of six bunches of Grapes—three bunches of two varieties. Mr. McKenna obtained another first for two bunches of white Muscats, whilst for Black Hamburghs, Mr. J. Colgan, gardener to the Right Hon. J. M. Meade, LL.D., St. Michaels, distanced all other competitors.

The first award for a collection of vegetables of twelve kinds went to Mr. McLennan, gardener to Lord Carew.

Amongst the non-competitive exhibits appeared a stand of hardy flowers including Carnations and Roses from Messrs. Alexander Dickson & Sons. Mr. Forbes, Buccleugh Nurseries, Hawick, N.B., had a stand of magnificent Carnations, Hollyhocks, and Pentstemons. Messrs. O. Ramsay & Sons, Ballsbridge Nurseries, showed tuberous Begonias and Cactus Dahlias in a style that well displayed the skill exercised by the firm in the treatment of these popular flowers. Messrs. R. Hartland & Sons, The Lough Nurseries, Cork, had some excellent tuberous Begonias, for which this firm is justly celebrated, also Pelargoniums. Messrs. Saunders & Sons, Friars Walk Nurseries, showed tuberous Begonias, herbaceous plants, and deciduous fine foliage trees in first rate style. Sir J. Mackay, Ltd., 33, Upper Sackville Street, had a collection of Potatos which amply demonstrated the pains expended by them on the cultivation and improvement of the noble tuber. Messrs. Henderson & Sons, Lincoln Place, had very creditable Begonias, Carnations, and Gladioli.

ABERDEEN.—*August 19th, 20th, and 21st.*

The annual show of the Royal Horticultural Society of Aberdeen was held in the grounds of Gordon's College, where three large marquees were erected for pot plants and cut flowers, fruit, and vegetables respectively. The Art Gallery was set apart for the exhibits of amateurs and cottagers chiefly. The show was formally declared open by Lady Gordon Cathcart, of Cluny Castle, in a few graceful words. The number of entries was some hundreds under that of last year, yet Mr. McLeod, of Erskine Street, who has judged at this show for the last 28 years, said that for quality the show had never been finer during that long period.

A very fine table for effect was arranged by Mr. John Proctor, gardener to Sir William Henderson, Devanha House, Aberdeen, who took the premier honour. Mr. A. Hutton, gardener to George Keith, Esq., Usan House, Montrose, took the lead for Ferns. In the class for hybrid perpetual Roses, Messrs. D. & W. Croll, Dundee, easily took the lead. The first award for Tea Roses, however, was taken by Messrs. Adam & Craigmile, Aberdeen, which says much in favour of the northern climate of the Granite City. Dahlias, Gladioli, China Asters and herbaceous plants were all well-represented, considering the cold rainy weather which prevailed in June and the early part of July in the North.

Grapes were the leading feature of the fruit classes. Mr. Stewart, the Gardens, Eden House, Banff, took the first prize for magnificent bunches of Black Hamburgh and Muscat of Alexandria. Mr. Hutton also showed well here.

Vegetables are generally very well shown at Aberdeen, and they were no exception on this occasion. Classes are set apart for gentlemen's gardeners and market gardeners. In the former case the first prize for a basket of vegetables was taken by Mr. George Milne, gardener to Lady Gordon Cathcart, Cluny Castle. Mr. Alexander Paterson, of Ruthriston, headed the market gardeners for a basket of garden produce.

The trade was represented by Messrs. James Cocker & Sons, Messrs. Ben. Reid & Co., and by Messrs. W. Smith & Son, all of Aberdeen, who each made fine displays of plants and cut flowers.

The amateurs and cottagers made a very creditable display of flowers and vegetables, and were scarcely, if at all, behind the gardeners in the quality of their Dahlias, Marigolds, China Asters, &c. Exhibitors came from all parts of Aberdeenshire, and took the bulk of the prizes, though successful exhibitors came from various counties between Perth and Elgin. The new secretary, Mr. J. B. Rennett, performed his part creditably.

DEVON AND EXETER HORTICULTURAL.

August 20th.

THE summer exhibition of this society which was held at Exeter on the date as above was again unfortunate with regard to weather, for there were some very heavy showers. In character and size the prize list was similar to that of former years, except that it contained 109 classes as against 107. The exhibitors numbered upwards of eighty, although it was to be regretted that there was no competition in a number of the classes for plants. Taken as a whole, however, the show was a great success, and the quality of the exhibits left little to be desired.

In the class for a group of plants arranged for effect in an oval with diameters of 11 ft. and 15 ft., some capital stuff was to be seen. Mr. W. Brock (gardener, Mr. W. Rowland), Exeter, was placed first, and Mr. B. H. Hill, Crediton, second. Mr. W. Brock also scored for twelve and six stove and greenhouse plants, the foliage and flowering element being in equal proportions, six stove and greenhouse flowering plants, six Fuchsias, distinct, and six foliage Begonias, distinct. Twenty-four Cactus Dahlias, distinct, were best shown by Mr. W. B. Smale, followed in the second place by Messrs. W. Tupplin & Co., Newton Abbott. The forty-eight fine spikes of distinct Gladioli in twenty-four varieties contributed by Mr. F. H. Fox, Wellington, also received the first award in their class.

There was some good fruit awaiting the decision of Mr. S. Jones, Exeter; Mr. J. Mayne, the Gardens, Bicton, and Mr. S. Lyons, The Gardens, Cricket St. Thomas, Chard, who were the judges in this section. Mr. V. Stuckey, Langport, headed the list of competitors for ten dishes of fruit to include two bunches each of black and white Grapes. The second award fell to the lot of Mr. J. Brutton, Yeovil. In the smaller class for six dishes the prizes were won by Mr. H. B. Hill, Rev. A. W. Hamilton-Cecil, and Sir John Shelley, Bart. Mr. V. Stuckey also had the best three bunches of Muscat of Alexandria Grapes, and Mr. W. C. Washington, Starcross, scored a similar success for the same number of bunches of Black Hamburgh. General Sir Redvers Buller, Crediton, was the most successful exhibitor of a Pineapple; whilst Mr. Mark Farrant, and Lady Walrond, Broadclyst, were each awarded firsts for Melons. Lady Walrond was likewise credited with firsts for dishes of Apricots and Pears, the most meritorious dish of six Nectarines and six Peaches coming respectively from Mr. V. Stuckey, and Mrs. Benmore.

Vegetables all round were very near perfection, and this in despite of a somewhat trying season. Sir John Shelley, Bart., led the way for a collection including twelve kinds, and was followed in the second and third places by Mr. B. H. Hill and Mr. W. A. Sanford, respectively; Mr. W. C. Cleave, Crediton, secured chief honours for a smaller collection of six kinds.

The non-competitive exhibits were a great assistance. Messrs. Robert Veitch & Son, The Royal Nurseries, Exeter, filled half of the central staging in one of the largest marquees with an attractive display of hardy perennials, Gladioli, Cannas, etc. A miniature rockwork adorned with mountain plants received a good deal of attention. A collection of insectivorous plants was also worthy of mention.

Mr. James Walters of the Mount Radford Nurseries occupied a good deal of space with some grand Roses and Gladioli. Of the former Mrs. John Laing was in splendid form. The Jadoo Co., Ltd., Exeter, had an exhibit of a variety of plants all successfully grown in Jadoo Fibre. Messrs. Jarman & Co., Chard, showed capital cut Roses, Dahlias, Begonias and Sweet Peas. The Exeter Nurseries Co. had a fine display of Palms and other foliage as well as flowering plants. Mr. William Randall sent an excellent collection of stove and greenhouse plants from the West of England Nurseries.

ROYAL HORTICULTURAL.—*August 24th.*

DAHLIAS in their various sections, Lilies, hardy Heaths, Begonias, Caladiums, and fruit were the leading features of last Tuesday's meeting. Orchids were fairly well represented.

Messrs. J. Veitch & Sons, Ltd., Chelsea, exhibited an interesting group of hybrid Orchids. Amongst them were nice pieces of Cattleya Atalanta, C. intertexta, Laeliocattleya Parysatis, L. Nysa, and L. Proserpine Superba The latter is a dwarf and pretty form raised from Laelia dayana crossed with the pollen of Cattleya velutina. Laeliocattleya Nysa is

a handsome thing. Cypripedium Melanthus and C. Janet were also shown (Silver Banksian Medal).

Messrs. F. Sander & Co., St. Albans, exhibited the curious Catasetum fimbriatum, and C. christyanum. Very pretty was Cattleya gaskelliana virginalis. Laeliocattleya Robin Measures, and L. Sanderae were bigeneric hybrids with yellow sepals and petals, and distinct appearance. Sir Trevor Lawrence, Bart. (grower, Mr. W. H. White) Burford Lodge, Dorking, exhibited a magnificent spike of Grammatophyllum speciosum, 7½ ft. long and bearing a large number of its huge flowers, each 5 in. to 6½ in. across. A First-class Certificate was awarded it. Everyone was struck with the magnificence of this Orchid, which no one has ever before seen in bloom.

Messrs. Hugh Low & Co., Clapton, exhibited Laeliocattleya canhamiana, L. Harrisoni-praestans, and Cypripedium Alfred Hollington. Mr. Wm. Bull, 536, King's Road, Chelsea, exhibited fine plants of Goodyera Rollissoni. N. C. Cookson, Esq. (gardener, Mr. Murray), Oakwood, Wylam-on-Tyne, exhibited Laeliocattleya Juno. R. I. Measures, Esq., (gardener, Mr. H. J. Chapman), Cambridge Lodge, Camberwell, exhibited the beautiful Masdevallia Lowii, and Laeliocattleya andreana. Chas. L. N. Ingram, Esq. (gardener, Mr. Bond), Elstead House, Godalming, exhibited Cypripedium gracile, Laeliocattleya Ruby Gem, and L. Radiance. Mrs. Briggs-Bury, Bank House, Accrington, showed a hybrid Cypripedium Hercules.

Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, N., staged a comprehensive collection of pompon and Cactus Dahlias. The blooms were arranged with their own foliage in pyramidal bunches of from six to ten blooms each, and represented many of the leading varieties. Prominent amongst the Cactus section appeared such sorts as John Welch, Fusilier, Mrs. A. Beck, Cannell's Gem, George Marlow, J. T. Barber, and J. E. Fremel; of the pompons, Flora, Darkness, Midnight, Ariel, Juliette, Gazelle, Fairy Tales, and little Julia. A Silver Flora Medal was voted.

P. Purnell, Esq., Woodlands, Streatham Hill, staged a nice little group of miscellaneous flowering and foliage plants comprising single and double tuberous Begonias, small Fuchsias, Crotons, Rex Begonias, and Ferns. A Silver Flora Medal was accorded.

Messrs. Jas. Veitch & Sons, Ltd., Chelsea, made a most interesting exhibit of hardy Heaths. Erica vulgaris flore pleno, E. v. monstrosa, E. v. Hammondii, E. v. aurea, and E. Mackayana were some of the most noticeable. Menziesia polifolia atropurpurea and M. p. alba, were also honoured members of the group. As each subject was shown in clumps of a number of plants contained in large round baskets, the effect was excellent (Silver Banksian Medal).

Messrs. R. Wallace & Co., Kilnfield Gardens, Colchester, made a brave display with cut Liliums. The collection was a very comprehensive one and included grand flowers of L. speciosum, L. s. Kraetzeri, L. tigrinum splendens, L. Henryi, and L. Ballmanniae. Gladioli in capital form were also shown by this firm (Silver Flora Medal).

The principal feature of the show was a superb decorative group set up by Messrs. John Laing & Sons, Forest Hill, S.E. The outline was prettily curved rising to a rather shallow mound in the centre. In the background were some large plants of Cocos plumosa and Kentias, and several pieces of Cocos weddeliana were scattered here and there over the group. The bulk of the exhibit consisted of Caladiums, of which there were numbers of well coloured plants on view. Various Ferns were tastefully employed as a ground work or setting for the Caladiums, and the bright hues of the latter appeared to advantage against the fresh green of the former. The Messrs. Laing also had a small circular group of brightly coloured Crotons. The plants were small but shapely specimens, and were set up with a setting of Maidenhair Fern. Emperor Alexander, Mrs. Bause, Madame C. Heine, and Baron N. de Rothschild were some of the varieties shown (Silver-Gilt Flora Medal).

Mr. Chas. Turner, Slough, sent blooms of the new show Dahlia Marjorie, also blooms of several new pompon Dahlias. Messrs. Wm. Paul & Son, Waltham Cross, Herts, sent a box of blooms of new Roses. Mr. G. Harris, Leads Hill, Orpington, had a dozen blooms of show Dahlias. Mr. Wm. Bull, 536, King's Road, Chelsea, sent several new plants, including the pretty Ficus radicans variegata. Mr. John Green, Dereham, sent a number of boxes of cut Cactus Dahlias. Midnight Sun, Royal Purple, and Green's Gem were three of the best varieties Three plants of Hibiscus Mrs. Mackintosh sent by Mr. Fulford, gardener to F. D. Lambert, Esq., received a vote of thanks.

(To be continued).

QUESTIONS AND ANSWERS

Tomatos spotted.—*W. R. D.* : Both the leaves and the fruits you sent were very badly attacked by a small white mite allied to the red spider, but much smaller and white. By the aid of a magnifying glass you will be able to see them on the under side of the leaves as well as in sheltered parts upon the fruits. They might be destroyed or kept under by means of syringing, as in the case of red spider, but if this were continued for any length of time your Tomatos would be almost certain to get attacked by one or more kinds of fungoid diseases, if, indeed, they do not get attacked in any case. At present we think the malady is wholly due to the mites. Therefore we should recommend syringing the plants with flowers of sulphur in water. This should be done in the morning of fine days, so that you can throw all the ventilators open to dry the house and the plants before night. You might also try the painting of the hotwater pipes with a mixture of sulphur and water, as in the case of Vines. A similar mite has been destroyed on Vines and Crotons with clear soot water. The sulphuring of the pipes must be done as carefully as in the case of Vines. Very bad fruits and leaves of the Tomatos should be taken off and burnt.

Grapes for Market.—*Sigma* : It would be difficult or impossible to say who first commenced growing Grapes for market. We think it more than probable that the custom first originated in private gardens, for the purpose of contributing towards their maintenance. It took cultivators some time to discover that such a crop could be turned to commercial account with profit. That was, however, a good many years ago, and unless it is recorded somewhere, it would be difficult or impossible for those now living to name the first grower who started to grow Grapes solely for market. Moreover, the first who did, must have started in a small way, and escaped public notice. You mention Messrs. T. Rivers & Son, Sawbridgeworth; but if we rightly remember they were chiefly notable for the cultivation of fine-flavoured grapes, which are not now very extensively grown. Amongst early growers were Mr. Solomon, Peckham Rye, and Mr. Davis, of Starch Green. Mr. Wm. Thomson was the first to grow grapes to any extent in Scotland. Large growers of more recent date are Mr. Peter Kay of Finchley; Messrs. Rochford, Broxbourne; Mr. P. Ladds, of Bexley and Swanley; the late Mr. George Bashford, of Jersey; Mr. N. Domaille, Guernsey, and others.

Names of Plants.—*A. D.* : 1, Statice Limonum; 2, Statice latifolia; 3, Erigeron mucronatus; 4, Eryngium giganteum; 5, Potentilla varia.—*W. M.* : 1, Sibthorpia europaea variegata; 2, Ficus repens minima; 3, Lonicera alpigena; 4, Colutea arborescens.—*J. C. S.* : 1, Atriplex rosea; 2, Allium vineale compactum; 3, Carex paniculata; 4, Scirpus triqueter; 5, Juncus acutus; 6, Rumex maritimus (*rare*).—*A. L.* : 1, Oncidium dasystyle; 2, Masdevallia harryana; 3, Odontoglossum Pescatorei; 4, Cattleya Warscewiczii var. — *W. G.* : 1, Spiraea Douglasii; 2, Spiraea japonica var.; 3, Hibiscus syriacus.—*H. J.* : 1, Asplenium bulbiferum minus; 2, Selaginella emiliana; 3, Selaginella Martensi; 4, Selaginella apus.—*J. W.* : 1, Rudbeckia laciniata; 2, Helianthus rigidus; 3, Astrantia major; 4, Aspidium (Cyrtomium) caryotideum; 5, Nephrodium molle; 6, Polystichum angulare proliferum.

Communications received.—Sutton & Sons.—J. Veitch & Sons.—W. B. Hartland.—W. K.—C.—A. E. S.—R. C.—A. O.—R. G.—W. S.—R. T.—W. F.—Reader.—M.—G. Entwhistle.—Nathan.—T. S.—James C.—Marrow.

TRADE CATALOGUES RECEIVED.

JOHN LAING & SONS, Forest Hill, London, S.E.—Dutch, French and other Bulbous Roots.

FISHER, SON & SIBRAY, Ltd., Royal Nurseries, Handsworth, Near Sheffield.—Catalogue of Bulbs and Flower Roots.

ALBERT F. UPSTONE, F.R.H.S., 35, Church Street and Market Place, Rotherham.—List of Bulbs for 1897.

ROBERT SYDENHAM, Tenby Street, Birmingham. Mr. Robert Sydenham's Unique Bulb List with revised Pamphlet corrected to date "How I came to Grow Bulbs."

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August 24th, 1897.

MESSRS. HURST & SON, 152, Houndsditch, and 27, Seed Market, Mark Lane, report a steady demand for Trifolium incarnatum at hardening rates. Alsyke, owing to bad reports as to new crop is enquired for. Mustard and Rape steady. Rye scarce and dear. Winter Tares in full supply, and the quality is good.

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